

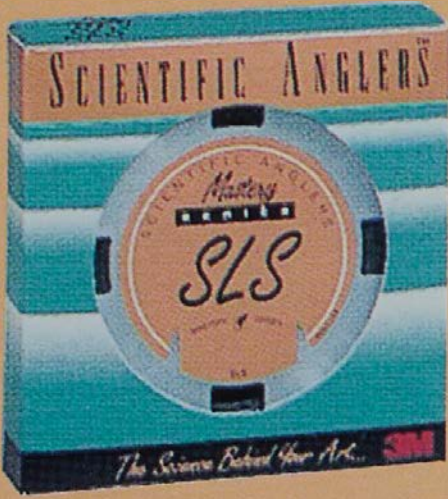
# TARGET TAUPO

A Newsletter for Hunters and Anglers  
in the Tongariro/Taupo Conservancy

NOVEMBER 1998, ISSUE 29



Department of Conservation  
*Te Papa Atawhai*



# BETTER THAN EVER

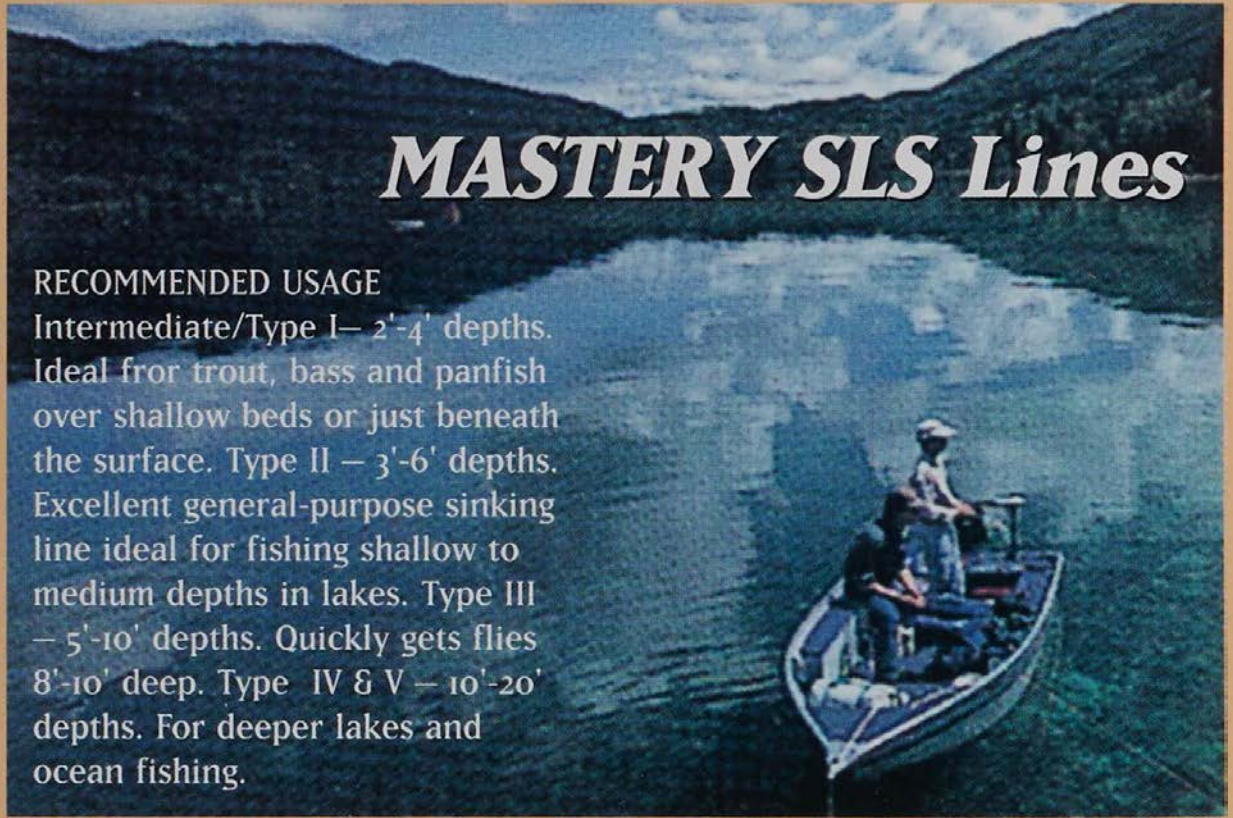


A unique method of blending high and low density coatings resulting in a superior casting line. With a true denser tip for straight-line connection to the fish.

## MASTERY SLS Lines

### RECOMMENDED USAGE

Intermediate/Type I – 2'-4' depths. Ideal for trout, bass and panfish over shallow beds or just beneath the surface. Type II – 3'-6' depths. Excellent general-purpose sinking line ideal for fishing shallow to medium depths in lakes. Type III – 5'-10' depths. Quickly gets flies 8'-10' deep. Type IV & V – 10'-20' depths. For deeper lakes and ocean fishing.



We've focused our resources and unparalleled technology expertise on creating the most functional, application-specific products in the history of fly fishing. No matter what kind of fishing you do, there's a Mastery product designed to help you do it better than ever.



Marketed in New Zealand  
by KILWELL SPORTS  
the fishing specialists



Scientific  
Anglers™  
3M Innovation

# TARGET TAUPO

A newsletter for Hunters and Anglers  
in the Tongariro/Taupo Conservancy

NOVEMBER 1998, ISSUE 29

Published by  
Department of Conservation  
Tongariro/Taupo Conservancy  
Private Bag, Turangi, New Zealand

ISSN 0114-5185

Telephone (07) 386 8607  
Facsimile (07) 386 7086

Production and advertising by Fish & Game New Zealand  
Telephone (09) 579 3000  
Facsimile (09) 579 3993

## CONTENTS

Poaching in the Taupo Fishery	4
Managing the Rangitikei Remote Experience Zone	14
The Importation of Trout and Salmon	20
Something Fishy	26
Bitz 'n' Pieces	57
Team Profiles	63

The views expressed  
in *Target Taupo* are  
those of the  
contributors and do  
not necessarily reflect  
Department of  
Conservation policy

Cover photo:  
Roy Cotterill on the  
Hinemaiaia River,  
May 1998.

Photograph:  
Len Birch

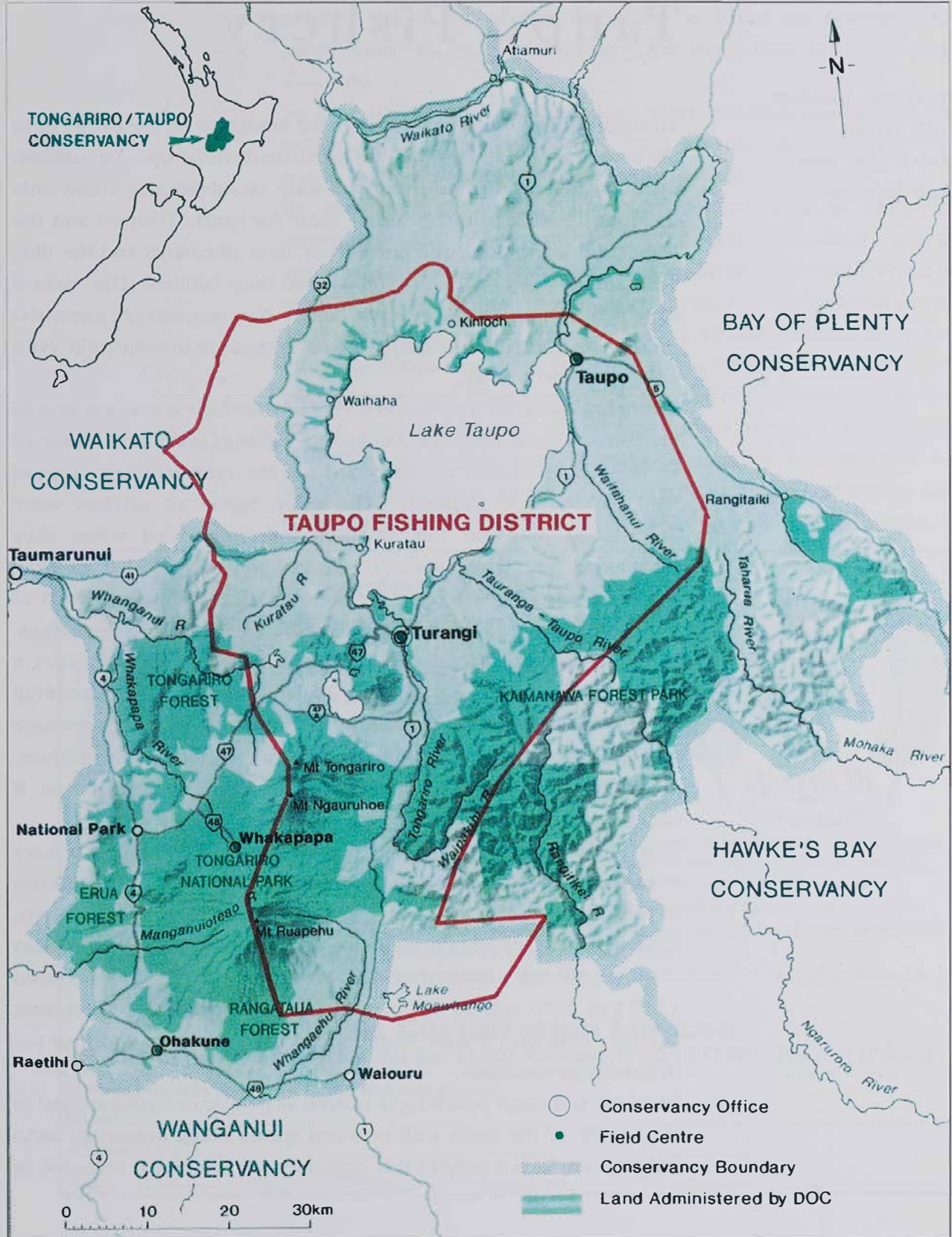
Information about illegal activities is only of use  
when it is passed on immediately

Please contact compliance staff  
**ANYTIME**

Telephone: (07) 386 8607

After hours an answerphone message will provide you with the  
number of the Conservancy Duty Officer. He/She will take your call  
and pass on your information to the appropriate person.

