

TARGET TAUPŌ

#66

Issue 66 / October 2014
A MAGAZINE FOR TAUPŌ ANGLERS

Angler Participation & Lapsed Anglers

Czech Nymphing

No Frills Fishing



TARGET TAUPŌ

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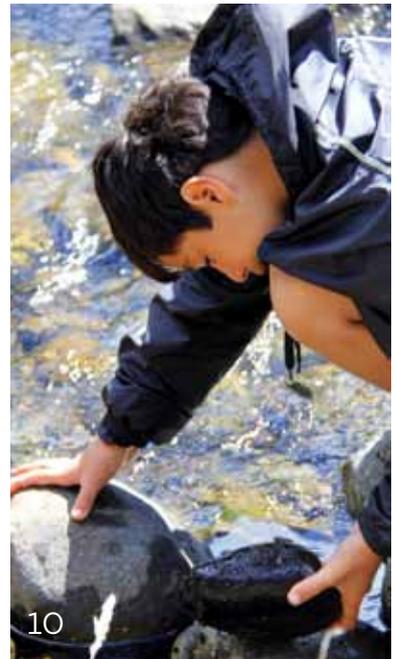
Front cover: First time summer fishing in New Zealand, Canadian
Mike Walz caught this nice rainbow on the Upper Tongariro river.
Photo by: Kim Turia

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FISHERY FOREWORD



Welcome to the first edition of the Target Taupō newsletter – we hope you like the new format.

By Kim Alexander-Turia
Conservation Services
Manager, Taupō Fishery

There certainly have been many changes since the last Target Taupō, including the introduction of Services and Partnership groups to DOC and, of course, a new fishery manager. On 2 September 2013, the Taupō Fishery, which was previously part of the DOC Taupō-nui-a-Tia Area Office under Dave Lumley's guidance, was separated back into its own service group. I was appointed as the new Conservation Services Manager, Taupō Fishery, and Dave is now running the Turangi Services team. I started with DOC in 2006 as the Programme Manager, Community Relations for the Taupō Fishery and since this time have moved around within DOC. It's great to end up back in the fishery team as, out of all the DOC roles I have taken on, the fishery, Lake Taupō and trout fishing are what I am most passionate about. I am from this area and of Ngāti Tūwharetoa descent.

Our team has certainly gone through some changes, with seven service rangers being appointed – Michel Dedual as our fishery science advisor, Mark Venman as senior ranger and Randal Hart, Dave Plowman, Mike Hill, Harry Hamilton and Thomas Scott-Simmonds as fishery rangers. We also receive support from our Partnerships group of Peter Shepherd and the other partnership rangers. This group supports the Services team with communications (media, Facebook®, etc) and helps identify new angler opportunities. Together we are working on implementing recommendations from Exploring Future Opportunities for the Taupō Fishery: A review of the Taupō Sports Fishery report, which was released on 20 May 2013. This implementation process allows us to work closely with our key partners, the Tūwharetoa Māori Trust Board and the Taupō Fishery Advisory Committee (TFAC) to provide an effective voice for anglers in the management of the Taupō Fishery.

I am really proud of my team and the way they have rolled their sleeves up and got on with things after the review. Active prosecutions are up on last year, and I think it's notable that the fishery is responsible for at least 20 percent of the Department's national compliance effort. This also indicates no drop in the compliance effort as a result of the restructure, which is impressive given the reduction in ranger numbers.

Enough about structure changes – let's get on to more important stuff. The rivers are just starting to fire up, which is to be expected now that we are into October and the spawning runs are well underway. As always, the key thing is to get out there and enjoy it – it's your fishery. We had a rough time for a year or two, so get into it now when the going is good!

Tohu and Kim Turia making the most of Lake Otamangakau.
Photo: Dave Conley

Exploring future opportunities for the Taupō Fishery

By Kim Alexander-Turia
Conservations Services
Manager, Taupō Fishery



ABOVE
Tommi and Shar Joyce, another great day on Lake Taupō.
Photo: Mark Venman



RIGHT
Locations like Tongariro River have provided great angling opportunities for generations.
Photo: Pete Shepherd

In issue 64 of Target Taupō, we reported on the fishery review that was taking place. That review has now been completed, and the report *Exploring Future Opportunities for the Taupō Fishery: A review of the Taupō sports fishery* can be viewed on DOC's website at: www.doc.govt.nz/taupofishery

The Taupō Fishery has already achieved a number of the recommendations listed in the report, including:



The report provides a very good summary of the challenges facing the fishery and highlights a range of opportunities to focus on. *These include:*

- › **Establishing an overarching goal for the fishery:** This really boils down to coming up with a clearly defined vision statement for the fishery, which will form the basis of everything we set out to achieve.
- › **Improved governance and management structures and processes:** This refers primarily to the opportunity to maximise the role the Taupō Fishery Advisory Committee can play in aiding the management of the fishery by allowing anglers to provide detailed input into its management. We may need to look at re-structuring the committee and its membership base if we want to get the most out of it.
- › **Ensuring there is clear direction focused on maximising the full value of the fishery:** Fish & Game New Zealand apply a 'user pays, user says' model in their management, and the Taupō Fishery may benefit from a similar approach. By working more closely with anglers and businesses that rely on the fishery, we may be able to improve the recreational, economic and cultural outcomes for stakeholders in the fishery.
- › **Management of the resource** (the trout): This is something we have always done well, and the review re-confirmed this. What we perhaps need to improve on is how we utilise our comprehensive understanding of the fishery to better inform the way we manage and increase angler opportunities.
- › **Adopt angler notices:** This is a simplified process to make responsive alterations to aspects of the Taupō Fishery regulations due to any impacts that exist at that time, i.e. reducing or increasing catch limits. This will allow us to achieve some of the desired outcomes described in the previous point.
- › **Better engagement with anglers and licence-holders** (particularly with a view to increasing participation): This forms an important part of the reasoning behind our move to an online-licensing system. Anglers told us through the review process that they wanted licences made available online. An online platform would also help us talk to specific anglers directly and, in this way, improve our understanding of the desires of our anglers.
- › **Improving relationships more generally:** (adopting a 'philosophy of partnership').

developing stronger links with Ngāti Tūwharetoa, re-aligning the staff structure and budget allocations, reviewing the Tongariro National Trout Centre and making better use of social media platforms (our fishery Facebook® page, Taupō Trout Fishery, has proved very popular, and of course we have revamped the style of Target Taupō from magazine to a more regular electronic newsletter.

The Taupō fishing licence online system finally went live in early July this year. We are proud this project has become a reality and forms stage one of addressing some of the comments made by Taupo anglers during the review process. There will be significant financial savings with the online system allowing us to redirect funds to improve access, fishing opportunities and more visible compliance monitoring which were indicated as important issues by anglers during the review.

Finally, we will be in a position to really start fine-tuning our licensing options over time, including exploring the possibility of offering annual licences or a different range of short-stay licences. None of this will happen without fully engaging with our stakeholder groups. Online licensing offers convenience and flexibility to us as fishery managers responding to customer demand.



So the key thing for our staff and anglers to realise is that the review report is an important document in helping us re-evaluate and re-prioritise where we put our collective energies. At the end of the day, it seems to me that we all want the same thing: a healthy, vibrant and challenging fishery that continues to live up to its reputation as one of the great trout fisheries of the world. 🐟

ABOVE

Working with businesses and anglers is key to a sustainable fishery.

Photo: Thomas Simmonds

BELOW

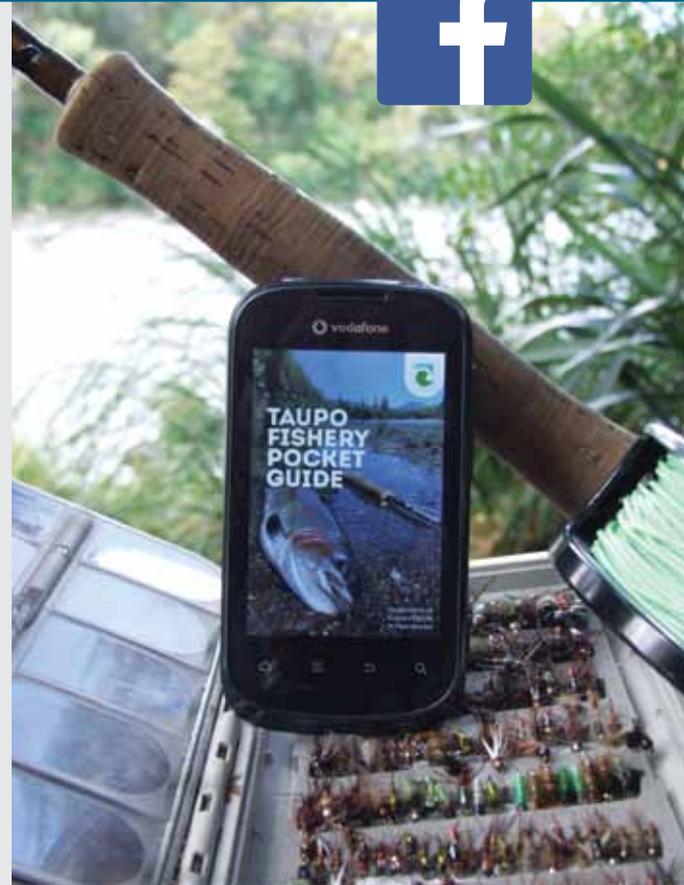
Lake Otamangakau continues to attract anglers.

Photo: Pete Shepherd





FACE TO FACEBOOK WITH THE FISHERY TEAM



By Dave Conley / Partnerships Ranger

One message we got loud and clear during the fishery review process was that the trout fishery needed to improve its level of communication with anglers. What we were doing was fine; in fact, Target Taupō was consistently receiving praise as being a high-quality publication that many anglers looked forward to receiving. The wider issue, however, was that people felt the issues were too infrequent and, basically, they weren't getting as regular a level of communication from the fishery as they wanted.

In one sense, this was encouraging, as everyone likes to feel that their work is valued, and it was gratifying for the team to hear that Target Taupō is well regarded. Also, it was gratifying to discover that there are people out there who want to learn more about our work.

So the challenge for us was to make some tweaks to how we communicate; to keep the things that people like while providing a fresh look and offering more for those who want to engage. One of the changes we decided on was what you are reading now – the move from a printed magazine to a more regular online newsletter. Another significant change was to explore the potential offered by an even more instantly digestible form of communication: Facebook®.



We dipped our toes into the Facebook® pond in June of 2013, and since creating our page Taupō Trout Fishery, support has grown rapidly, with 1187 'likes' as I write this article. Now, I suspect there will be a bunch of you out there who don't 'do' Facebook®, don't see the appeal and perhaps question why we would spend resources on communicating in this way, but bear with me, as I explain our case for joining this social media platform.

For Facebook® novices, a few points of clarification to help with the discussion. Our idea is to set up a page ▶



and then encourage other people who are members on Facebook® to 'like' it. Once they do, those people automatically receive any information that we 'post' on our page. We go about our business, posting stories about what we see and what we are doing in the Taupō Fishery, and our 'friends' can watch and comment on any posting we make that interests them. Pretty simple really, and the first few months of having a page up and running have provided us with a whole bunch of insights into what people do and don't like about our work.

Pretty much any posting with a picture of a fish in it does well. I guess there should be no great surprise in that as we are fishery managers after all. Vinnie's 7.2 kg monster broke all the records for our Facebook® page hits, with nearly 4500 views, nearly 50 'shares' and over 30 comments. Even a pretty run-of-the-mill picture of a Lake O fish can stimulate quite a response, and most of the posts we make provoke some sort of comment. This can sometimes be a great opportunity for people to ask us questions about the fishery and how it is managed. We've had questions about koura fishing, harvesting trout as a management tool and illegal fishing activities, all of which have helped us engage with people to inform them and improve their understanding of the Taupō Fishery.