# Tongariro/Taupo Conservancy



# Poaching in the Taupo Fishery

*by Glenn Maclean,  
John Gibbs,  
Rob McLay and  
Rob Marshall*

Throughout history trout fisheries have tended to be the preserve of the landed gentry and the wealthy, particularly in Europe. In contrast, common folk who often lived in a state of subsistence could only dream of chasing trout and other game for sport. Trespass and the illicit catching of someone else's trout, deer, pheasants and the like, were simply a necessity in order to feed their families. The risks if caught were imprisonment, even death. Not surprisingly, given the social disparities, poaching was viewed by many as morally right, even an honourable activity.

Sentiments over the injustice of a very few having exclusive access to the fish and game resources because of rights of birth or by virtue of wealth, also provided the direction for the establishment of trout fisheries in New Zealand. The early European settlers were determined to avoid this situation being repeated when they introduced new game species. Instead it was intended all New Zealanders should have equal access to the new resources by way of a reasonable licence fee, a principle reflected in the legislation. Whereas poaching in the old country had been a crime against a privileged few, poaching in New Zealand was a crime against all citizens. Poaching directly and unfairly impacted on their resource and poachers were no longer viewed as acceptable rogues. Nevertheless, the illegal taking of trout remains an inherent if unwelcome component of all New Zealand trout fisheries.

Poaching takes many forms. The person who goes fishing but refuses to buy a licence and so avoids contributing their share to the upkeep of the resource, is free-loading off all the other anglers who do pay. Quite rightly many anglers view this as poaching. At Taupo more than 2000 anglers are checked on the lake each summer and between 1200 and 1500 anglers on the rivers to ensure they hold a current licence. Less than 2% are found not to have a licence and they are invariably prosecuted.

More often though poaching is viewed as people creeping around in the middle of the night with nets and spears filling numerous sacks full of trout. It is a subject that engenders an emotional response in

many anglers and provides a great discussion topic around the lodge fire or on the river bank. Because it is an activity that few anglers ever actually see, a lot of the discussion is based on hearsay and supposition and as a consequence the facts often get somewhat distorted.

So here are the hard facts, although there are obviously several on which we can't comment in any detail, lest that information prove useful to the very people we are trying to catch.

By and large most poaching in the Taupo area is relatively unsophisticated. For example often the offenders when apprehended, perhaps retrieving a net in the lake on a cold winter's night or waist deep in a spawning stream, are wearing tracksuit pants and running shoes, rather than waders or a wetsuit. Many of the more minor incidents are spur-of-the-moment actions and the degree of preparedness and planning on the part of the offenders tends to reflect this. Indeed one of the key lessons we have learnt with respect to successfully apprehending offenders is, in most cases, to keep our operations simple. Complex plans are not necessary for success and just increase the likelihood of something going wrong.



## Comfort and Safety Above and Below the Water Line

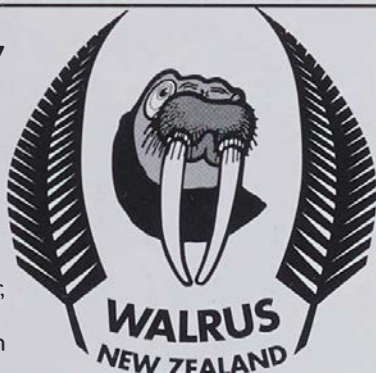
Walrus Waders are manufactured in three styles – CHEST, WAIST & THIGH and are available in boot sizes 5-14.

Made from high-density closed-cell chloroprene rubber, Walrus Waders are totally waterproof, warm and comfortable to wear. The closed cell neoprene from which they are made is re-inforced on the outside with nylon and lined with a warm plush pile which reduces condensation and helps make the waders easy to pull on and off. Because closed cell neoprene contains thousands of tiny air bubbles it is lightweight, flexible and provides excellent thermal insulation.

NOW with fitted cushioned knee pads for extra durability and protection.

All Walrus Waders are individually made and tested in New Zealand. Seams are cross link bonded and rubber taped for strength and durability.

Walrus Waders are available in Bush Green or Camouflage, fitted with either cleated or felt soles.



### Walrus Corporation Limited

68 Carbine Road, Mt Wellington, P.O. Box 11-209, Auckland. Ph (09) 573 0843; Fax (09) 573 0782

For free brochure on Walrus fill out and mail coupon:

Name \_\_\_\_\_

Address \_\_\_\_\_

Town \_\_\_\_\_ Phone \_\_\_\_\_

*When this utility vehicle was seized by DOC rangers it contained 58 trout speared from a small spawning stream. A further 12 trout speared by the same offenders were later found at the stream. One offender was fined \$3000 with total court costs of \$380*



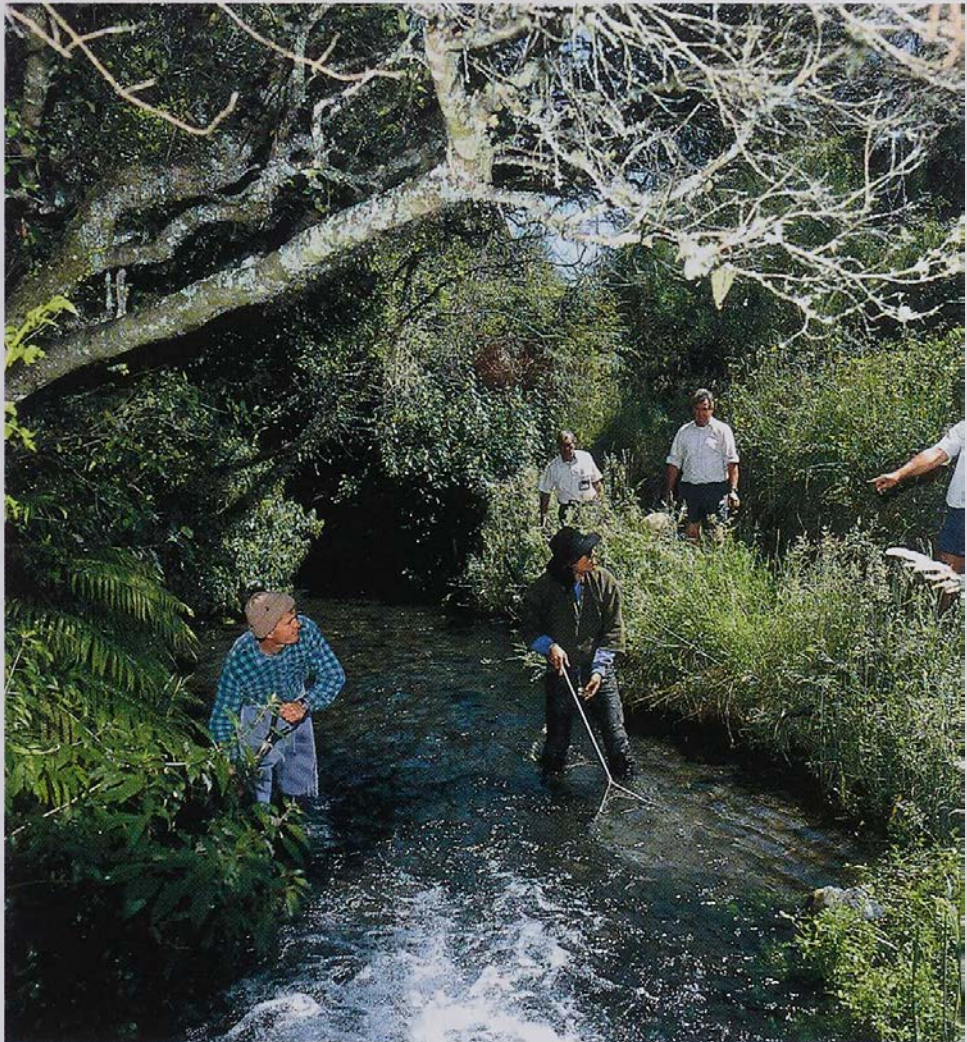
One of the constraints on poaching activity is the difficulty offenders have carrying a large number of fish. It is not easy to carry a string of 10 or more trout very far at all, particularly over rough ground. For example 10 prime spawning trout weigh in the vicinity of 25kg. Therefore, in nearly all cases, poachers undertake the activity in a spot close to where they can get a vehicle, four-wheel bike or horses.

Typically, poaching activity falls within one of four categories:

- 1 Abuse of the angling regulations by exceeding the daily bag limit, bait fishing with fish roe or smelt and taking undersized fish.
- 2 Setting gill nets at any time of the year in or around the stream mouths or along the lake shore. Nets are usually set by wading, although occasionally a dinghy may be used and are usually deployed perpendicular to the beach. The net may be as short as seven or eight metres, or as long as 60 metres. It is nearly always set after dark and often after midnight if set in an area frequented by anglers, though not always, as anglers occasionally discover. The offender/s may remain nearby in their vehicle or on the beach, but just as often leave the scene. The net is usually left for several hours. Both the setting and retrieval of the net are often accomplished in less than five minutes and typical catches range from nothing to 20 or more fish.



- 3 Drag netting over the winter months in several of the medium-sized tributaries, but in particular the Waimarino River. Dragging a gill net in a larger river or with a quicker flow is not very effective as the net lifts off the bottom and the people dragging it can't keep their footing. Typically the operation involves several people dragging a net through a short stretch of the river which is relatively free of snags. Usually at least one other person collects and carries or drags the catch. The whole operation from arriving at the scene to leaving the site takes between a half to one hour depending on the size of the catch required. In a recent incident three offenders collected 49 spawning trout in less than an hour.
- 4 Spearing or hand-netting spawning trout in the small tributaries. Many of these streams are only knee-deep and no more than a metre or two wide, often with overhanging vegetation. Large



*Trout in the small spawning streams are very vulnerable to poaching*

numbers of trout may use such a stream and are particularly vulnerable to someone wading up the bed with a spear, a pitchfork or a handnet. Often a single offender may collect up to half a dozen fish in a matter of minutes, but on other occasions a group of people may spend several hours working the stream over. In one incident brought to charge, three people speared 70 trout over a three and a half hour period. Obviously a vehicle parked for several hours close to a known poaching area can be a give-away that there are people in the stream and so often the offenders are dropped off to be picked up at a pre-arranged time.

There are several other forms of poaching that are commonly raised which do not fit into any of the above categories. Despite popular belief, explosives are not a good way to obtain trout to eat. Compression from the explosion kills the fish outright by pulverising the internal organs, but similarly turns the flesh into an insipid pulp which is not very appetising. The use of pair-trawlers and helicopters to collect large numbers of trout from the lake makes for a good story but that's all it is. Whatever the present economic benefits from poaching, they do not yet extend to the use of such costly (and obvious) machinery with the huge financial risks should it be seized and confiscated.


Many poachers are very indiscriminate in terms of the quality of fish they kill and keep. We regularly seize poached trout which have spent several months spawning in the river and are in such a condition they are literally not fit to be fed to the cat. Most fish are taken for the person's own use, family functions and so forth, though obviously the occasional bigger catches are destined for other uses.

Poaching activity may affect the fishery in two ways. There is the obvious impact arising from the killing of fish before they have had an opportunity to spawn. However, where the activity involves wading up and down the stream the trampling also causes the destruction of eggs already laid in the spawning gravels. In a small stream this can be a very significant loss.

The single biggest obstacle to large-scale poaching is the difficulty in disposing of the trout. Most New Zealanders are well aware that it is illegal to buy and sell trout. Sure it's possible to sell a few over the local bar but as soon as it is done regularly word comes back to us. At intervals we receive reports of Taupo trout for sale overseas, usually as canned product. These are checked out on each occasion, but

invariably appear to be cases of an entrepreneur attempting to increase the desirability of the local product by marketing it as being from Taupo. The sheer logistics and freight costs to put canned New Zealand trout on the overseas market make this unlikely.

Who are the poachers? Those people taking a couple of extra fish over the bag limit or a fish or two from around a road culvert on a spawning stream can be from any background and social circumstances. However those involved in more serious poaching tend to fit a common description, usually unemployed with convictions for violent assault or worse. Dealing with these people in what is often a remote location requires experienced, well trained staff. There is an element of risk and unpleasantness, which we do not



Turangi - New Zealand  
**ANGLERS  
PARADISE  
RESORT**

Trout Fishing Capital Of The World

**Adjacent to cnr H'way 41 & Ohuanga Rd, TURANGI.**

Quiet, private, spacious ground-floor serviced suites, full kitchens & own patios, surrounding an all-year heated swimming pool and hot spa.

Licensed restaurant & room service meals

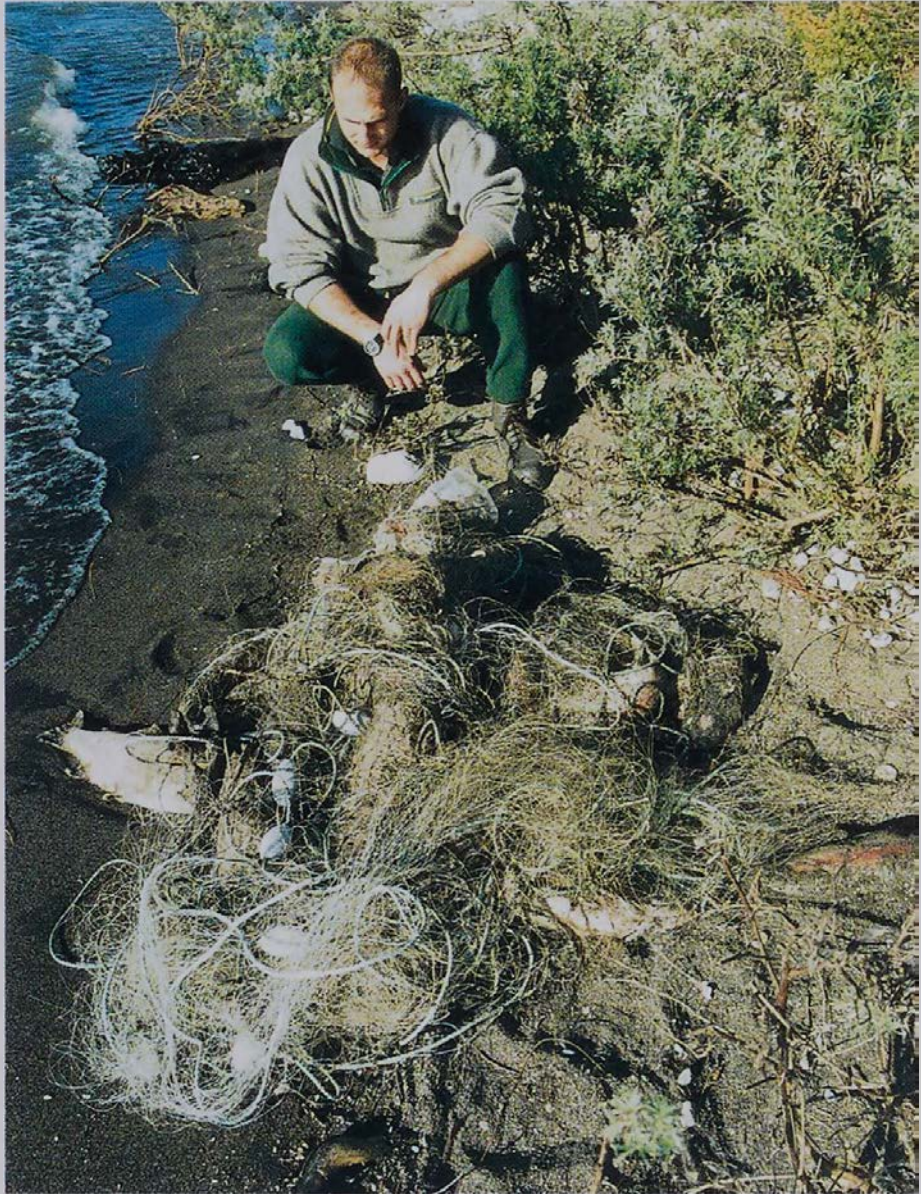
A superb base with plenty to do - there's trout fishing, horse riding, golf, hunting, rafting, tramping and mountain biking.

Fishing Guide services arranged and/or tackle, waders, flies etc for sale & hire.

**Phone or fax us for a quote.**  
**Linda & Terry Drum**  
PO Box 130, Turangi.

**FREEPHONE  
0800 500 039**  
**Ph 07-386 8980**  
**Fax 07-386 7408**

**AA** **HOST**  
ACCOMMODATION



*Fishery Ranger Rob Marshall (Bert) with an abandoned net from Lake Taupo containing 23 rotting trout*

expect honorary rangers to have to cope with, which is why we don't make a lot of use of this group in the Taupo fishery.

The biggest contribution anglers can make when they do see a serious offence is to carefully note the details, quietly leave the scene and contact us immediately. For example, on two occasions in the last year we were able to locate nets set in the lake as a consequence of information passed by anglers. On both occasions we were successful in apprehending the offenders when they returned. Occasionally the offenders must get cold feet, perhaps as the result of unexpected or forthright contact with anglers, and the net is abandoned. The net, which has usually been set under settled

conditions and as a consequence is only lightly anchored may, if conditions change, then be swept along the beach to remain undiscovered for several days. During this time it continues to ensnare trout so that when it is located it often is a mass of rotting fish, as the accompanying photograph illustrates.

In general it is not wise for lone anglers to confront poachers. It may stop them on that particular occasion but they will do it again albeit taking more care, which makes them harder to catch. Similarly you put yourself in a situation of risk that should not be under-estimated. Unfortunately some of these people do not behave rationally or with any regard for the consequences of their actions.

How do we apprehend the offenders? Many of the prime poaching areas are traditional spots which are visited year after year. One of the advantages we have is that most forms of poaching leave clear signs of the activity that occurred and so by regular checking we can identify those areas to target and the extent of the current activity. Several of our staff are keen hunters and it is those same skills of reading the sign that we apply in enforcement. Occasionally new poaching spots develop and it is essential these are located quickly. Several years ago a road culvert on a small spawning stream was damaged and in the few weeks before it could be repaired we apprehended eight different groups poaching trout which were unable to pass through the culvert. This illustrates how fast the word can get around.

To apprehend those involved in low-key poaching is usually quite straight-forward and is essentially just a case of putting in lots of time on the ground. Staff regularly patrol the poaching spots but in the course of undertaking other work also investigate vehicles or people whose behaviour seems out of context. Similarly the Department operates a duty officer system so that after-hours calls received from the public can be followed up immediately.

If you do call in suspicious activity please provide as much detail as possible about the nature of the offence, the location, number and description of people involved (names if known), vehicle make, model, colour and registration, boat description and anything else that seems relevant, even if only vaguely so. Your name and contact number is also very helpful as we often need to follow up reports for further information or clarification. You may remain anonymous if you choose but we do keep confidential all personal information received from members of the public. After hours contact can be

made by calling the regular office phone number (07-386 8607) where you will be given the number for that week's duty officer. We very much appreciate the trouble that many people go to to alert us of poaching taking place.

Local Police are very co-operative and often pass on or act directly on information or incidents they encounter in the course of their duties. By virtue of their warrants of appointment Police officers have full powers under the Conservation Act. They also willingly provide back-up for our staff if offenders are proving difficult or threatening once detected. As a government law enforcement agency, the Department has access to some databases in the Wanganui computer and this is used frequently to assist in tracing offenders through vehicle registration records and the like.

Combating poaching on a larger scale requires a much more intensive use of staff resources. At the same time the ever-increasing advances in technology are allowing us to make more and more use of electronic surveillance techniques and equipment such as night vision glasses. In addition, information is regularly reported by anglers and while often these reports are, in themselves, insufficient to be sure of what is going on, when a series of reports is combined a clear picture emerges. It's surprising how often an angler somewhat apologetically reports something small they have seen which happens to be just the confirmation we need about how a particular poaching activity is occurring. As we gain more and more information about particular offenders and their method of operation we are able to target operations to apprehend specific offenders. The key to successfully apprehending these people is to catch them standing waist-deep in the water with the fish and whatever implements they are using. Such operations are run covertly and some may involve nearly all of our 15 fisheries staff. One frustration that does arise out of this approach is that anglers are generally unaware of what we do to combat poaching and perceive this as a lack of effort on our part. However, for this approach to be effective, and it is very effective, it is essential that no one outside of our team is aware of our activity. Word soon gets around if we are careless.