The comment and messaging functions on Facebook® are a great aid in that we can respond quickly and directly to people's questions and concerns. The medium differs from email in that discussion often emerges through an individual viewing and responding to a particular posting, which makes it easier for us all to understand the context of the enquiry, in contrast to people ringing or emailing out of the blue with questions or concerns.



Another surprisingly popular posting was one of a family of whio/blue duck on the Tongariro. This posting raced off to over 4000 views and generated quite a bit of comment. Thinking you all wanted more of that, we posted a great pic the following week of a young whio chick diving underwater while Mum supervised nearby. Barely 100 people viewed that posting, go figure! Perhaps it's all in the timing.

So it's been a bit of a learning curve, particularly during the summer months, when our rangers were out clearing tracks, catching catfish and doing some of the less glamorous work that doesn't attract so much attention on Facebook®. During that time, we struggled to keep up a regular flow of postings, but we are refining our skills all the time.



PREVIOUS PAGE

Social media provides opportunities to engage to a wider audience.

Photo: Dave Conley

THIS PAGE TOP LEFT

This 7.2 kg brown trout became the most popular post for the fishery Facebook page.

Photo: Mark Venman

THIS PAGE LEFT

Whio family, another very popular Facebook posting with 4000 views.

Photo: Nick Singers

The demographic of our Facebook® likes makes for interesting reading as, initially, our numbers included a very high proportion of females. With well over 30% of likes coming from females, we felt we were connecting with a different audience than before, since we had presumed that the majority of our previous readership had been male. However, over time, the proportion of females liking our postings seems to have settled back to about 20% of total likes, which is more in line with what we would expect based on our understanding of the traditional fishing demographics.

One clear benefit of Facebook® to organisations like ours is the ability it gives us to connect with younger people. Our Facebook® audience has a younger

average age than our season licence holders, and we hope to use this social media platform to attract more of these younger 'followers' to Taupō angling.

We also appear to be receiving a large number of likes from people who identify themselves as Māori, which is another important demographic for us and an audience that we have struggled to connect with in the past, and we're chalking that up as another plus to connecting to our followers through Facebook®.

All in all, our introduction to Facebook® has been an interesting exercise for the team, and we're really looking forward to the 2014 spring season, knowing we now have a whole new range of fun and interesting ways of engaging with anglers at our fingertips. 🐟

RIGHT

Students considering conservation outcomes through engagement with the fishery.
Photo: Catalina Amaya-Perilla

FAR RIGHT

“Taupō for Tomorrow” takes students into their “natural wonderland”.
Photo: Kim Turia



Taupō for Tomorrow

By **Mike Nicholson** / Partnerships Ranger-Teacher

A biology-based education article that I read recently outlined the fact that, in most instances, deteriorating environmental conditions are caused by human behaviour. It also identified a number of barriers to attempts to modify or change this behaviour for conservation or sustainability outcomes. The article discussed the idea that ‘education’ in itself is unlikely to increase conservation and instead education coupled with a clear reason for action is what drives behaviour change. It also proposed that people most often see themselves as disengaged with nature and are generally reluctant to engage with conservation efforts as that is not what they see most people around them doing.

The paper made me reflect on what we are trying to achieve at Taupō for Tomorrow and the objectives of the DOC, Genesis Energy and Tongariro National Trout Centre Society partnership that support the programme. In many ways, breaking down the barriers is what drives us every day to deliver this programme, as all of us in this partnership have a stake in our natural environment, our young people and the long-term health of both. We believe in our young people, and we recognise that they are future leaders in conservation and business and that they are the ones who will, in the end, drive change.

For DOC, education and partnerships with community to achieve action are very much seen as critical to the way forward; the rationale being that, as we look to the future, we need to see conservation

as an ‘investment not a cost’ and that we all need to be investing in that vision.

In terms of Taupō for Tomorrow, we are very much about promoting clear reasons for investment and conservation action. Students in this neck of the woods reside in a natural wonderland. There are ample rivers, streams and lakes to swim and fish in and mountains to climb, hunt or ski on. Most of the students who come to us have grown up in this playground, and although I wouldn’t say some take their environment for granted, perhaps they see through or past it at times. Yet, when those same students are at the Taupō for Tomorrow programme, learning about macroinvertebrates, indicator species, trout, stormwater or renewable energy, their engagement with and passion for their ‘special’ place and their personal connection to it becomes palpable. Many take this passion back to their schools and homes and take action in a myriad of ways.

In addition, what drives education at DOC and at Taupō for Tomorrow is the idea that ‘everything is connected’. Students grasp this idea quickly and just as quickly recognise that the word ‘everything’ includes ‘them’. When they become aware that they are inexorably connected to Lake Taupō, kōaro, whio/blue duck, mayflies, trout and the rivers of the region, the desire to become engaged, active and learn, appears natural. During their time with us, the students are most definitely engaged with nature, as are their peers and teachers around them. ►



When students visit the programme, it's not just DOC staff and the immediate community that they observe engaging with the natural world and conservation efforts. They are also connected with the idea that commercial operators, like Genesis Energy, have a significant role in caring for the environment and are increasingly recognising that doing so is good for business.

Students get to link with, and learn from, Genesis staff and are exposed to the fundamental idea of 'striking the balance'. In other words, they are challenged to think about how to 'have their cake and eat it too' – renewable energy to run our lives from sustainable natural systems that provide as best they can for the biological and cultural aspirations of society.

Genesis Energy is an excellent example of an organisation engaged with conservation and taking action over and above any legal requirement to do so. A great example of this is the work with whio that Genesis is sponsoring in the central region and nationally. For Genesis, seeing whio living out their lives on cold, clean rivers, some of which they use for generating energy for human use, is a prime and gratifying example of 'striking the balance' since, in many ways, whio can be seen as the ultimate freshwater indicator species.

When students are learning about these connections, it can be very powerful. The energy they personally consume from a renewable source is connected to healthy rivers, which in turn are connected to a myriad of other values, species and importantly the special place they call home.

A large part of the learning at Taupō for Tomorrow is about encouraging our youth to engage with the natural environment in a recreation sense, particularly trout fishing in our region. This is where the volunteers from Tongariro National Trout Centre Society come into play. The centre teaches students how to catch a fish. However, just as important is the learning around water quality and sustainability, for as the centre knows, without striking a balance and investing in looking after our fresh water, species like trout and whio may well suffer in the future. In addition, when fishing at the centre, students are surrounded by people who are passionate about fishing and looking after the natural environment that drives this world-class fishery.

So, when reflecting on what we are trying to achieve at Taupō for Tomorrow, there is plenty to be pleased about. We are trying our hardest to engage head on with the barriers to encouraging conservation outcomes. Our students are given plenty of reasons for taking action, and many of them do. Not least, we ask them to recognise how special their place is and how (even if they didn't know it to start with) they are inextricably connected to it. While they are with us, they are engaged in their natural environment and importantly are encouraged to recognise the value of accessing and enjoying the fantastic natural resources of the area. And they are immersed with a number of groups and individuals who are prime examples of how to engage passionately and positively in conservation efforts.

Roll on the rest of 2014. 🐟



LEFT
Teacher Mike Nicholson discusses "Striking the Balance" concepts with students.
Photo: Catalina Amaya-Perilla

ONLINE LICENCES UPDATE

By Peter Shepherd / Partnerships Ranger

An online licence system for the Taupō Fishery is being introduced for the 2014–2015 fishing season, in response to demand from existing and potential anglers. In May 2013 the Taupō Sports Fishery went through a comprehensive review (Target Taupō #65, 2012) which identified a number of reoccurring issues. Participation in the sport was identified as a major issue with recent studies here and internationally showing a downward trend in participation.

The review suggested that the Taupō Fishery management could potentially improve participation by identifying and removing barriers that prevent anglers from taking part in the sport. The current licencing system was one factor identified as a barrier to participation.

Feedback from current and potential anglers cites the lack of an online licence as a barrier. As a result of this, and thinking generally about streamlining licensing, the Taupō Fishery management has introduced an online licence system for the 2014–2015 fishing season. Businesses that have provided licence sales in the past will be able to continue selling licences.

The development of an online fishing licence system also supports the Government’s priority of better public services, with New Zealanders and businesses easily able to complete their transactions online with departments.



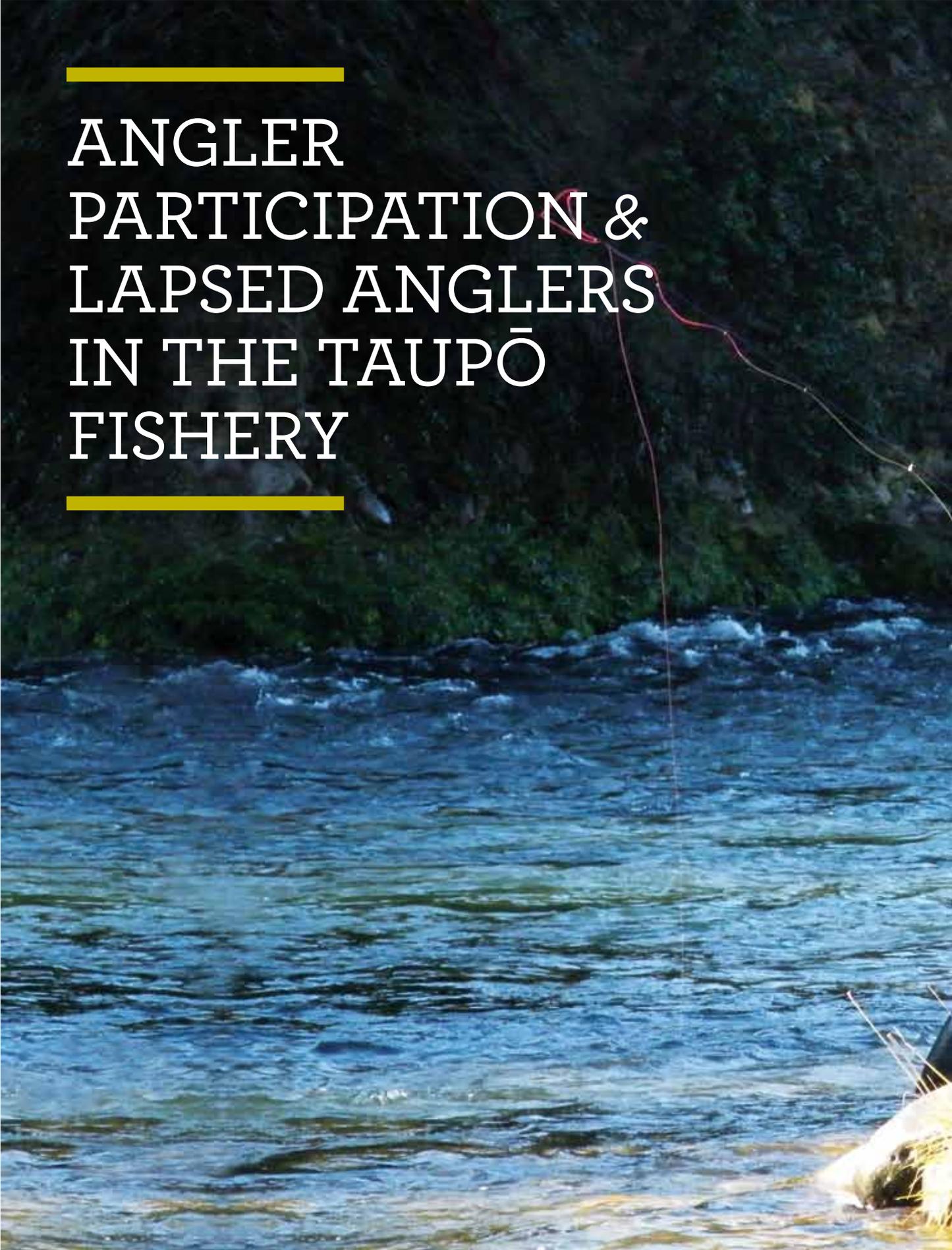
Waitahanui angler Clint Healy with the new season licence. Photo: Michael Hill

KEY POINTS

1. Online licensing is the result of a comprehensive review process. Anglers told us this is what they want to see.
2. Online licensing offers instant accessibility and convenience.
3. It is also a response to economic issues. Online licencing provides for administrative and compliance efficiencies and savings.
4. This will allow re-investment in areas anglers have asked for, such as improved access and more visible compliance.
5. It will provide us with improved information and understanding about our customers, which will help us make better decisions.
6. The system will improve and evolve over time, and opens the door to other licensing options, for example annualised licences.



The online fishing licence system went live to the general public from the DOC website on **1 July 2014**. To purchase your next licence visit – doc.govt.nz/fishtaupo. 🐟



ANGLER
PARTICIPATION &
LAPSED ANGLERS
IN THE TAUPŌ
FISHERY



LEFT
Johannes Krill at the Blue
Pool – Tongariro River.
Photo: Pete Shepherd

By Michel Dedual / Fishery Science Advisor

Taupō Fishery managers have good reasons to be worried about the ongoing decline in angling participation. The number of fishing licences sold can be used as an indicator of the level of participation and show that participation peaked in 1986-87 and steadily declined thereafter (Figure 1). In 2010, the number of licence sales was half the number in 1987. This downturn in participation is of concern for a number of reasons.

First, having fewer anglers results in reduced revenue. This is problematic because the earnings from licence sales is the only source of income used to manage the Taupō Fishery. So it is vital to stop this erosion in participation to maintain adequate revenue. However, the decline in fishing participation is not isolated to Taupō. The same trend is reflected in other recreational fisheries around New Zealand and worldwide and also in other outdoors activities.

Second, the benefit of increasing participation is not only of a monetary nature. If fishery managers succeed in boosting participation, they will receive more recognition for their work, which, in turn, can help better protect the fishery.

The level of participation is calculated from the number of new anglers joining the fishery and the number leaving it (lapsed anglers). In order to attract more participants, scientists and fishery managers need to understand the factors that deter anglers from fishing in the first place or from fishing as often as they would like. Therefore, lapsed anglers are of particular interest to fisheries managers who seek to understand, and perhaps influence, the dynamics of fishing participation.

In this article, we will focus on identifying possible causes for the decline in participation. We will then zero in on the data available for Taupō and use the results of the survey that was carried out as part of





the fishery review to explore what might underpin the level of participation, what makes anglers abandon fishing in the Taupō region and what would make these lapsed anglers resume fishing in the region.

The majority of people wanting to fish first have to clear any potential barriers to engaging in the activity. Constraints on leisure activities were first measured formally more than 50 years ago and began to be investigated systematically in the 1980s.

Social scientists distinguish and rank three categories of leisure constraints: intrapersonal (self-oriented), interpersonal (interactions with others) and structural (external factors). The intrapersonal constraints include the individual psychological states and attributes that interact with leisure. Stress, depression, anxiety, religiosity, kin and non-kin reference group attitudes, previous socialisation into specific activities, perceived self-skill and subjective evaluation of the appropriateness and availability of various leisure activities are all interpersonal constraints. Since people are faced with their intrapersonal constraints first, social scientists view these as the most powerful constraints.

When intrapersonal constraints are absent and the activity requires at least one partner, interpersonal constraints come into play. These include lack of buddies and family members to participate in a leisure activity.

If interpersonal constraints are solved, then structural constraints become the focus. The most prevailing structural constraints are: cost, time, family-cycle stage, season, climate, availability of opportunity and reference group attitudes concerning the appropriateness of certain activities.

Studies concentrating on fishing participation have identified that many of the constraints are of a structural and to a lesser extent an interpersonal nature. Generally lack of time, cost, poor fishing quality, lack of a fishing buddy and lack of knowledge are responsible for declines in participation. A survey of lapsed American and Australian anglers revealed that a lack of time (46 and 27% respectively) was the main reason given for abandoning fishing. The same survey indicated that British anglers stopped fishing because of a lack of fishing buddies (38%).

LEFT

Fly-fishing angler, opening day on Lake Otamangakau.
Photo: Pete Shepherd

BELOW

The Tongariro National Trout Centre has been introducing kids to trout fishing for a number of generations.
Photo: Peter Wilton

RIGHT

How important is fish size, quantity and quality for anglers?
Photo: Dave Lehndorf

BELOW RIGHT

Dave Lumley, past fishery manager and still an avid angler.
Photo: Vanessa Lumley



Fishery managers use questionnaires sent to anglers and non-anglers to gather feedback on management direction. The idea is to have a level of response sufficient to assume that the number of people responding accurately represents the views of the entire population that is targeted by the survey. In most surveys, there are a lot of unknowns that can influence the interpretation of results. In 2012, just such a survey was carried out as part of the Taupō Fishery review: www.doc.govt.nz/taupofishery

This survey was available via the Internet and potentially could have been accessed by tens or hundreds of thousands of potential respondents. However, only 738 people responded, and such a low response immediately raised the question: Did only those who felt strongly about one or some of the questions reply? Using information collected only from those who choose to respond is likely to introduce serious biases since the opinions of self-selected respondents may not represent the opinion of the whole population targeted. Statistical principles imply that you must draw a random sample from a population to make valid inferences about the overall population. If you don't have a

random sample the results are simply not valid. Unfortunately, this requirement of a random sample is virtually never fully satisfied. In the case of the Taupō Fishery review survey, it is likely that the survey was biased toward unhappy anglers as it coincided with a decline in fish quality that naturally upset anglers.

Furthermore, the cross-sectional nature of this survey provided information at only one point in time and couldn't provide information on changes that might have occurred at the individual or population level over time. It is also possible that the anglers who decided to stop fishing in Taupō were not interested in filling out the survey. Surveys are most likely to attract the people who have something pressing to say. Nevertheless, the survey is valuable as it still indicates some reasons why anglers abandoned fishing in Taupō.

Among the questions asked, two were relevant for the rest of this article. The first relevant question was: "If you used to fish in the Taupō region but no longer do, why did you stop, i.e., why have you turned into a lapsed angler?" and the second was "What would ►

.....

“This means that fishing must compete with other recreational activities for people’s leisure time”

encourage you and others you know to start fishing or fish more in the Taupō region?”

For the lapsed anglers, the answer to both questions was expected to be the same. This analysis allows us to compare with other overseas surveys the reasons behind anglers lapsing and to work out what might explain the current decline in participation, based on licence sales.

The raw data from the survey indicated that 738 people responded, of whom 89 (12%) were valid lapsed anglers. The responses provided by the lapsed anglers could be classed in 21 categories, and the most common reason given for stopping fishing in Taupō was the decline in fishing quality (43%) (poor fish condition and a lack of fish deterred 38 % and 5% of these anglers respectively). A lack of time available for fishing due to other commitments was almost as strong as the fish condition for lapsing (33%), and the financial burden was the third most important reason, identified by 12% of lapsed anglers.

The popularity of the ‘lack of time due to other commitments’ reason agreed with the findings of the majority of similar studies carried out elsewhere, but it begs the question: Why do some anglers lack time to participate? Isn’t the time available the same for all of us? When we say that we don’t have time, it is generally for two reasons; either we have other obligations (family, work, school) and hence have less time for angling, or we have decided to stop fishing in order to participate in another recreational activity. Lack of time therefore reflects the fact that our priorities are changing compulsorily or voluntarily.

This means that fishing must compete with other recreational activities for people’s leisure time. The less time people have for recreation, the higher the value they will place on convenience over sheer enjoyment of a particular recreational activity.

Favourite activities may be abandoned permanently or momentarily for activities that are more accessible, cheaper or more enjoyable or rewarding. A report prepared in 2012 by Responsive Management and Southwick Associates on behalf of the American Sportfishing Association summarises the situation nicely by stating “To attract more anglers, or to retain current anglers, fishing must be as convenient and hassle-free as possible, and people need to know how fishing can fit into busy schedules.”

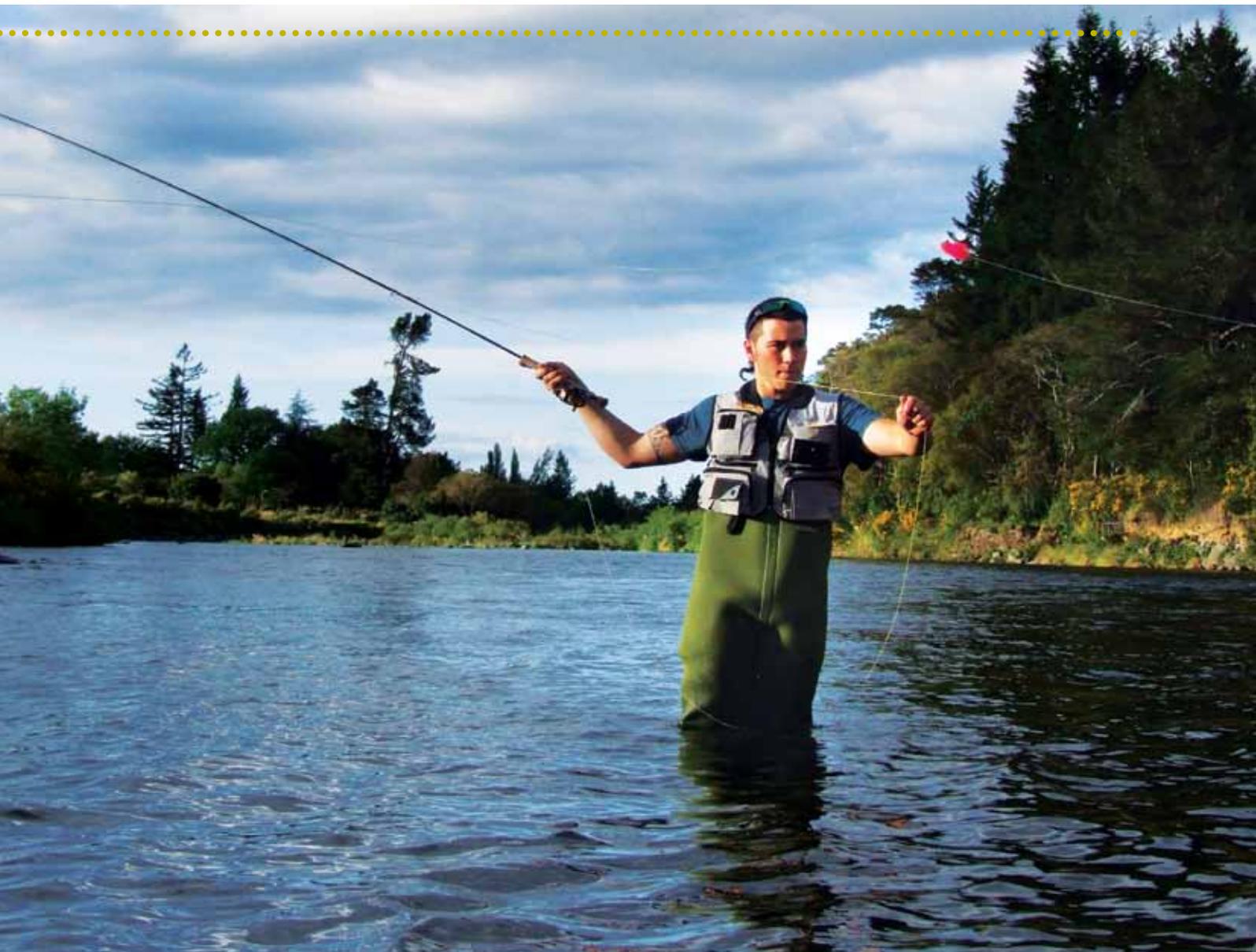
Trout fishing must compete with other activities not only on a hassle-free basis but also in terms of associated costs. Lack of time is not a new phenomenon; a survey of New Zealand trout and salmon anglers conducted by the National Research Bureau Ltd (NRB) in 1991 identified that lack of time (33%) was by far the most significant barrier preventing anglers from fishing more.