To be caught poaching in the Taupo area can prove costly. The maximum penalties under the Conservation Act for illegally taking spawning trout or disturbing spawning grounds are imprisonment for up to one year or a fine of up to \$10,000. Fines regularly range from

\$500 to \$1000 per charge and custodial sentences are sometimes imposed. Most offenders are likely to face two or three different charges over a particular incident. Furthermore, if the offender has used a vehicle to get to and depart from the scene, they may well be disqualified from driving for three or more months. Being caught is a major deterrent for many people. We are aware from past experience that it only takes a few people to get away with a few poaching trips undisturbed for the talk in the pub to encourage others to have a go. Similarly though, a couple of successful cases early in the winter is sufficient discouragement for many would-be poachers.

Because of current enforcement effort and public support, poaching is not currently having a major impact on the Taupo fishery. There are certainly a few places vulnerable to small-scale opportunistic poaching and without regular success on our part such offences would quickly get out of hand. There are also limited, albeit reasonably regular, attempts at larger-scale poaching in several well known but localised spots around the lake.

Concern has been expressed that the recent decision to allow the importation and sale of trout from overseas opens the door for the sale of illegally caught New Zealand trout. In making the decision the Ministry of Agriculture and Forestry is constrained by law to address biosecurity (disease) issues only. It is not able to take into account the potential for a black-market in poached wild trout to develop and the risks that this might pose to domestic fisheries. If such a market did develop for Taupo trout, which is after all a premium product, poaching will become more prevalent and be carried out in a much more planned and professional way. Greater resources will need to be applied, both financially and in staff time, to counter any threats to the sustainability of the fishery.

# Managing the Rangitikei Remote Experience Zone

by Cam Speedy

*At the October meeting of the Tongariro/Taupo Conservation Board a briefing paper was tabled seeking comment from the board on both the current management regime within the Rangitikei Remote Experience Zone, and on shifting the Ecology Stream/Rangitikei Junction landing site some 45 minutes, walk upstream on the main Rangitikei River. Both recommendations were endorsed by the board. The briefing paper is reproduced here in an abridged form in the interests of highlighting a number of management issues in the Rangitikei headwater catchments.*

Helicopter access to Kaimanawa Forest Park for recreational users is a complex issue. Helicopters allow access for a great many people who might not otherwise be able to get to the more remote parts of the park to enjoy recreational activities like hunting, angling, rafting and canoeing. However, helicopters also impact on the experience of other users who prefer to walk to remote locations to be away from all aspects of modern life. The equipment that can be carried by people accessing the park by helicopter is often significant. At some landing sites, both legal and illegal, human impact as a result of camp site construction, the use of chainsaws and rubbish can be a major problem detracting from the “wilderness” values of remote parts of the park. Helicopters are also an important management tool, particularly for animal control. The current Conservation Management Plan for Kaimanawa Forest Park, a publicly prepared plan, contains policies which attempt to recognise these complexities, allowing for helicopter access but restricting it to specific sites and, in some cases, specific times.

The Remote Experience Zone (REZ) of Kaimanawa Forest Park was designated in recognition of the outstanding wilderness character of this part of the central North Island. Management policy is that while it does not strictly fulfil the criteria for “Wilderness Area” classification, the area will be managed as such with no development in terms of tracks or huts, and no aircraft landings except for management purposes. Such a management regime is now unique in



the central North Island as most adjoining land, both in private Maori and Crown control, has been developed and/or marketed by helicopter and fixed-wing transport companies for hunting and fishing excursions into the back country. As a consequence there are very few places one cannot fly to in the central North Island. To the south, the New Zealand Army strictly controls public access to similar terrain, limiting alternative access/recreation options.

Illegal helicopter landings in the Rangitikei REZ have been an ongoing problem for many years. However, staff have made a lot of progress in reducing the level of illegal landings through liaison with legitimate helicopter transport concessionaires.

### Background to the Current Issues

In 1991 concerns were raised at the level of deer impact in the Rangitikei REZ of Kaimanawa Forest Park. The Department of Conservation's approach to this, as it has been in other parts of the country in similar situations such as in the Landsborough Wilderness

# HIGH PERFORMANCE

## 444 LAZERLINE<sup>TM</sup>

**444 LAZERLINE<sup>TM</sup> THE FUTURE OF FLY FISHING**  
 When it comes to superior fly lines, Cortland's 444 LAZERline<sup>TM</sup> is "state of the art".  
 444 LAZERline<sup>TM</sup> combines innovative features with Cortland's time tested reliability.  
 Our technicians have developed a harder coating that surpasses all others on the market.  
 You will instantly notice the smoothness and distance with your first cast.

Now available in Sage Green colour to meet the special needs of New Zealand anglers. See your nearest store for unbeaten value



Self-lubricating to produce a better shooting, supple & more durable line.

Advanced front taper for tighter loops & longer, more delicate casts.



CORTLAND<sup>TM</sup>  
**444**  
Lazerline<sup>TM</sup>  
Sage Green



Line weight and size permanently laser-printed on line for easy identification

Produced in a variety of bright colours to meet your special needs.

LAZERLINE<sup>TM</sup>

The precision braiding of sixteen multifilament threads into a tubular core offers constant casts the entire length of the fly line.

The buoyant finish coating is achieved through an exclusive Cortland formulation of hollow microspheres.

Distributors: Douglas Johnson & Co. Ltd  
 P.O. Box 65179, Auckland 10. Phone: (09) 479-5315

Area in the Southern Alps and in the neighbouring Makino REZ within Kaweka Forest Park, was to increase the opportunity for recreational hunters to gain access to the area. Section 6.4(e) of the Kaimanawa Forest Park Management Plan specifically allows for this management and the proposed regime was also endorsed by the Tongariro/Taupo Conservation Board in 1993.

Helicopter access for parties whose principal activity is hunting has been permitted to four sites within the Rangitikei REZ for a seven or eight week period from Labour Weekend to the weekend before Christmas since 1993 in an attempt to increase the deer harvest. This time of year was chosen to limit any hunter preference for shooting stags only, which would do little to reduce deer density and impact. Instead it focusses the hunting pressure on the breeding females which are particularly active as they are feeding heavily on spring growth just prior to calving, and therefore more vulnerable to harvest. It also allows the camp sites at the four landing sites to be checked and, if necessary, cleaned up prior to the Christmas/January period, traditionally the highest use period within the REZ.

The level of interest in the annual access period has been very high and many hundreds of hunters have contributed with more than 334 deer removed from the catchment through these limited, targeted access opportunities. Concerns regarding rubbish and toilet wastes raised during initial access periods have progressively been addressed through follow-up work with users and the provision of toilet boxes. Staff are now satisfied that the amount of human impact generated by the limited helicopter access to the REZ is at an acceptable level. As part of the follow-up work, hunters who provide feedback, and who treat the area with the care and respect such special areas deserve, have been given every opportunity to return to the area. Staff have visited the area in the course of open access periods to determine the effectiveness of the exercise, to ensure the special values within the REZ are not being compromised and to make first-hand observations to help put public feedback into context.

Harvest information and deer jaw bones collected from hunters show that the deer population age structure has become younger, deer condition and reproductive rates have increased and that red deer encounter and harvest rates have declined significantly since 1993. In fact, the helicopter access periods to date have been very successful in reducing red deer numbers in the alpine zone within the REZ and therefore reducing the impact deer impose on this habitat. This

suggests the current management regime is having the desired impact on animal density. Of concern however, is that sika deer encounter and harvest rates have not declined to the same degree, suggesting the regime is less effective for this species, likely as a consequence of the difficult country sika deer prefer in this catchment.

### **Fisheries Issues**

Concerns over the possible impact that increased hunter access might have on the Rangitikei headwater trophy trout fishery prompted local DOC staff to liaise closely with Wellington Fish and Game Council staff from the start of this exercise. While the Department of Conservation needs to maintain high hunting pressure on the deer herd to protect conservation values, managers recognise that this must be balanced against the aspirations of those anglers and other users who seek the wilderness experience the Rangitikei offers. While it is policy that groups utilising the access opportunity must be primarily there to hunt, all hunters who visit a part of the REZ where they might have the opportunity to fish, are receiving information packages to help them understand the fishery issues. Banning helicopter access hunting parties from taking fishing rods was an option, however advice from Wellington Fish and Game was that while it did not support helicopter access for hunters in principle, it believed a rod ban impossible to enforce due to the nature of modern fishing equipment. It felt it better to inform hunters of the issues and to receive honest feedback from those that chose to fish, rather than to receive no feedback at all knowing angling was still occurring despite a rod ban.

Originally, two sites were used in the main river valley but due to the poor hunting success from the Trick Creek site and in recognition of concerns expressed by Wellington Fish and Game this landing site was shifted in 1996. Only one of the four access sites available each spring now provides an opportunity for trout fishing. The conservancy acknowledges the differences in the value judgements of those who utilise the Rangitikei REZ for varying forms of recreation, however the current status of the fishery causes no biological reason for concern. The hunting access period is not compromising the fishery other than to impact on the wilderness angling “experience” for some anglers during a small part of the open season on a small part of the river.

Nevertheless, the conservancy has received some criticism for its management approach from wilderness anglers who perceive a conflict. Staff believe shifting the helicopter landing site presently located in the Rangitikei River Valley to a location 45 minutes walk upstream, will help relieve the perceived angler conflict. This shift would open up greater access to habitat that is suffering sika deer impact and reduce the available angling opportunity for fly-in hunting parties. It must be emphasised however, that were there no fisheries values to consider in the upper Rangitikei, the Department would certainly seek to authorise more short-term, targeted hunting access sites in the main river valley as it is sika deer impact in the heavily forested river terrace habitat that now remains the major concern. Detailed forest monitoring work planned this summer will provide more specific, quantifiable information regarding these concerns.