While future trends cannot be known, lack of time due to other commitments is likely to remain a major issue that will continue to erode people’s participation in angling as a recreational activity. Perhaps wisdom could be taken from the words of John Geirach as reported in Derek Grzelewski’s book *The Trout Bohemian*: “The solution to any problem – work, love, money, whatever – is to go fishing and the worse the problem, the longer the trip should be” (published by Bateman Publishing in 2013).

Contrary to similar overseas studies, the fishing quality in the Taupō region was the single most important reason given for stopping fishing. However, this is to be expected since the Taupō survey took place during a documented depression in fish condition between 2007 and 2012. However, the 1991 NRB study reports that fishing quality was not a reason for stopping fishing given by trout and salmon anglers despite the fact that the fishery also went through a depression between 1990 and 1992. Was the 1991 survey conducted too early in the 1990–92 decline in fish condition or did that decline not last long enough to change anglers’ fishing behaviours?

The abundance of good fishing spots within the central North Island, allowing anglers to move with ease from one ‘hot spot’ to the next might be another reason anglers put such an emphasis on fish quality in their survey responses – they could easily shift from Taupō to somewhere else with better quality fish, for example, the Rotorua lakes, as indicated in some of the survey responses. However, licence sales for the





Rotorua region are also trending downward. Perhaps in other parts of the country where there is not such a range of fisheries available in close proximity the anglers are less sensitive to fishing quality, as appears to be the case in the northern hemisphere.

Fishing quality is a combination of fish condition and fish numbers. Fish condition is a composite of weight and length, but generally, few anglers bother to calculate the full condition of their catch, concentrating more on the fish's weight in qualifying their catch.

Figure 1 opposite shows that, from the mid-1970s, the number of licence sales trended upwards until 1987. After 1987, sales began to decline. There appears to be two phases to this decline. The initial decline occurred with no apparent relationship to fish weight, then in about 1993, the drop in licence sales appears to be more closely related to the average weight of fish, albeit with some anomalies. ►

ABOVE

With so many competing interests, how does the sport of trout fishing stay relevant?
 Photo: Kim Turia

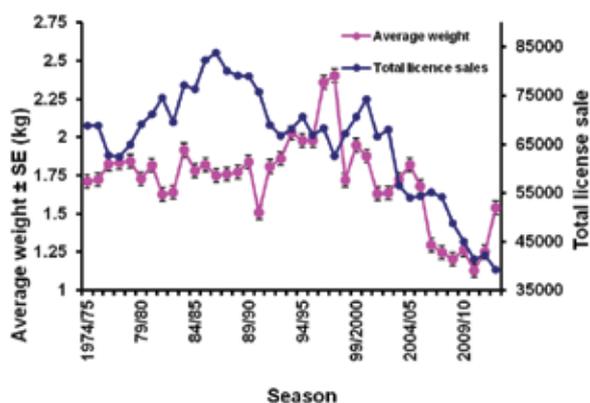


Figure 1: Licence sales and average weight of fish caught in the Taupō catchment between 1974 and 2012.

The Waipa Stream trapping programme, which started in 1998, provides more information about the relationship between fish average weight and licence sales between 1998 and 2013. For every year during this 15-year period, the average fish weight could explain only 23% of the variations in licence sales. However, if a lapsed angler's decision to buy a fishing licence were based purely on a certain standard of fish condition (weight), then we could expect a lag in time before that angler actually resumed buying a licence because the angler could not know the condition of fish in advance of catching the fish and would probably wait a 'safe period' to allow the fish condition to recover to their acceptable standard before resuming fishing. Statistical analysis of the data indicates that the strongest relationship between fish size and number of licences sold occurred after a lag time of two years, when fish weight can explain 37% of licence sale variance.

In conclusion, fish condition will impact on licence sales, but this impact is limited since the bulk (63%) of the variation is explained by the other important factors, such as lack of time as discussed earlier.

Virtually every angler who stated that they had stopped fishing in Taupō because of the poor condition of the fish indicated that they would resume fishing there if the condition of fish recovered. Despite the dramatic improvement in the condition of fish in Taupō since 2012, there has been no sign that the decline in fishing licence sales in 2013 has slowed significantly (Figure 1). However, there are some signs of change for this spring–summer as licence sales are up marginally for October and November of this year. This is encouraging because the condition of the fish is expected to remain great throughout the summer as indicated by the abundance of smelt in the region. Provided that the same time lag of two years remains, we can expect licence sales in 2014 to be markedly improved, although probably not sufficient to reverse the overall current downward trend.

Figure 2 shows run size and fish weight obtained from the Waipa Stream trapping programme between 1998 and 2013. The blue shaded graph shows the relationship that existed between licence sale (LS) and weight (W). The closer the data points align to a clean line, the stronger the relationship. The green shaded graph in Figure 2 shows that the average size goes up as the run size goes up.

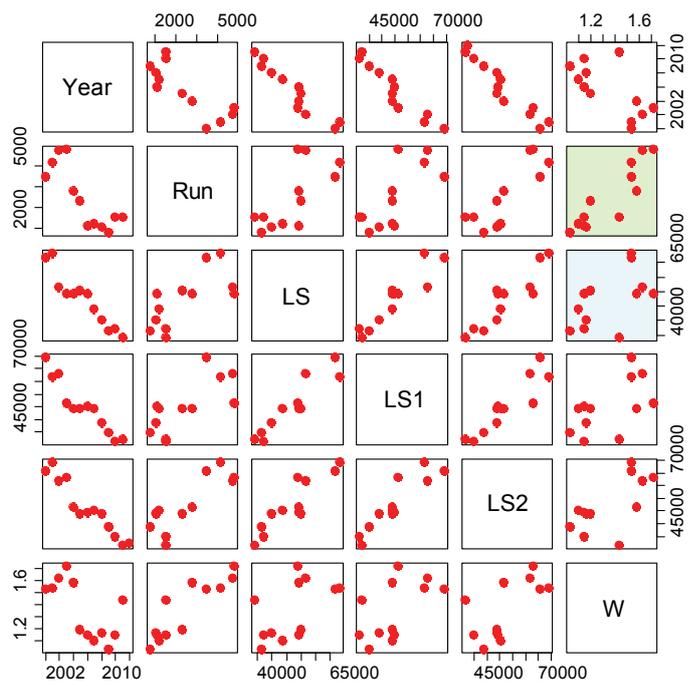


Figure 2: Relationships between year, run size, licence sale (LS), licence sale with one year's lag (LS1), licence sale with two years' lag (LS2) and weight (W).

In the survey, eleven anglers (12%) indicated that they gave up fishing in the Taupō region because of the overall cost. Overall cost includes the licence fee, gear, transport and accommodation. For some local anglers, the cost of the licence may be the deciding factor for their withdrawal from fishing, but for the visiting anglers, the other associated costs of transport and accommodation could be the main drivers. The survey did not allow us to identify which respondents were local and which were visiting, therefore we cannot identify whether the cost of a licence or other associated costs created the main burden.

However, an annual licence fee of \$90 allowing Taupō anglers to fish 365 days a year and keeping up to three fish a day is surely a good deal for the local anglers! Simply eating trout once a week will at the end of the year reduce the family protein bill by over \$90. And there is more; fishing is a multi-rewarding activity. Besides providing food, it offers a great experience of the outdoors, exercise, relaxation and social interaction. The physical and mental health benefits generated by taking part in an outdoor activity such as fishing can be substantial. North American studies have shown that out of 10 popular outdoor activities, fishing was the most powerful at increasing people's good mood, wellbeing and

self-esteem. In heavily urbanised areas, angling arguably provides the easiest accessible ‘wilderness’ experience available and can be a cost-effective way for helping address urban issues.

Many surveys reported having no buddy to fish with as an important factor in declining participation. In this fishery review, however, only one response stated no buddy as the reason for the angler’s declining participation, which suggests that this was not a significant reason for Taupō anglers’ decline in fishing.

It would be interesting to repeat the online survey after a couple of years of good fishing. However, the general downward trend in angler participation is unfortunately likely to remain despite fluctuations in fish number and quality typical of a self-sustained fishery.

Surveys have shown that people fish because someone instilled and mentored their interest. Family, neighbours, friends, etc. have socialised most of us avid anglers into our sport. That socialisation process usually begins at an early age (over 80% of today’s anglers began fishing when they were less than 12 years old) and it continues, to different degrees, throughout our lives. Therefore, the safest and probably most effective way to stabilise or increase angling participation in Taupō is to discover new ways of recruiting new, and in particular young, anglers. 🐟

BELOW
Intergenerational involvement can be the key to future participation in fishing.
Photo: David Lehndorf



.....

MAIN

Johannes Krill keeping his rod high during a short drift at the head of Blue Pool, Tongariro River.
Photo: Pete Shepherd

INSET

Tag ends left on the indicator nylon to aid the detection of strikes.
Photo: Pete Shepherd

CZECH NYMPHING

By **Mark Venman** / Fishery Ranger

Fly-fishing in the Taupō region dates back to the early years of cane rods, silk lines and the traditional wet-fly style of fishing the rivers. During the 1980s, upstream nymphing appeared on the scene from the States and was initially frowned upon by the traditional wet-liners until they recognised its potential to open up new areas of water for fishing. Upstream nymphing now accounts for approximately 80% of all fly-fishing on the Tongariro River and is the preferred way to fish the Taupō rivers. However, casting heavier rods and rigs fitted with heavily weighed nymphs or ‘bombs’ to get down to where the fish are during winter is not everyone’s idea of ‘fly’ fishing. A relatively new style of nymphing known as ‘Czech nymphing’ or short-line nymphing has arrived on the scene over the past decade, originating from the Czech, Polish, Spanish and French variations used in various World Fly-Fishing Championships.

During early May, we were fortunate enough to have a visit from expert anglers Johannes Krill and Roman Heimlich. Both men took the time to talk us through their fishing gear and showed us how to Czech nymph successfully on the Tongariro River. This article summarises how to get started with the method and also outlines the code of practise that we would like to see anglers follow should the method become more popular on Taupō rivers.

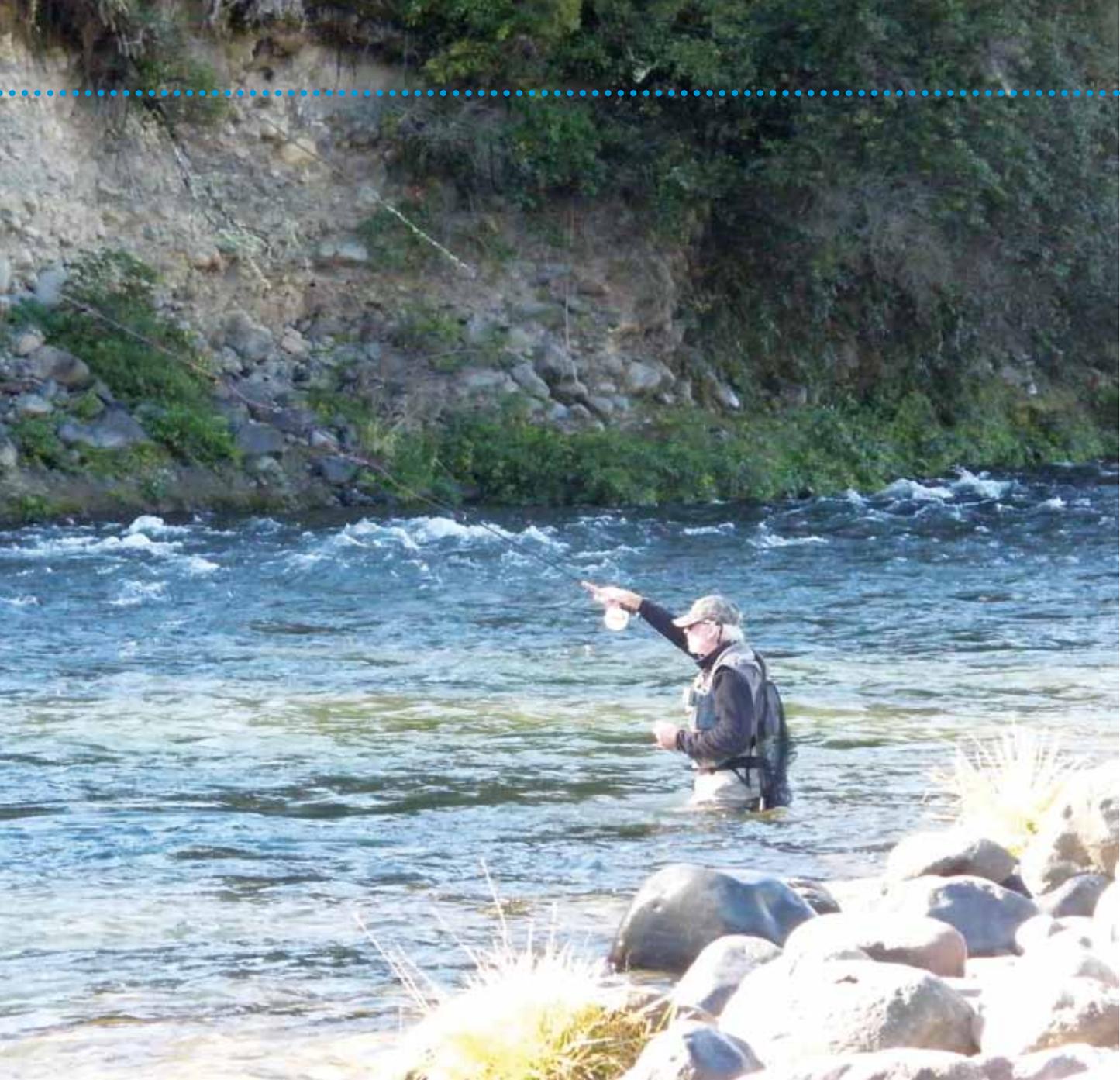
Czech nymphing is a collective term for a number of short-line nymphing techniques currently being used in New Zealand. Although it has been around



for 10 years, there has been much discussion amongst Taupō anglers who have been keen to try it out over the last couple of years. The method, when used under the correct conditions and at the right time, can be very effective but can result in a lot of smaller fish being caught, especially during the summer months. The short casts and frequent wading required mean that the method is not to everyone’s liking, and the method requires a lot of casting and a lot of concentration as the angler has to watch the coloured nylon indicator carefully during each drift.

A 10- or 11-foot, 5-weight rod is ideal and helps the angler to keep in contact with the flies and feel potential takes. A longer rod offers more reach over the water and opens up more water for fishing. It also helps with casting leverage. Rods in the 3- to 5-weight





classes help cast the light leaders as such rods can easily load mono leaders. Lighter rods also allow for the use of lighter tippets, which helps with close-quarter presentation in clear and shallow waters. A 5-weight rod is generally preferred when dealing with some of the larger, feisty Taupō trout. Ideally the rod should have a stiffer butt section combined with a relatively fine tip section. The sensitive tip makes it easier to feel your flies bouncing along the bottom and to quickly detect when a fish takes your fly. Trout will mouth a fly and accept or reject it in less than a second, and the ability to feel a take instantly allows you to strike and set the hook much faster than with traditional upstream nymphing techniques.

The lightest fly line possible is best, such as a triple 0-weight or double 0-weight floating fly line. Such

lighter lines won't pull your leader back through the rod eyes since the fly line is often barely off the reel itself. Attached to the fly line is 7 to 15 m of 8 lb Maxima Fibre Glow monofilament line, which aids the detection of strikes in low light and variable water conditions. Alternatively Hi-Vis Stren line can also be used. Attached to this is a 30 cm section of yellow coloured 8–10 lb braid or nylon, which doubles as a visual indicator. It can be useful to leave the short 2 cm tag ends on the indicator when tying it onto the Maxima Fibre Glow / Hi-Vis Stren line to help with detecting takes. To complete the rig, approximately 2 m of 6 lb fluorocarbon leader is added with one fly tied off on a dropper (approximately 10–12 cm long) after 1 m and another slightly heavier fly tied on the point. In contrast, in traditional nymphing, an unweighted fly is tied on the point. ►



Obviously, it is important to modify the length of leader being used with varying depth, but this set-up was used to fish the lower section of the Blue Pool on the Tongariro. A minimum of 50 cm between flies is recommended, with 60-70 cm preferred. Casting is much easier with two flies than three, and fewer tangles are likely. Traditional flies, such as pheasant tails and hare and coppers, will still work but are best tied on jig-head style hooks with tungsten beads in the 3-4 mm range to minimise the risk of snagging on the bottom. Two 4 mm beads are preferred in deeper or faster water as the heavier flies sink quicker and create more tension in the leader, making the detection of strikes easier to feel. Lighter flies are preferred in shallower water, where minimal disturbance is important at close range. Given the relatively high capture rate of juvenile trout, barbless hooks are highly recommended in sizes 10 to 12. However, presentation accounts for about 70% with this method, and so fly choice is not so critical.

When Czech nymphing, it is important to fish your feet first. This was evident as we watched Roman short cast from the true-left bank of the Blue Pool in relatively fast water less than 1 m deep and hook into

a juvenile rainbow. Roman then proceeded to wade out straight across the river and cast with each step until he could cast to the true-right bank. This is in contrast to traditional upstream nymphing, where you would peel considerably more line off the reel to make a longer cast. Roman then turned and fished his way back to the left bank, covering much the same water as before and continuing to hook and land fish. It was surprising to see just how close Roman could get to the fish that he would then successfully hook.

Roman was using short casts with the fly line still on the reel and was leading the flies downstream with his rod kept high, at shoulder height, at a similar rate to the river flow. This is where a lighter rod and reel helps as your arm will tire holding a heavy rod at shoulder height for an entire day! The action looked more like a flick or a lob at times, with the flies cast on an angle upstream approximately 1-2 rod lengths out from the angler. Although the method looked very easy, Roman assured us that it took a lot of practice over many years to really master the method of Czech nymphing.

With just the leader in the water, it was easy to maintain a drag-free drift, and the angler kept better



Code of practice

- Use barbless hooks.
- Use knotless landing nets.
- Take care when handling and releasing juvenile trout.
- Keep the fish in the water and use two wet hands to support it, if necessary.
- Avoid touching the fish if possible and do not put your fingers near the gills.
- Use forceps to remove the hook.
- Avoid walking on spawning areas, known as redds.
- Observe normal angler etiquette.

contact with the flies, which enhanced the detection of strikes. Any movement in the coloured section of nylon held just above the water could indicate a fish, and so it is important to strike as soon as you see or feel movement in the line.

With traditional upstream nymphing using a yarn indicator, there can be quite a delay in striking a fish once the indicator dips under the water, especially if a lot of fly line is out on top of the water, and a lot of fish could easily be missed using this technique. Also, water flows faster at the surface than lower down, and so the yarn indicator on top of the water creates drag by moving faster than the nymphs below. Czech nymphing keeps the angler in direct contact with the leader, significantly enhancing the detection of bites and resulting in more fish being hooked.

Shorter casts means shorter drifts, and so a lot of casting is required, but the flies tend to sink quickly and so are effectively fishing faster and longer than standard upstream nymphing techniques. Hand line stripping was not necessary during the drift as the rod tip was kept high while the flies drifted downstream; effectively taking up any slack in the line. The rod tip was then lowered towards the end of

the drift, allowing the flies to swing up to the surface, which often resulted in fish being hooked. However, with a relatively light set-up, a downstream breeze can be problematic in terms of casting mono leaders.

Although catch rates of trout were high, the majority of the fish caught during the trial were undersized, with only one in ten close to the legal limit of 40 cm. In smaller rivers, such as the Hinemaiaia, Waiotaka, Waitahanui or Waimarino, for example, this method will work very well, especially during the winter months when larger fish dominate the runs. The ability to fish close to river banks and fish deep holes effectively opens up a lot of new areas for fishing and can be a useful tool to target difficult fish in pocket water or at the head of deep pools and runs. Not having to mend a fly line on the water as with traditional upstream nymphing and not having to worry so much about varying surface currents makes targeting trout at close range so much easier.

How an angler handles and releases a fish is obviously critical to the survival of undersized or unwanted trout, and it is a concern for fishery managers when high numbers of smaller fish are being caught. Where possible, trout should be kept wet and unhooked whilst still in the water ideally without touching them. The use of barbless hooks is highly recommended to make releasing fish easier.

Despite the large number of undersized fish caught during this trial, the Czech nymphing method was certainly effective and caught fish in some areas where anglers wouldn't normally be able to fish. Once a decent fish was hooked, the action was all go with it hooked on a short cast at close range. Roman explained that it wasn't always a 'killer method', but it had its place at suitable locations and under the right conditions.

Let's not forget that Wee Wets, Glo Bugs, Woolly Buggers and dry flies will still take their fair share of trout throughout the season when conditions are favourable, however, the addition of short-line Czech nymphing to your arsenal of fishing techniques will certainly help you catch fish at times and in places where others anglers might struggle. 🐟

FAR LEFT

Roman Heimlich demonstrating the high stick action required with his coloured nylon indicator visible just above the water's surface.
Photo: Pete Shepherd

ABOVE

Jig head flies.
Photo: Randal Hart

When is a *Whio* not a duck?

By Dave Plowman / Ranger, Fishery

With safety the priority when working with boats on water, it was time the fishery's old dingy was retired. It had passed its best-used-by date and with a changing workload had become unsafe. The dingy was fine for surveys on Lake Otamangakau, however, catfish monitoring on Lake Taupō involves two people hauling aboard nets that can weigh up to 80 kg, and a safer working platform was definitely necessary.

A visit to the Auckland boat show gave me the opportunity to check out the options and talk directly with the various manufacturers. An aluminium pontoon appeared to tick all the boxes, and a visit to Trev Terry Marine in Taupō gave us the opportunity to test a demonstration boat. An exercise in pulling heavy weights over the side proved that the boat was exceptionally stable.

Consequently, with funding from the sale of another boat that had become surplus to requirements, we were able to upgrade to a fit-for-purpose vessel at no cost to the fishery. After some minor modifications, including the addition of a 4-stroke motor, we now have an economical, clean-running, quiet, reliable and safe asset.

For a small vessel, *Whio* handles the sometimes rough conditions on Lake Taupō beyond our expectations and has proved invaluable for compliance work and surveys on both Lake Otamangakau and the southern end of Lake Taupō. Look forward to seeing you on the water! 🐟



ABOVE
Rangers Michael Hill right and Dave Plowman introducing *Whio* to Lake Otamangakau.
Photo: Pete Shepherd

BELOW
Whio perfect addition to the compliance team.
Photo: Pete Shepherd



PROGRESS IN ERADICATING

MONKEY MUSK

By Mike Hill / Fishery Ranger



Work continues on eradicating the weed monkey musk (*Mimulus guttatus*) along Whangamata Stream in Kinloch. Monkey musk is an invasive weed that can choke small streams and wetlands and out-compete native plants. For this reason, the Taupō Fishery follows an annual control programme for this weed in an attempt to provide clear passage for free-running trout, giving them a better chance to migrate up this important tributary to spawn.

We apply safe, regulated levels of the herbicide glyphosate to control the weed. To ensure that the herbicide is not deposited too heavily within the stream's catchment, we treat the stream in two sections; applying glyphosate to the first section then returning to tackle the second section after a seven-day rest period. The rest period also gives the application time to be well absorbed into the weed's root system before we return to rake away any plant remains that might be causing blockages.