### **Summary**

The primary function of the Department of Conservation is the protection of conservation values and if the Department is able to achieve this by fostering recreation, well and good. When there are conflicts between users, these must be balanced and the Rangitikei REZ is a good example of where this happens. The hunter access period occurs in spring when breeding female deer are most vulnerable, enhancing the contribution recreational hunters can make to animal control. Helicopter access for hunters is closed before the summer period when the majority of users enter the Rangitikei REZ to enjoy its special, remote wilderness values. Anglers have almost a month to enjoy early season angling free from hunter access conflicts before the hunter access period opens. They then have the rest of the summer and autumn once the hunter access closes again.

While there may be grounds for the conservancy to modify the way it manages recreational hunter access to control deer impact in light of various issues that arise from time to time (e.g. opening, closing or shifting helicopter landing sites) the conservancy does not currently believe stopping short-term, targeted helicopter access for hunters to the Rangitikei REZ is in the best interest of protecting conservation values. The management implications of the alternative options of paid professional hunters or commercial helicopter venison recovery operations make them far less attractive at this point in time.

# THE ULTIMATE FISH FINDER.



Authorised  
Central North Island  
Haines Dealer.  
Enquire about our  
packages now.



CALL THE BOATMEN

## Trev Terry Marine Ltd



Nukuhau Street. PO Box 1038, Taupo  
Fax & phone (07) 378 7779.  
A/h (07) 378 8753



# The Importation of Trout and Salmon

*In August, the Ministry of Agriculture and Forestry (MAF) made the decision to allow the importation of table trout and salmon for sale in New Zealand. The Department of Conservation had previously made a submission in opposition to this proposal, citing concerns over the risk of introducing new diseases and the impact that increased poaching, which is likely as a consequence of the decision, would have on our trout fisheries.*

*MAF has asked us to publish the following press release from Stuart Macdiarmid, to explain their position. This is published in full as is a release from John Davis, Chairperson of the Taupo Fishery Advisory Committee.*

## **Importation of Salmon, Trout Without Risk**

*Stuart Macdiarmid, MAF's National Manager for Agricultural Security, explains the background to MAF's recent decision to allow limited imports of table trout and salmon.*

Following a major risk analysis that took two years to complete and was reviewed by a number of international experts, MAF is to allow New Zealanders the right to import table trout and salmon from certain countries where fish processing and disease surveillance standards are similar to our own.

The allowable products include uncooked, headless, gilled and gutted salmon, trout and char from Australia, Canada, EU States, Norway and the USA. The fish must be for human consumption and be accompanied by a health certificate from the relevant government authority of the exporting country.

Uncooked table salmon was imported into New Zealand until 1983, when commercial salmon farming was established and there was concern that trade in dead fish might somehow result in the introduction of diseases to New Zealand salmon, trout or native fish stocks.

However, New Zealand law and our international obligations require MAF to restrict trade only in cases where a scientifically based analysis is able to demonstrate a genuine disease risk from a trade. Two major risk analyses have, in fact, demonstrated just the opposite; the

likelihood of introducing any fish disease through trade in table salmon or trout is vanishingly small. Even if New Zealand imported the entire annual production of British Columbia every year for 100 years we would be unlikely to introduce disease.

Commercial salmon farmers in New Zealand have accepted the outcome of the risk analysis. They eye the potentially lucrative market for salmon across the Tasman. Australia remains the only country in the world that refuses to permit the importing of table salmon, and many people believe that the Australian position is based more on shielding local salmon farmers from competition than on any genuine disease threat. Certainly, a recent World Trade Organisation panel came to the conclusion that the Australian ban was unsupportable. New Zealand salmon farmers see that science-based risk analysis is the means by which they will gain access to Australia for New Zealand produced salmon.

MAF's conclusion that there are no disease reasons for continuing to exclude imported trout has caused dismay amongst some recreational fishers. The main concern raised is that the availability of imported trout will encourage the poaching of local trout. It is hard to know whether this fear is justified or not. However, the potential criminal behaviour of a tiny minority of New Zealanders is not a legitimate reason to deny access to our markets and there is a range of commercial and government documentation which can be used to verify the origin of imported trout. Imported trout is expected to be a high-cost product and restaurants and retailers selling such a product are unlikely to jeopardise their livelihood by buying illegal, home-caught product through the back door.

New Zealand is a major exporter of products produced from agriculture, aquaculture, and fisheries. Science-based risk analysis and the fair trading rules promoted by our membership in the World Trade Organisation are our best means of securing and preserving access to the world's markets. However, trade is a two-way affair and we cannot demand access to other countries' markets while continuing to exclude other countries' products on spurious grounds.

### **A Can of Worms**

*John Davis, Chairperson of the Taupo Fishery Advisory Committee (TFAC), expresses the committee's concern over MAF's decision.*

No doubt you will have noticed the headlines most New Zealand

newspapers have given to angler opposition to changes in regulations which now allow importation of uncooked salmon, trout and char flesh for human consumption.

MAF Regulatory Services undertook a health risk analysis to determine possible adverse effects to New Zealand salmonid fisheries through the risks of importing diseases with these fish. Three MAF employees, Mathew Stone, National Advisor (International Animal Trade), Stuart Macdiarmid, National Manager (Agricultural Security) and Howard Phard, National Advisor (Agricultural Security), operating within the scope allowed by the Biosecurity Act 1993, undertook this task and released their report for public submission in September 1997.

The TFAC, after discussion with the Department of Conservation fishery managers and scientists, decided to oppose these moves to allow importation of salmonid flesh. We believe there are very real risks which are totally understated by MAF, of horrific diseases being imported and destroying our trout fisheries. Furthermore, we are very concerned that as markets for trout become available, trout poaching, which is already having an impact on spawning trout habitat and numbers in important and isolated streams, will become widespread and virtually uncontrollable. Prime trout from the central North Island area will be sought after by restaurants and hotels wishing to provide their guests with the best quality fish - hatchery fish fed on pellets will not compare in either taste or size.

MAF's *Risk Analysis* document, numbering 269 pages, is extensive in its examination of the world's diseases and their distribution and frankly overwhelms the reader with scientific jargon and data. However, a closer examination of the data on the many diseases that kill trout and salmon in huge numbers would suggest that little is really known about how these diseases are spread or what the infective doses are. Such unscientific conclusions as the "risk is probably low" gives the TFAC very little confidence.

The section on Erythrocytic Inclusion Body Syndrome (EIBS) is a typical example. EIBS is a viral disease and is a major cause of mass mortality in coho salmon in fresh and salt water. Rainbow trout have been infected experimentally. Whether transmission or reservoirs of infection occurs other than in salmonids is unknown. The infective dose is unknown. Outbreaks occur in cool water temperatures and may last at least five months. No treatment or control methods are known.





*... a wilderness river*  
*... a mate ... a dog*  
*... magic*  
*... SAGE country*

"The favoured rod of the New Zealand  
Professional Fishing Guides Association"

*F. W. Murphy*

Frank Murphy – President

**SAGE**

*Perfecting Performance*

See your authorised Sage Dealer regarding the Sage unconditional guarantee

Yet page 101 gives the following conclusions:

- 1 *EIBS is an important pathogen of salmonids and is of economic significance in salmonid aquaculture in countries in which it occurs.*
- 2 *Pacific salmon clinically infected with EIBS are unlikely to be harvested and processed for human consumption without suffering quality downgrading.*
- 3 *Pacific salmon incubating EIBS, or possibly unapparent carriers of the EIBS agent, and infected Atlantic salmon may be harvested and processed for human consumption.*
- 4 *The amount of EIBS infectivity within any infected fish which is harvested is likely to be significantly reduced by bleeding and evisceration (gutting) during processing.*
- 5 *The ability of the EIBS agent to survive in a product processed and imported for human consumption is unknown, as is the ability of the EIBS agent to persist in the environment and the dose required to infect salmonid species present.*
- 6 *The risk of EIBS introduction through importation of trout, salmon and char is probably low. The uncertainty reflects a lack of scientific data concerning disease transmission.*

These conclusions formed part of the eventual decision to allow the importation. **The mind boggles!**

Further, the section dealing with infectious salmon anaemia (ISA) virus has not used correct data and its conclusions are therefore neither appropriate nor accurate. ISA has been recorded in both Norway and Canada in the past and is now reported as rife in 57 Scottish salmon farms. Apart from the probable future actions involving killing upwards of four million fish and the major disinfection required to clean up the mess - with absolutely no guarantees - the major concern now is the complete destruction of the West Highland wild salmonid fishery.

The independent reviewer made the point that the origin of ISA in Canada and Scotland is not known. In the *Import Health Risk* report, page 220 gives figures of probability of ISA introduction into United Kingdom ( $1.02 \times 10^{-4}$ ) suggesting that risk is similar to the risk to New Zealand - but hang on - ISA has arrived in Scotland!!

In MAF's executive summary in their publication *Decision and Review of Submission*, their first conclusion is - "potentially severe

*consequences to the valuable salmonid fisheries of New Zealand would result from the introduction of an exotic disease. Once introduced, eradication would probably not be successful."*

The TFAC feels that any risk higher than zero is unacceptable.

The New Zealand economy reaps around \$750 million annually from activity associated with the freshwater fisheries. The benefits of importing 20 to 30 tonnes of salmon from the USA (1996 value) would be less than \$600,000.

There must be an underlying reason for allowing this unwarranted and unwanted importation. John Luxton, Minister of Agriculture and Forestry may well have the answer - watch this space. We can assure you much more on this issue!!



## **TRS WADERS**

(Formerly Tongariro River Systems - Turangi)

Made to Measure • At Factory Direct Prices

Call **0800 WADERS**  
**(0800 92 33 77)**

Products available include waist or chest length waders in two materials:

- Neoprene – a dense closed cell waterproof neoprene rubber material with a jersey knit outer layer bonded to both sides to provide excellent thermal qualities. Seams are sealed for extra strength.
- PVC coated nylon fabric – a new lightweight, flexible, strong, waterproof material, excellent for use in warmer climates. Areas such as surf, rivers, ponds, wetlands forestry work, etc. Seams sealed and strengthened crotch area. Waders bonded onto quality NZ made gumboots. Optional gumboots with steel re-inforced sole for rock work and oyster farming.