MAIN
Ranger Mike Hill on the job.
Photo: Gordon Crabb

INSET
Mimulus guttatus, common name monkey musk.
Photo: Gordon Crabb

We have restricted raking the dead weed after treatment to particularly dense areas for two reasons:

1. We discovered large amounts of fry among monkey musk that had been raked up onto the stream banks and had to push the weed back into the water in an attempt to save as many small fish as possible.
2. We cannot be totally confident of how fully the glyphosate application is penetrating the weed's rhizomes (fine roots) because of the saturation levels in the soil around these rhizomes. During raking, small sections of weed can break away and drift downstream, and we are concerned that these fragments might take root and start a separate colony in a new area.

One area along the stream has proved particularly challenging, requiring more attention than the rest of the stream combined. Located 45 m in from the lake shore, this is an open area that receives a lot of sun, which contributes to strong re-growth. The area is also low to the stream, which can flood and turn the area into a small lake. Flooding has allowed the monkey musk to spread across land, settle and grow substantially in hidden pockets. In this 'problem area', we have had to spray beyond the stream edges to minimise re-infestation as a result of flooding.

Thanks to the team's persistence, the good news is that we are seeing a decline in the amount of monkey musk present in and around Whangamata Stream. The flow-on bonus is that we are using considerably less herbicide, resulting in less compound exposure and less expense, so we're winning on all fronts. 🐟

RIGHT

Brown Bullhead Catfish
(*Ameiurus nebulosus*).
Photo: Peter Wilton

FAR RIGHT

Catfishing competitions such as 'take a kid catfishing' are becoming increasingly popular.
Photo: Peter Wilton

BELOW RIGHT

Takurua Reweti with a great specimen.
Photo: Peter Wilton



SPEARING CATFISH

By Mark Venman / Fishery Ranger

The topic of catfish spearing, or fishing, has become a popular one, and every couple of weeks, I receive an email or a phone call from a member of the general public wanting to know the ins and outs of spearing catfish on Lake Taupō. This short article addresses the most frequently asked questions to help keep everyone more informed and legal.

Catfish have been in Lake Taupō since the early 1980s after their accidental or deliberate release. They tend to be found around the southern end of the lake at locations such as Waihi and Motuoapa bays and come in close to shore over the summer months to spawn in the reeds and raupō. Catfish can also be found north of Motuoapa Bay towards the Tauranga Taupō rivermouth. At the northern

end of Lake Taupō, they can be located around Whakaipo Bay and even along the lake front of Taupō township itself, but they are limited by a lack of suitable habitat at the northern end of the lake.

No special fishing licence is required to fish or spear catfish, and there is no open season - you can fish for them 365 days a year. No minimum (or maximum) size limit exists, and you can take as many as you like. Catfish are considered a pest fish within Lake Taupō, and so we would encourage you to capture and kill as many as possible. The larger catfish can be filleted and skinned from the dorsal fin to the tail and, when coated in a batter, can provide a satisfying meal after a day spent snorkelling in the lake. A sling-based spear gun



and a catch bag is all that you need to get started once you have your basic mask and snorkel sorted. It is advisable to stay at least 300 m away from river mouths as trout tend to congregate at these spots and it is an offence to spear trout.

The old Tokaanu wharf provides a great platform for fishing for catfish, using light spinning rods and a basic rig consisting of a small size-12 hook, ball sinker and a piece of cheese. Let the bait down and hold it just above the weed beds in only a few metres of water. The small hooks work well, and it is easy to get a bucketful of catfish within a couple of hours using this method. Alternatively mussels work well as bait, but to my thinking, mussels taste better than catfish. I'll leave that up to you to decide! 🐟



NO FRILLS FISHING

No \$\$ but a lot of inclination!



By **Pete Shepherd** / Partnerships Ranger

When growing up in a town like Taupō, it's inevitable that, at some stage, you'll find yourself in a small tin boat, sipping a hot chocolate, fishing rod in hand, staring at the great blue yonder. If you're anything like me, such times get you to thinking about the myriad of methods available for catching that elusive town mascot. When I reached my teens, my method of choice was to stalk the river banks of the closest stream I could get to by bike and spend the better part of a weekend whipping the water with my dad's old Kilwell fly rod. Like most teenagers, I had a series of after-school jobs, which, for the most part, paid the

minimum wage. My budget for fishing was pretty tight, especially because, at the same time, I was chasing the other, more elusive, prize of the female persuasion, which came with a higher price tag. What I lacked in cash, though, I made up for in enthusiasm and would take any opportunity to get out and fish.

Fly-fishing, the sport of gentlefolk, lends itself well to those who don't have the deep pockets required to get out on the lake to fish. First and foremost, a rod, reel and line are very necessary. Before casting your net out in search of the best, top-shelf rod money can buy, however, check the home garage:



“What I lacked in cash, I made up for in enthusiasm and would take any opportunity to get out and fish”

MAIN

Basic Kayak set ups are worth considering when cash is the limiting factor.

Photo: Pete Shepherd

ABOVE CENTRE

Andy and Suzy Broadley successful morning jigging – Lake Taupo

Photo: Michael Hill

ABOVE RIGHT

A collection of fishing gear purchased from second hand stores and opportunity shops.

Photo: Pete Shepherd

Mum or Dad might just have in their possession the ‘mack daddy’ of all fly-fishing rods. If not, it’s time to go shopping... and then fishing...

If you’re new to the sport, the more information you can glean before you dive in, the better. Techniques and methods for fly-fishing are as varied as the equipment available to support them. There are many publications, websites and articles that provide advice on fly-fishing techniques. Advice can be technical or relatively basic. Try to hunt out advice to your level of skill. Retail owners are another great source of advice on fly-fishing and fishing in general. I was lucky when I first took up fly-fishing as I had numerous family members who fished, and my best source of advice was my closest friend who was mad keen on nymph fishing.

Once you’ve decided what method you’d like to try, get out with someone who already uses that method, and look to borrow or hire some equipment for your first few outings. Waders are good if you can get your mitts on a pair but not essential for a beginner. Gumboots will get an angler to a lot of fishable water on the smaller streams in the Taupō fishing district. You’ll need to wear clothes that ▶



LEFT
Fully set up fishing rods priced under \$100.
Photo: Pete Shepherd

BELOW
Kayak fishing is a great angling experience that can be very successful.
Photo: David Lehdorf

are a natural colour, such as greens and browns, in order to blend with the background. You don't need anything flashy, but it needs to be able to cope with the likely weather during the day.

If, on your first few excursions onto river, you're able to get onto some trout, the likelihood is you'll be hooked, too. Once you get to the stage of looking to purchase your own set-up, don't go past your local outlets. All the retail operators in Taupō will give you a good steer. Prices range to suit your budget, and there are some pretty good, cheap set-ups available. If you know what you want, the internet's an obvious place to search, and again it offers numerous choices. Second-hand stores, garage sales and op shops are another option well worth checking out: you'll be surprised what people are looking to get rid of.

Another form of trout fishing that has taken off in recent years is jigging on the lake. It's another cheaper option. You don't need a power boat – a kayak and some good water safety gear can get you to some excellent fishable spots, and jig rod set-ups are very affordable. Again, the internet is a great place to find cheap boats and gear.

As the popularity of jigging increases, more information is coming through on appropriate techniques – depth and action are the key ingredients to successful jigging. Playing a trout from a kayak is a great experience too and quite different from fishing from bigger vessels.

There are a surprising number of affordable fishing options out there that offer a priceless fishing experience. 🐟





Love your river? PROTECT IT

Ranger Gordon Crabb paddling the inner shoreline in search of a reported terrapin sighting.
Photo: Brenda Lawson

CHECK, CLEAN, DRY BETWEEN ALL WATERWAYS

By Brenda Lawson / Partnerships Ranger-Freshwater Threats

Recently I had a very interesting conversation with a local angler on the riverbank while I was didymo testing - a very nice Taupō chap, he was, and clearly loves fishing in his beautiful, local rivers.

I explained what I was doing and then asked him whether he visited more than one river in a day and, if so, did he 'Check, Clean, Dry' between rivers? The interesting part for me is that he replied that he did move between rivers in a day but didn't 'CCD' at the moment, declaring, "I would CCD if didymo were here."

Unfortunately, at this point, the skies opened up, and we all ran for cover, so I never got to explain to him why it's important to Check, Clean, Dry all the time.

So I thought this article would be a great opportunity to explain the didymo testing that we undertake and why it is important to Check, Clean, Dry regardless of where you fish and how rarely you change rivers.

DIDYMO: TESTING OUR WATERWAYS IN ONE DAY!

Visiting our beautiful rivers has got to be my favourite job. They are all so different - from the mighty bulk of the Waikato near FullJames Rapids to the low shallow flow of the Waiotaka. My least favourite would have to be the Waimarino where it flows under the SH1 bridge, with trucks continuously rumbling over the top - I have visions of a large articulated dropping by for a visit one day! I'm sure ▶

it's a beautiful river upstream, but I've not had the opportunity to head up there yet.

At the other extreme, my favourite would have to be the Tauranga Taupō as that is where I learnt to fly-fish. I take the sample for didymo at the lower end, which is not as pretty, but I'm fully aware of how beautiful it is further up.

We test the Tongariro River every month as it is the most heavily used river. Anglers and other recreational users visit from all around the world to experience its pristine, fast-flowing, trout producing waters. Every second month, we also sample the Waiotaka, Waimarino, Tauranga Taupō, Hinemaiaia, Waitahanui, and Waikato rivers as well as Waihukahuka Stream. This year, we have also sampled the Waipakihi, Ngaruroro and the Mohaka, with the Rangitikei earmarked for testing shortly. Such regular testing is necessary to ensure that we are notified as early as possible about any presence of didymo and are able to stop its spread to surrounding rivers and lakes.

Each river is sampled at a particular point. The main goal is to sample the most downstream point so that the recreational use upstream is captured.

I set up my equipment, which comprises a series of sieves along a 'drift net', and hold it in the river for 10 minutes. The first sieve on the drift net captures the bigger particles to prevent the samples getting too big. The second sieve is so fine that it traps microscopically small algae cells, including didymo.



After those lovely 10 minutes, I transfer the sample to a vial that contains some preserving ethanol. I write on the details of when and where the sample was taken and later package it up to send off to The University of Waikato, where there is specialised equipment to analyse DNA.

The day becomes quite long, not only with travel between each river but also because I follow very strict Check, Clean, Dry procedures between each river - not only decontaminating my waders and equipment to kill any cells picked up in each river but also denaturing any cells in the sampling equipment. Decontaminating is straightforward as I have the detergent solution in a garden sprayer and can easily spray my waders with solution, and I soak the handle for the drift net in a 2% bleach solution between rivers.



LEFT

Ranger Brenda Lawson testing local rivers for didymo (*didymosphenia geminata*).
Photo: Murray Cleaver

BELOW LEFT

Ranger Brenda Lawson cleaning competitor equipment before the T42 multi sport event.
Photo: Gordon Crabb

SO WHY IS IT IMPORTANT TO CHECK, CLEAN, DRY ALL THE TIME, EVEN IF THE LATEST TESTS ARE NEGATIVE?

The reality is that we can never say for certain that a particular river is didymo free, and here's why ...

Firstly, it takes up to 10 days for the results to come through from the university (their analysis follows a very complicated process, involving several complex steps). That's 10 days of not knowing whether a particular river is negative or positive for didymo.

Secondly, even as I sample a river, numerous recreational activities are taking place or are set to take place – anything from rafting, kayaking, fishing or swimming through to tramping. So, from the moment I've collected my sample, conditions in the river could have changed and someone could have transferred didymo into its flow. At any stage in the month or two between samplings, there is more opportunity for didymo to be introduced into one of our lovely rivers, and the chances of someone then unwittingly transferring that didymo between rivers is high.

WHAT CAN WE DO TO PRESERVE OUR RIVERS' AWESOME QUALITY FOR THE FUTURE?

Check, Clean, Dry is the only way to stop invasive threats spreading between our rivers, and luckily for us, it's a very easy thing to do.

Restricting yourself to one waterway or drying your gear properly (once it is dry, avoiding using it for a further 48 hours) is also very effective. Alternatively, many people who visit the South Island regularly equip themselves with two sets of gear – one set to use in the North Island, the other in the South. Why not take the same approach for our lovely Taupō rivers? (This approach has the added bonus of reducing wear on your gear.) ▶

Decontaminating the drift net itself is a more technical process as the net has to be 'denatured'. Denaturing blasts apart all algae cells trapped in the net, to the point that even dead cells can no longer be detected. Denaturing became common practice after dead didymo cells were picked up in North Island testing several years ago from equipment that had previously been used in the South Island (understandably, nowadays, nothing from the South Island is used for any part of the sampling process). Denaturing is achieved by soaking the drift net in a 5% bleach solution for 15 minutes. Between every river, I have to make sure that there is absolutely no possibility of water transfer – even a wet shirt cuff is a transfer danger. Imagine if we discovered that I was responsible for didymo transfer!

Cleaning is easy since regular household detergent is as effective as anything else for neutralising the algae. Other effective products include bleach, disinfectant and salt – you can even kill didymo by freezing your gear!

The trick is to be organised and set up a cleaning method that best suits you for the amount of gear you need to clean. For example, we use a cheap garden sprayer with 5% detergent solution to clean our waders between our river tests. For smaller items, you could use a 1-litre spray bottle, available at your local fishing, outdoor or boating shop. We even provide cleaning stations and detergent around the countryside for you to use. How easy is that?

A little bit of detergent or a whole lot of didymo?

CHECK, CLEAN, DRY

For more advice on cleaning and gear:

- › **Contact the DOC Freshwater Threats team at the Taupō Office.**
Phone: 027 750 2104 or
email: checkcleandrytaupo@doc.govt.nz
- › **Visit: www.mpi.govt.nz <http://www.biosecurity.govt.nz/pests/didymo/cleaning>**
- › **Like us on [facebook.com/ccdtaupo](https://www.facebook.com/ccdtaupo)**
- › **Freephone the MPI hotline: 0800 80 99 66 about any suspected threat sightings.**



Recreational sports that move waterways are also a risk to freshwater if cleaning protocols aren't undertaken.
Photo: Garth Oakden



NEWSFLASH!

DOC urges strict use of Check, Clean, Dry after delays to local didymo testing results

Local didymo testing results have been delayed for two months with the last negative results for eight local rivers dating back to late December 2013. The DNA analysis machine used to test river samples for didymo is being recalibrated, and this has held up analysis of the samples for January and February 2014. DOC urges all fresh waterway users to keep using best Check, Clean, Dry (CCD) practices to protect the Central Plateau's pristine waterways from invasive threats, such as didymo.

DOC Freshwater Threats Ranger Brenda Lawson says it is imperative to continue using CCD when moving between all rivers and lakes. "We can never say for certain that we are negative for didymo. Check, Clean, Dry is the only way to stop invasive threats spreading," she says.

"Regular testing is necessary to ensure that any didymo is detected as early as possible and stopped from spreading to surrounding rivers and lakes," Brenda explains. "But, because of this DNA calibration delay, the testing period has been pushed out to three and four months."

Appreciation of our great freshwater assets and the desire to protect them for the future have already motivated many freshwater recreationalists to follow CCD diligently. However, a few have admitted that they don't always apply CCD between rivers and lakes but would if they knew that didymo were present. DOC urges everyone to take up the CCD practice without waiting for confirmation of didymo before they act. "If we wait for a sighting or positive test result before deciding to CCD," Brenda says, "it will be too late, and many more of our rivers could become infected."

Brenda says that one deterrent to more of the general public following the CCD programme seems to be the perception that it is hard to do. But she refutes this. "Check, Clean, Dry is so simple! Keeping to one waterway or drying your gear well between rivers are both very effective options, and cleaning can be as simple as spraying your gear thoroughly with a common household detergent." 🐸

NOTES

- › The Central Plateau is still classed as the highest risk area for didymo in the North Island because of our pristine cold water.
- › A total of 160 catchments in the South Island have been identified as containing didymo, with the algae now confirmed as pushing into the Nelson Marlborough region.
- › There are no scientific reasons why didymo would not survive here, and water testing by the Cawthron Institute confirms that didymo could grow in North Island rivers.
- › There is still some confusion about the definition of "catchment" in association with needing to Check, Clean, Dry (CCD) between waterways and catchments. A catchment is an area where water drains from high points in the mountains to rivers, lakes and eventually the sea. The Taupō region has a very large catchment. For this reason, it is perhaps easier to apply the term 'waterways' in relation to CCD – to prevent didymo or other freshwater threats spreading, we need to Check, Clean, Dry between all waterways, regardless of size or location.
- › It is also important to Check, Clean, Dry even if you are only moving between our local lakes. For example, the freshwater weed hornwort exists in Taupō and Rotoaira lakes but not in Kuratau and Otamangakau lakes, and an introduction of this weed would be particularly devastating to both those lakes and their fisheries.
- › Please also remember that the upper Waikato River borders the control bridge, which is only a hop, skip and a jump away from Lake Taupō. The lower Waikato River contains unwanted fish species, such as koi carp and gambusia, and freshwater weeds, such as parrot's feather and alligator weed. It is important that these pest flora and fauna are not transferred up river, which is easily prevented by Check, Clean, Dry. If you are water skiing in the Aratiatia dam area, please ensure that you Check, Clean, Dry before transferring to water ski in Lake Taupō.
- › Check Clean Dry is easy. It requires only a little forethought and preparation. Please phone the DOC Freshwater Threats team on 027 750 2104 if you need advice, especially about applying the treatment to larger equipment, or would like to promote the Check, Clean, Dry message at your work.



WILD ABOUT TAUPŌ

By Peter Wilton / Services Ranger

Sitting in a backcountry hut, hunkering over the warm glow of a log fire while outside rain pelts against the window seems the ideal time to reflect on what I will say in this article. Not far away, about the distance of an average cast, the Tongariro River roars through a spectacular gorge, its rapids echoing in my ears. It's always there; a presence, demanding respect.

I have spent the last 18 years working as a fly-fishing guide and, through the winter months, have the privilege of working as a fish-trap operator for DOC. This work has placed me right in the heart of the Taupō trout Fishery. It's hands-on stuff – exactly the type of work I most enjoy. I get to hold the future of the fishery literally in my hands; those prime rainbows and browns, as they migrate upstream on their annual spawning run. The Waipa Stream, where I work, enters the Tongariro via a steep-walled gorge. It's dramatic country.

On the other hand but also just as intimately involved with the fishery, I get to fulfil my other passion as a fly fishing guide. One line of work is involved with the region's tourism, the other gives me the opportunity to be involved in the

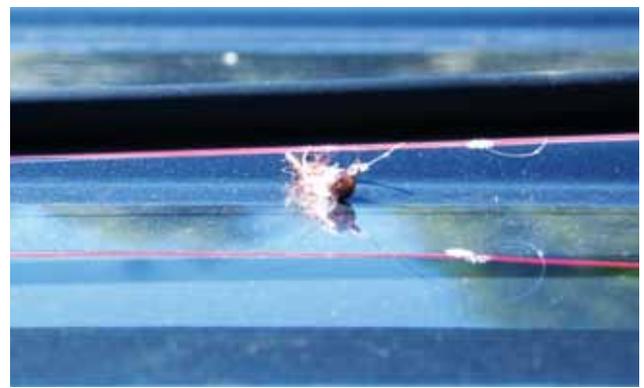


FAR LEFT
Prime example of a Hinemaiaia Rainbow.
Photo: Peter Wilton

LEFT
Author working at the Te whaiiu trap.
Photo: Mark Venman

BELOW LEFT
Dave Hargen from Canberra caught this nice 6lb jack on the Hinemaiaia Stream.
Photo: Peter Wilton

BELOW
Gold bead hair and copper, common nymph lure.
Photo: Pete Shepherd



management of the fishery. I'm a relatively new boy to the fishery team at DOC but both these involvements put me in a position to view the Taupō Fishery from completely different perspectives.

It will be obvious to most readers, both local and regular visitors to the region, that the Taupō trout Fishery has been through some lean times recently. The downturn in the fishery over the last six to seven years has been a distinct low point, but this is not a completely new trend. In the 1920s, stocks in the lake took a downturn in quality when fish numbers flourished to the point that their food supplies became inadequate.

The Department of Internal Affairs, as it was at that time, solved the problem by netting the lake and selling the catches to the Auckland markets in order to reduce the rainbow population. Later, smelt were introduced to the lake to help solve food supply issues, and their introduction has been largely responsible for the success of Taupō today.

So what lies ahead for Taupō in 2014 and for its trout fishery's future? I can only say that the 2013 winter season was fabulous and probably the best winter

fishing the area has experienced for some time. The quality and numbers of rainbow entering all the spawning rivers from April through to September 2013 bore testimony to the fishery's resilience.

Nature can impact brutally on our wild trout population, but this is the very essence of being wild and helps the fishery retain its strong genetic stocks. Fishery managers and scientists have remained steadfast in their confidence that the fishery would recover, while anglers, the local fishing fraternity and even some of us fishing guides have at times been critical of the way the fishery has been managed. Yet, last summer, the lake anglers experienced some of the best fishing for years, and this carried over to our rivers during the winter spawning runs.

The Hinemaiaia produced some truly prime rainbows early in the 2013 season and continued to produce some of the highest catch rates throughout the winter months. Likewise, the Tongariro held big numbers in its lower reaches and fished superbly through July 2013 and onwards. Rainbows averaged close to 3½ lb, with 5 to 6 lb beauties not uncommon. Among the browns, there were also some prime ►



FAR LEFT
 Waipa trap on crisp winter morning.
Photo: Peter Wilton

RIGHT
 Monitoring on the Waipa trap "selfies".
Photo: Peter Wilton



catches in the 6 to 8 lb class. I have never seen so many browns holding in the Waitahanui River as there were in April and May 2013.

What of the fish traps that DOC monitors along our rivers? Well, Waipa Stream is definitely up on quality compared to previous seasons, with rainbows on average 10 cm longer and 0.5 kg heavier. The browns' 2013 run, which came first in this small spawning stream, was as impressive as usual, with the fish in superb condition.

Some water received a lot of pressure from fishers, and during surveys on the Hinemaiaia, I often pointed out spawning areas, or redds, to anglers. These redds can be easily damaged by wading anglers so, if you are fishing this little gem, please respect the privilege of the recent addition of access to this extra 2.5 km and watch carefully where you are walking.

It only seems fitting to finish my ramble by returning us to the river: its serenity and a lasting memory of the final fish of the day. The river? The Tongariro of course, with me sitting on a large boulder high in its upper gorge while the last rays of sunlight filtered through the pines that surrounded it. A few hundred

metres upstream, the river thundered against moss- and fern-covered cliffs before descending in a series of white foaming rapids. The whole scene is captivating and inspiring with its raw power and beauty, and if it doesn't seem so, well, you're probably not a fly-fisher.

The final fish of the day? A rainbow jack of around 2.7 kg. Only about 6 lb, I hear you thinking; and yes, that's true, but this was a fish full of spirit and beautiful colour. Gill plates and flanks blood red descending to burnt orange around the belly, a prominent hooked jaw and classic sock eyes. I held him in my hands and, for a brief moment, he eyeballed me, almost allowing me a glimpse into his watery world. Placing him over the bars of the fish trap, we both paused as he contemplated the journey ahead. A sweep of his broad tail, and he powered from my fingertips, his bow wave merged with the silver ripple of the stream, and he was gone. "I hope you make it mate. Go show those ladies a thing or two," I muttered, urging him on his way. And I had to admire him; wild, majestic and, I thought, just a little bit like our fishery, running against the flow. 🐟

New face to the Taupō Fishery



TOM SCOTT-SIMMONDS FISHERY RANGER

Kia ora koutou. I'm the latest addition to the Taupō Fishery team. I have a background in marine biology and environmental management and I'm especially passionate about managing New Zealand's aquatic environments. Originally I'm from Hamilton but moved here recently after spending a couple of years working as an aquarist in Auckland for Kelly Tarlton's Sea Life Aquarium. Like the work here with DOC, my role at Kelly Tarlton's involved a variety of tasks, ranging from hand feeding sharks to rehabilitating turtles.