**Repair service also available.**

## **TRS WADERS**

*Made in New Zealand by Progard Industries*



# Something Fishy

## Waipa Trap Repairs

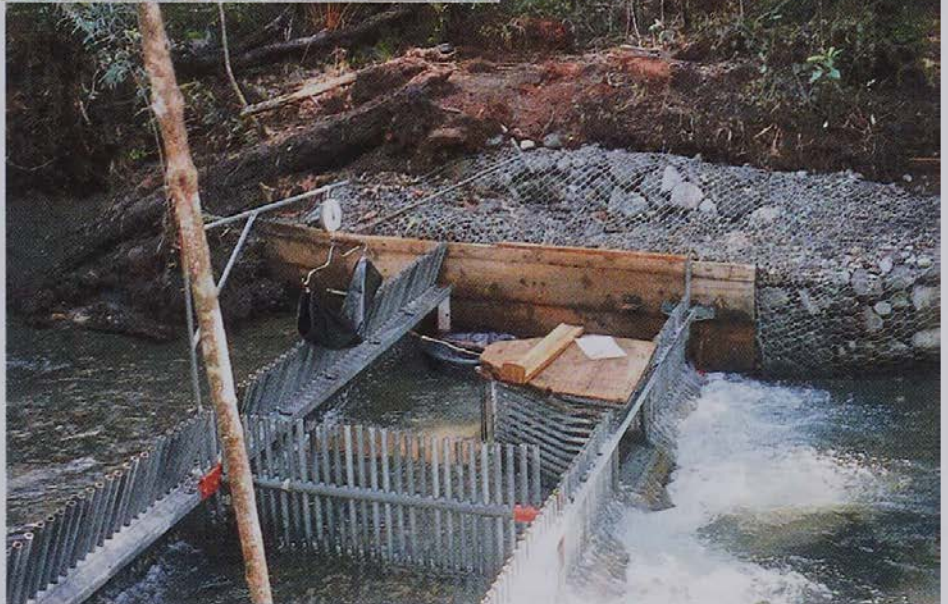
The Waipa fish trap is designed to trap spawning fish making their way up the Waipa stream so that we can weigh and measure them before putting them upstream to resume their journey. However the

trap also proved to be an effective barrier to the huge amounts of pumice and debris dislodged during the July floods. Needless to say, the Waipa trap suffered fairly substantial damage during the successive 814 and 838 cubic metres per second (cumec) floods, although the damage was not as severe as might have been expected.

On 2 July the first of the two floods swept the stream. At the peak of the flood which



*Another skipload of rocks is dropped in by helicopter to the Waipa trap site*

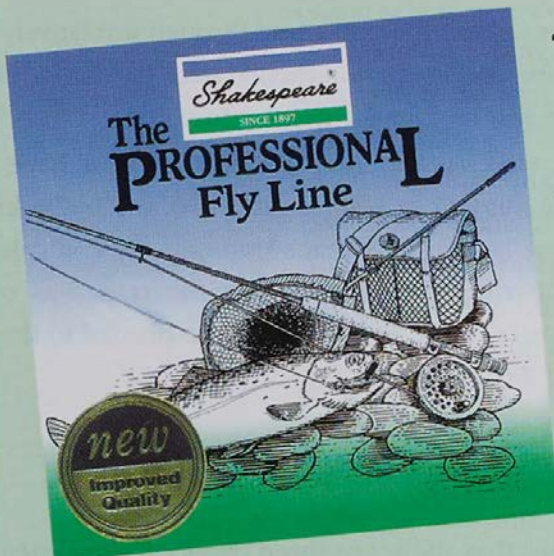


*The trap and new gabion built to fill a 15<sup>m3</sup> hole scoured in the July floods*

occurred at approximately 4.30 a.m., the river was running at least a metre above the front barrier of the trap and through the bush beside the trap. A lot of debris in the form of logs and bushes was forced against the back barrier, which caused minor damage.

On the 9 July the second flood along with the mass of debris it carried had enough force to buckle the back barrier of the trap completely and bend the vertical steel bars left in this barrier. Large amounts of scouring also occurred which threatened the integrity of the structure itself. The true left side of the stream bank adjacent to the trap was scoured back to a depth of over a metre, leaving a hole of approximately 15<sup>m</sup> in total behind the trap wall. As the trap is secured to this area of the bank the need to repair it was relatively urgent. Surprisingly though apart from the bent back barrier, the trap structure itself remained intact when uncovered from the debris and gravel lying over it.

Following an assessment of several options it was decided that a rock gabion structure would be best suited to fill the hole, preventing further scouring and supporting the trap structure through future



## The **PROFESSIONAL** Fly Line

**DURABILITY**

**CONSISTENCY**

**HIGH VALUE**

In response to customer requests The Professional range of fly lines has been extended to include a new intermediate line in both Weight Forward and Double Taper to offer a further dimension to the competitive advantage of this popular fly line.

Available in DT & WF floating and sinking sizes 6-9

The Professional is ideal for the fisherman who requires economy and extreme durability, especially for those who demand more than usual usage of their fly line.

*Distributed by:*

**R.A. CONAGHAN** – Auckland

Ph **09 373 4340** Fax **09 377 2257**

**ALEXTO SPORTS LTD** – Dunedin

Ph **03 477 0084** Fax **03 477 0064**

flood events. Due to the isolated location of the trap the only feasible way of getting the 15<sup>m</sup>³ of rock needed to the site was by helicopter. The rocks were trucked from a nearby quarry to a point as close as possible to the trap from where they were then loaded by hand into skips. Each skip was filled by eight staff, hooked from a 50 metre chain to the Squirrel helicopter used and lifted to the trap site. The pilot then had to direct the skip through a small hole in the tree canopy to place the rocks beside the hole to be repaired. It took approximately two minutes for the helicopter to pick up and deliver one load, by which time the team had to have loaded the next skip. It took 25 to 30 loads to get all of the rocks to the trap. Unfortunately that wasn't the end of the job. The team then made their way to the trap where they worked as a "chain-gang" stacking the rocks firmly into the pre-constructed mesh gabions. Thanks to the skills of the pilot, Pete Masters, and the hard work of the fishery team the rocks were loaded into the gabion baskets and secured in one day. In addition to the repair of the scour hole a new back barrier was flown to the site and installed.

Unfortunately the flood damage kept the trap out of action for the entire month of July but the floods also provided the ultimate test of the traps strength. All things considered the trap came through it relatively well, and with the new gabion wall and strengthened back barrier we should have a solid, functional fish trap for many years to come.

Since the repairs the trap has functioned smoothly. Staff have been able to capture a large number of kelts (spent fish), and by looking at the proportion of these lacking this year's trap clip, we can calculate the proportion of the run we missed while the trap was out of operation. A full summary of the year's run will be printed in the next issue (March 1999) of *Target Taupo*.

### **Naming of the Hinemaiaia Dams**

Many people are aware that there are three dams on the Hinemaiaia River, known as H<sub>A</sub>, H<sub>B</sub> and H<sub>C</sub>, but are not sure which is which. In fact they are named in the order they were built. The top dam, H<sub>A</sub>, was built in 1952, the bottom dam, H<sub>B</sub>, in 1966 and finally H<sub>C</sub> was built between the other two dams in 1980.

Therefore the dam the public has access to by driving up the true left of the Hinemaiaia River is H<sub>B</sub>.

## **New Resource Consents Sought for Hinemaiaia Power Stations**

TrustPower Limited, which owns the Hinemaiaia Power Scheme, has applied for new consents to operate the top dam (H<sub>A</sub>) and middle dam (H<sub>C</sub>) on the Hinemaiaia River. The existing consents which were originally issued under the Water and Soil Conservation Act 1967 expire in November 1998. Consents for the operation of the bottom dam and power station (H<sub>B</sub>) do not expire until 2001.

The Department, in its discussions with TrustPower, favoured the consents for all three dams being dealt with together. The integrated nature of the Hinemaiaia scheme is such that finalising consents, and therefore operating procedures, for the upper dams may prevent the establishment of the most desirable regime for H<sub>B</sub> and the scheme as a whole. We were therefore prepared to support short-term consents for H<sub>A</sub> and H<sub>C</sub> with the same conditions as the existing consents on the basis that TrustPower seeks new consents for all of the scheme in 2001. However, TrustPower has decided to continue to seek consents for H<sub>A</sub> and H<sub>C</sub> for a period of 35 years.

The Department has a number of concerns with respect to the effects of the scheme on the river. These include the unnatural truncation of sediment and gravel transport through the river system, loss of fish access to important spawning streams, increased water temperatures, bank erosion and effects of fluctuating flows on trout production, stranding and angling opportunity. These concerns are largely associated with the operation of HB but some are obviously also affected by the operation of the top two dams.

The current application does not fully address these concerns and as a consequence the Department has made a submission in opposition to the granting of the consents. The Taupo Fishery Advisory Committee has also opposed the application on similar grounds. How the process is advanced from here will be up to Environment Waikato as the consent authority but we will keep you up to date on this issue in future issues of *Target Taupo*.

## **Forestry Impacts in the Taupo Catchment**

Recently there has been widespread comment about the impacts of exotic plantation forestry on the water quality and trout fishery of Lake Taupo. This follows from the extensive flooding in early July this



*A typical slip following the July floods, in this instance in the Whiti kau Stream within the Kaimanawa Forest Park*

year and the prolonged period that the rivers remained unfishable. It is important to remember that these floods (one week apart) were the third and fourth largest on record and peaked at 814 and 838 cumecs in the Tongariro River (over three times greater than the maximum flow of Huka Falls), so under the circumstances it isn't surprising that the rivers in the district took longer than usual to clear. The condition of the rivers and lake following the floods is not, however, as some anglers believe - a direct reflection of how the region's exotic forests are managed.

When we drive down the eastern lakeshore we get an impression of each catchment being dominated by pine forests. In reality by far the greatest proportion of each catchment falls within Kaimanawa Forest Park. After the July floods we flew over all of the eastern tributaries to check for the sediment sources. In all cases the discoloured water could be traced up into the native forest catchments. What appears to have occurred is that in the course of the second period of heavy rain each catchment became totally saturated. Where this occurred on steep faces, large areas simply slipped off into the river below. A graphic example is on the Tongariro River below Poutu Dam where slips are evident every hundred metres or so. Many of these slips occurred under mature native forest, as the accompanying



photograph illustrates. Once the debris was in the river it took several days for the river to cut its way down through it, hence the prolonged period of discolouration. An additional effect was that in some instances, the side of the hill slid off leaving a further area of unstable ground above the original slip. Over the next few days, especially those which started with good frosts, these areas also tumbled into the river. So while exotic forestry can have significant effects on water quality, to blame Lake Taupo Forest for the prolonged period of discoloration arising from the July floods is totally erroneous.

In a previous issue of Target Taupo we discussed Lake Taupo Forest, and how it is managed. It appears timely to reiterate some of the important aspects of its establishment and to explain how the water quality of Lake Taupo and its tributaries is protected from potentially damaging land uses such as forestry and farming.

# Trout Fishing

Trout fishing in the Taupo region is world famous.

The difference is how you experience it.

At Wilderness Adventures we specialise in making your adventure happen, and place a high priority on providing excellent customer service.

## WILDERNESS ADVENTURES

For "Simply the Best" time of your life call:

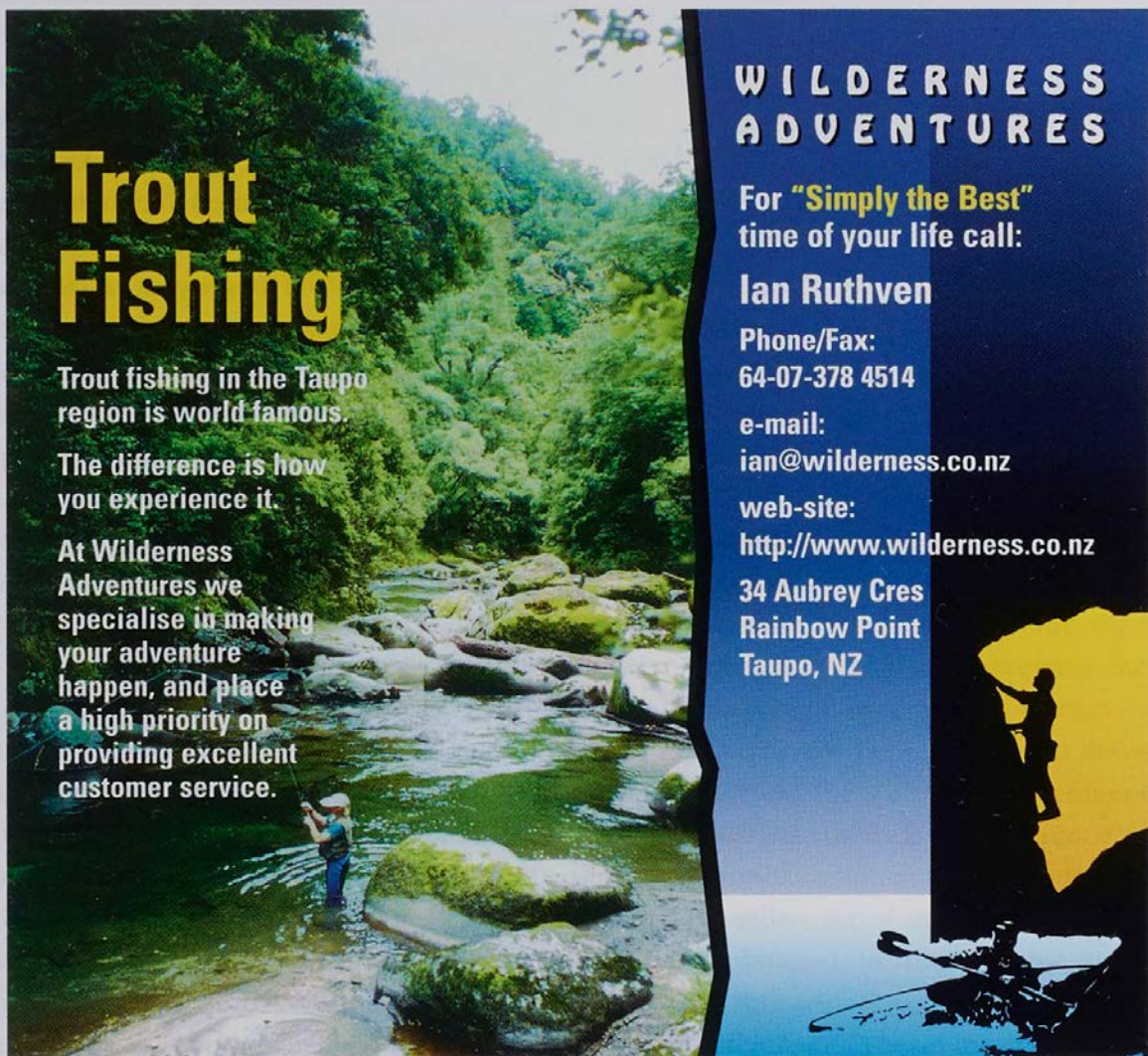
**Ian Ruthven**

Phone/Fax:  
64-07-378 4514

e-mail:  
ian@wilderness.co.nz

web-site:  
<http://www.wilderness.co.nz>

34 Aubrey Cres  
Rainbow Point  
Taupo, NZ



In 1969, a lease between the Maori landowners and the Crown was drawn up which covered 31,000 hectares of land, to be known as Lake Taupo Forest.

A point not well understood by anglers today is that the main objectives of the lease agreement were “preventing soil erosion, reducing pollution of the waters of Lake Taupo and of the streams and rivers flowing into and out of the said lake, and minimising adverse changes in river and lake waters”. “Conserving and protecting fish and wildlife habitat and other natural resources of the area” was the second objective but is directly related to the first. Financial gain was not surprisingly also an objective of the lease, to be “achieved through good forestry practices”, consistent with meeting the first and second objectives.

In order to meet these objectives and minimise any adverse effects of the forests operation, the lease stated that 18% of the 31,000ha of land was to be left in a natural state as forest remnants and corridors of native vegetation along both sides of streams and rivers within the forest. In fact at present, 29 years later, 25% of the total land area serves this purpose. The width of the riparian strips was not stipulated in the lease agreement, so has varied due to the topography of the land. For instance, on steep land beside rivers, where logging is most difficult and the risk of erosion is greatest, a strip of native vegetation often up to 100 metres wide has been left. On flat land where surface run-off and erosion are less of a problem the width may be as little as 40 metres. Even so, research has shown that a riparian strip 40 metres wide in these circumstances is capable of maintaining the micro-climate of an intact native forest and is therefore able to protect the stream from increases in soil and water temperature that would otherwise occur after the pine trees are harvested.

Riparian vegetation also stabilises the river banks, reduces the amount of water entering the stream as run-off, collects sediment and prevents harvesting equipment working along stream edges which weakens the banks. As discussed, during the floods in July many slips occurred along the entire length of some rivers, independent of land use. For example, the Waimarino and Whiti kau rivers suffered from slips on land where riparian strips are in place in Lake Taupo Forest and the adjacent Tongariro Prison Forest, but the great majority of slips occurred within the native bush of the Kaimanawa Forest Park. Such slips are part of natural hydrological processes and add valuable



*Studies show that extensive riparian margins along the Waimarino River have protected the stream from any impact of recent logging*

nutrients to streams. They would become problematic if the operation of a pine forest or farm increased their frequency and size which is sadly the case in many other regions of New Zealand but fortunately not for Lake Taupo Forest.

New Zealand Forest Managers Limited is responsible for the management of the forest in accordance with the 1969 lease agreement. In order to establish whether the objectives of the lease are being met it has commissioned water quality monitoring programmes to identify any changes as a result of harvesting the forest. The Waimarino River and Mangakowhitiwhiti Stream, a tributary of the Tauranga-Taupo River, have been monitored since logging began in 1994. Although 13% of the Waimarino catchment has been harvested the study shows that there is no difference in mean annual water clarity and suspended sediment concentrations at or between the plantation forest and native forest sites attributable to harvesting operations. Thus, as envisaged in the original lease agreement, the water quality in the Waimarino River has not suffered due to the operation of the pine forest. These results can be

attributed to sensible management practices and the protection afforded by the riparian buffer strips. The Resource Management Act (1991) also has an important role as it ensures forestry operators apply for consents before logging or redevelopment is undertaken. This allows affected parties to raise any issues about the potential impacts on the fishery from the proposed work, and to work with the applicant to find a suitable solution for both parties.

In conclusion the Taupo district is in a strong position in terms of water quality protection relative to other areas of New Zealand. Large portions of its rivers flow through protected conservation areas such as the Kaimanawa Forest Park and Tongariro National Park. The Lake Taupo Catchment Control Scheme of 1976 required farmland adjacent to streams to be fenced off and retired from grazing. In some cases this land was replanted with native vegetation with the aim of reducing erosion, in others the land was left to regenerate naturally. Finally the objectives of the Lake Taupo Forest lease agreement of 1969 have ensured that the landowners are able to protect the future of their land while also protecting the future of the Taupo fishery. It has been shown in the Waitahanui catchment, which has been logged since 1958, that properly planned and sensibly managed forests can exist without having any permanent negative impacts on water quality and hence fishery values. Obviously though, if the management practices were less effective the detrimental effects on water quality could increase.

From a fishery manager's point of view the ideal would be for each catchment in the region to be left undeveloped. Nevertheless we appreciate the right of private landowners to seek a profit from their land, and are satisfied that with careful management of the forest and other land uses in the area the future of Lake Taupo's water quality can be protected.

### **Compliance and Law Enforcement Update**

Monitoring of spawning areas throughout the winter has resulted in a number of apprehensions being made from traditional and known poaching sites. On one occasion, five offenders were stopped carrying a net and nine trout as they were about to leave the scene in their vehicle. These offenders all made off on foot leaving the net, fish and vehicle in the possession of fishery rangers. We are still awaiting an approach from the owner of the vehicle so that we can have a chat

to him about his fishing methods.