I am also a fanatical fisherman and diver, with most of my experiences to date taking place on the open ocean, so I am especially keen to immerse myself in the fishing culture here in the Taupō region. No doubt you will see me out and about on the lakes and rivers, and I look forward to meeting you all.

FAR LEFT

My favourite pastime –
catching big angry fish.
Photo: Jacob Simmonds



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COMPLIANCE ROUND-UP

By **Mark Venman** / Fishery Ranger

The arrival of summer and fine boating weather sees a huge influx of visiting anglers to Lake Taupō especially during the Christmas period, when many Kiwis head to the area for their family holidays. For many people, this is the only time of year that they fish for trout, and they often bring friends with them who, when they see the lake and the fishing on offer, are keen to fish themselves. This is also a busy period for the fishery rangers, who patrol the hundreds of boats dotted all over the lake. The 2012/13 summer was a particularly frantic one, with fine settled weather and lots of happy anglers out and about. A number of offences were detected by the rangers on duty then, ranging from no licences to

anglers providing false details. The 2013/14 summer was wetter and windier but still saw a number of unlicensed anglers out fishing on the lake with similar offences detected.

The rangers encountered a small number of anglers over both these seasons who were using licences that belonged to other anglers. In several cases, these anglers were using their parents' licences. As stated on the licence, fishing licences are not transferrable and can only be used by the person whose personal details are written on that licence. When a fishing licence is signed by the holder it becomes a legal document. Fishing without a licence



MAIN

Common sight on the Tongariro River during the winter spawning run.

Photo: Anna McKnight

TOP RIGHT

Always use an accurate measure when checking fish size

Photo: DOC supplied

BOTTOM RIGHT

It's important to release trout properly which improves their survival rate.

Photo: Shar Joyce

carries a penalty of up to \$5,000, while providing false details can lead to a fine 20 times this or up to 2 years in prison (or both).

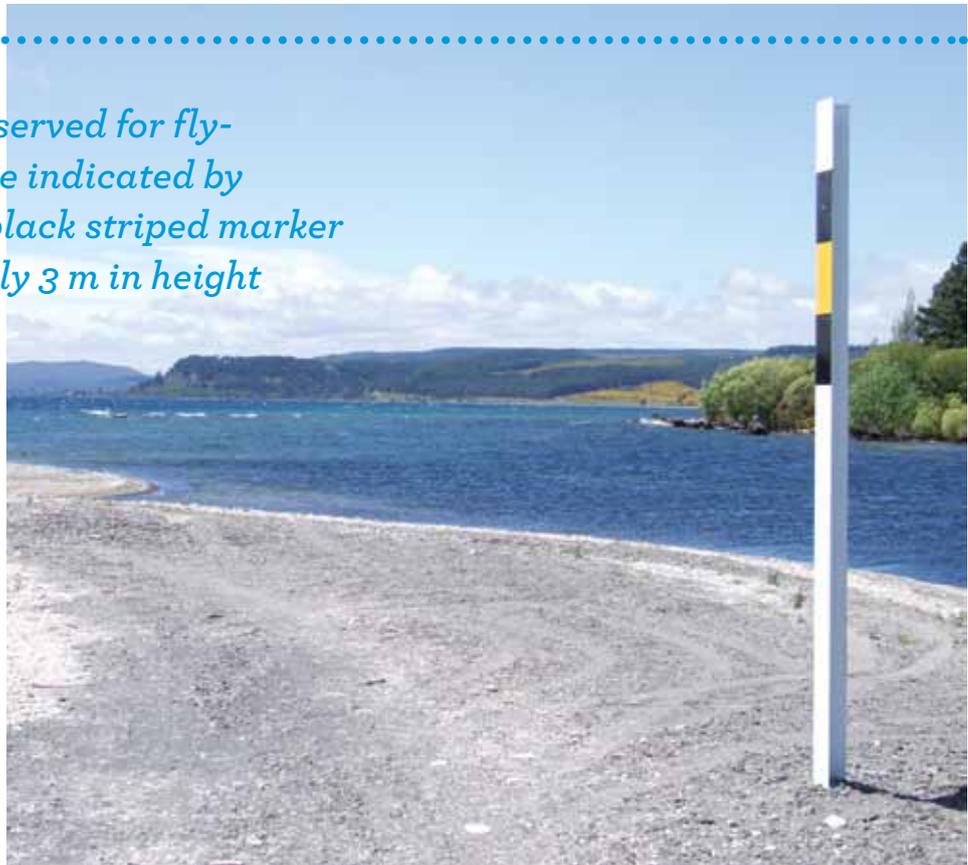
Fishing is a highly valued recreational pursuit and contributes significantly to the Taupō regional economy. Management and compliance operations within the fishery are funded solely by recreational licence sales. Anglers who dodge buying a licence contribute nothing to the management or protection of the fishing resource for future generations.

Rangers are out most weekends, public holidays and at different times of the week, and the chance

of being stopped and checked is quite high. Please don't be surprised if a ranger asks you to provide further forms of identification to ensure that they are talking to the correct licence holder.

Anglers who are caught fishing without a licence can expect to have the fishing gear they are using and any fish they have taken seized regardless of who actually owns the fishing gear. To avoid unnecessary embarrassment and a lot of paperwork, please make sure that all anglers aboard your vessel, who wish to fish for trout, each have their own current Taupō fishing licence with them. ►

These areas are reserved for fly-fishing only and are indicated by white, yellow and black striped marker poles approximately 3 m in height



Marker poles like these near to river mouths identify fly fishing only water.

Photo: DOC supplied

There also appears to be confusion over the three-fish-daily bag limit and when an angler must stop fishing for the day. All licenced anglers in the Taupō Fishery are entitled to keep a maximum of three trout per day. Once an angler has killed their third fish for the day, they must stop fishing for the rest of that day. Some anglers have been continuing to fish after catching their third fish, claiming that they are practising catch and release. This is a breach of The Taupō Fishery Regulations 2004 (the Regulations) and could lead to the accidental death of trout as a result of poor release techniques after capture.

It is also illegal to keep trout alive in bait tanks until a larger or better fish is caught. Anglers are also reminded that the legal limit is three trout per angler, so each angler on a boat must catch their own three fish – an angler cannot catch and kill a fish and then give that fish away: that fish is actually counted as one of the three fish that angler caught and kept that day.

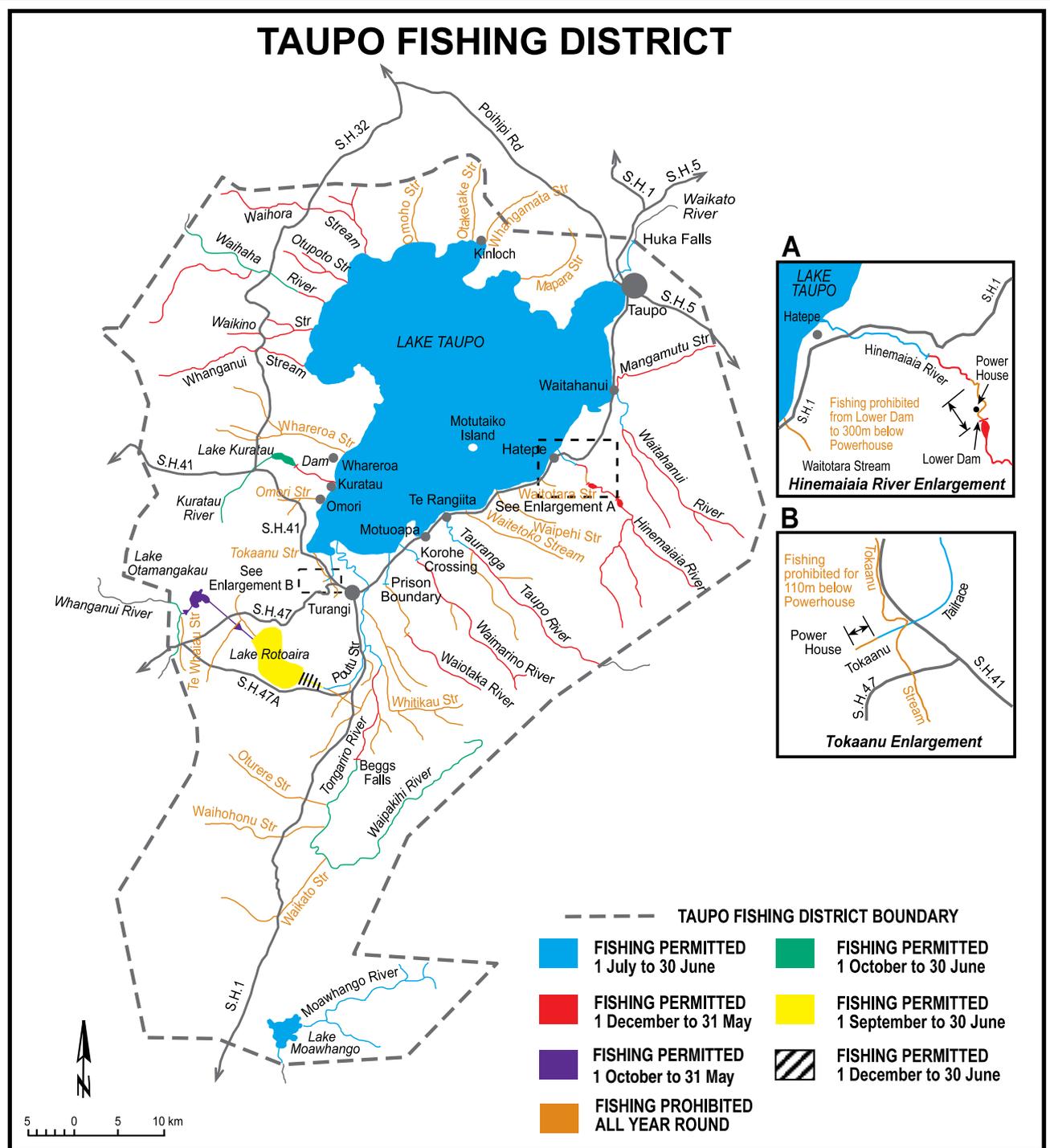
A small number of anglers have also been apprehended fishing on the lake using more than one rod at a time. This is also a breach of the Regulations. Anglers must only use one rod and one line at any one time and so cannot jig or troll with two rods. All children on board a boat must be licenced if they want to fish and must be physically able to reel in a trout themselves.

Anglers have also been encountered trolling and jigging well within 300 m of a number of river mouths. These areas are reserved for fly-fishing only and are indicated by white, yellow and black striped marker poles approximately 3 m in height. These marker poles are there to indicate that there is a river entering the lake. The 300 m radius starts at the centre of the river mouth, not from the marker pole itself – ideally keep well clear of these areas when trolling or jigging to be on the safe side. For further information, please refer to the information on your Taupō fishing licence or to the Regulations themselves for more detail.

We would like to take this opportunity to thank all anglers surveyed on the lake so far this year for their time and the feedback they have provided. Some anglers were checked for the first time, while others have been surveyed several times, but the information gathered is very important from both a management perspective and a compliance one, and the exercise provided our rangers with the opportunity to engage directly with many anglers.

So, be safe out there, and if you do see the fishery regulations being broken or other illegal activity occurring, please contact the DOC fishery rangers directly, and as soon as possible, on phone: 027 290 7758 so that we can act quickly to ensure a successful result. 🐟

TAUPO FISHING DISTRICT



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OUR PLAYGROUND, OUR RESPONSIBILITY

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