With the onset of summer the smelt will be starting to move into the lake shallows to spawn. This heralds the beginning of the harling season and for the same reason gill netting around the lake margins. Nets are usually set in or adjacent to stream mouths and are therefore often encountered by anglers, particularly those who fish at night. Anglers finding nets are encouraged to leave them where they are and immediately report the location to us, either via the office during working hours or via the duty officer after hours. In that way we can organise a reception party for the owners when they return to pick up the net. Timely reports of this nature from anglers almost always result in successful apprehensions and are a classic example of how we can work together to protect the fishery.

### **Lake Otamangakau Spawning Run**

The fifth winter of fish trapping on the Te Whaiiau Stream was successfully completed in August. The Te Whaiiau Stream is the major tributary of Lake Otamangakau and each winter is used by spawning brown and rainbow trout from the lake. The flooding in July that had such a large impact on the Tongariro catchment this year also caused a few problems here, though fortunately the damage to both the stream and the fish trap was not severe. Nevertheless the stream flowed over the top of the trap for two thirds of July which allowed large numbers of fish to pass upstream of the trap without being processed. Under normal flow conditions when a fish migrates upstream it becomes contained in the trap. As part of processing the fish we clip half its fin before putting it upstream to continue its journey. As fish move back downstream after spawning we recapture a sample and by calculating the proportion of clipped to unclipped fish we are able to establish the size of the actual run, including those

	1994	1995	1996	1997	1998
Rainbow female	427	361	582	600	570
Rainbow male	151	183	232	332	399
Rainbow Total	578	544	814	932	969
Brown female	497	591	575	578	420
Brown male	201	235	215	300	302
Brown Total	698	826	790	878	722

*Table 1: Breakdown of the adjusted annual run through the Te Whaiiau Stream 1994 to 1998*

fish missed during floods.

This year the total number of fish that ran the Te Whaiiau Stream (1691) was slightly less than last year (1810), though still the second highest since trapping began in 1994. Table 1 provides a breakdown of the total run by species. This shows that the number of rainbow trout in the population continues to increase but the number of brown trout remains relatively constant.

The number of times each fish has spawned (based on whether they have previous trap clips) is shown in Table 2. The large proportion of fish spawning for the second time this year reflects the contribution of the strong year class which first appeared in the runs in 1997. Trout in Lake Otamangakau grow relatively slowly when compared to fish in some other trophy lakes. However unlike fish from these other lakes, Lake Otamangakau trout continue to grow after spawning and tend to be relatively old. The old age of the fish is reflected in Table 2 which shows some fish are spawning for at least their fifth time. These fish are likely to be over eight years old. Next year will provide us with interesting information as to just how many times Lake Otamangakau trout can spawn, when we see how many fish return for their sixth time.

By being relatively long lived and growing throughout their life Lake Otamangakau trout are able to reach very large size.

A feature of this year's run is the large number of relatively small fish making their spawning migration. Anglers reported an increase in the number of small fish being caught towards the end of last season, so their appearance in the trap was some what expected. It is encouraging to see these fish in the population as they represent a year of successful recruitment and therefore another strong year class. The effect of small fish like these spawning with other larger fish does not, contrary to the belief of some anglers, lead to the

	1st time spawners	2nd time spawners	3rd time spawners	4th time spawners	5th time or more*
Rainbow female	58.6	29.6	7.3	1.0	3.1
Rainbow male	66.7	22.6	6.3	1.9	2.5
Brown female	30.7	30.7	17.7	6.8	14.1
Brown male	51.4	18.3	12.2	2.5	6.1

\* Some of these fish may have spawned more than five times as the trap has only been operating for five years.

*Table 2: Breakdown of the 1998 spawning run according to the number of times fish had spawned. Figures are the percentage of fish in each group*

production of small fish or the removal of the “big fish gene”. As mentioned earlier it is the trout’s ability to continue growing after maturation and spawning that is important in Lake Otamangakau. These relatively small mature fish may yet become trophies.

Table 3 shows that the average weight and length of trout this year was very similar to last year and that both years are down on previous years. This reflects the two strong year classes of young small fish which are currently dominating the population structure. In addition 1% of the rainbow run and 0.2% of the brown run were over 4.45kg which is much less than 1996 (50 fish in excess of 4.45kg in 1996 c.f. to 9 in 1998). It seems that the very large fish in 1996 were the remnants of the last strong year class and large numbers of trophy fish are unlikely until the year class which first spawned in 1997 reach sufficient age. The large fish that are present are in great condition though. For instance two rainbow females were trapped, one month apart, which were 660mm long and weighed 4.25kg (nearly 9.5lbs). They both had a condition factor of 53.4.

*Table 3: Average length and weight broken down by species and sex 1995 to 1998*

	Length (mm)				Weight (kg)			
	1995	1996	1997	1998	1995	1996	1997	1998
Rainbow female	615	600	586	586	3.18	3.01	2.60	2.61
Rainbow male	616	623	606	587	3.05	3.18	2.65	2.51
Brown female	599	597	570	579	2.85	2.87	2.33	2.47
Brown male	627	622	611	606	3.08	3.04	2.76	2.76

In summary the lack of very large fish coupled with the large number of young, smaller fish in the population leads to the relatively small average size. Because of the similarities with last year it is likely that anglers catch rates will be slightly higher than normal, but again trophy fish will be few when compared to 1996. However trophy sized fish should become more common again in several years time as the strong year classes of 1997 and 1998 have a chance to grow. Of course if anglers catching these fish knock them on the head, they are not going to grow any bigger.

### **Tongariro Power Development Update**

Work continues to complete several research projects commissioned by the Electricity Corporation of New Zealand (ECNZ) to address identified information needs as part of the consents process for the

Tongariro Power Development. Most of the projects however are now complete or in their final stages and the process is about to move from the collection of information to trying to negotiate suitable regimes using this information. This will occur through the consultative group, which is made up of representatives of all the parties who have expressed an interest to date. It is a wide-ranging group and includes ECNZ, affected landowners, conservation and recreation interests.

Anglers and the fishery are represented by John Davis, Chairman of the Taupo Fishery Advisory Committee and by the Department.

There are several hundred different consents required to operate the scheme and it is hoped that the consultative group can reach agreement on the great proportion of them. The various parties can then concentrate in the formal consents process on those few consents where agreement is not forthcoming. Furthermore, because the information has been collected for the consultative group rather than individual parties, debate should be over how it is interpreted rather than whether one group's information is better than another, as occurred in the infamous Whanganui Minimum Flows process.

If the consultative group reaches agreement over particular consent conditions, that is not binding on individual members, though obviously they would need good reasons to stand alone. The final consent conditions will be set by Environment Waikato as the consent authority and obviously if the consultative group is in agreement over the suggested conditions these are likely to be adopted.

It is our view that agreement for large parts of the scheme is likely to be reached quite readily, allowing the parties to concentrate on those parts where there is a much greater divergence of views. There is an awful lot of water to pass under the bridge yet though.

### **Licence Review Update**

As reported in recent issues of *Target Taupo* we are currently reviewing all aspects of our fishing licences and their administration. The first stage, which is nearly complete, has been undertaken by a University of Waikato student who has looked at the factors which influence licence sales, the advantages and disadvantages of the existing and other possible categories of licences, the licence format and the licence administration system. Her final report is due shortly. The next step will be to take this information, and in discussion with



the Tuwharetoa Maori Trust Board and the Taupo Fishery Advisory Committee, look at what changes we should make to our licensing system so as to best meet the needs of Taupo anglers and our licence issuing agents, whilst protecting the revenue so essential to the management of Taupo fishery.

A detailed discussion of possible changes will be presented in the March 1999 issue of *Target Taupo*.

### Petra is Caught

As detailed in the last issue of *Target Taupo*, a major prize was offered for the capture of a tagged fish during the annual Lake Taupo International Trout Fishing Competition in April this year. On 19 April we caught a beautifully conditioned 2.5kg rainbow trout, which we

## Get the Best in **Fluorocarbon**



### Look for Seaguar!

*Seaguar is the real thing –*

100% Fluorocarbon material. Abrasion resistance, knot strength and breaking strain are **extraordinary**.

Holder of a number of USA and foreign patents, Seaguar is the original, truly invisible, indestructible leader!

# Seaguar

## Accept no imitations!

Distributed in New Zealand by BCS Enterprises Ltd.

PO Box 30 631, Lower Hutt. Telephone 04 566 4799. Facsimile 04 566 6449

affectionately named "Petra", using a spotty gold cobra from a downrigger.

Upon her capture from the western shores of Whakaipo Bay, which is just around from Kinloch, Petra was photographed and tagged. She was then transported to the middle of the lake and released to give everyone a fair chance of catching her. At the time of release we were unaware that we were assisting with her migration to the Tongariro River. Even with our help it took Petra approximately four months to get to the Stones Pool on the Tongariro River where she was finally caught by Mr Craig McGregor of Kuratau. The angler unfortunately wasn't lucky enough to win the \$40,000 4WD that was up for grabs during the competition but he did have the satisfaction of catching a prime Taupo trout.

This is yet another example of how trout use all of the lake during their life and the importance of successful recruitment from the Tongariro for the whole fishery. Clearly Petra intended to swim the length of the lake to return to her spawning grounds.

### **When the Rain Tumbled Down in July**

Between 30 June and 2 July 126mm of rain fell in Turangi, and then another 162mm between 8 and 10 July. Probably up to twice that amount fell on the high ground around Lake Taupo and produced floods in the rivers bigger than any experienced in over 30 years.

Tracks, walkways, fishing access roads and bridges were scoured and damaged. The toilets and viewing chamber at the National Trout Centre (NTC) were flooded and the Centre was closed for most of July. Repairs and restoration costs of these tracks and structures are estimated at over \$100,000.

Flows peaked overnight on 1 and 2 July and again on 9 and 10 July. In the Tongariro River both were over 800 cumecs (as shown in Table 4) with the second flood 25cm higher than the first at the NTC. The morning after each flood revealed many sorry sights along the riverbanks as people checked the damage, but the best stories were those from people who watched the rivers rising.

One example is that told by Ron Collard. Ron, who works for King Country Energy and his boss, John Chapman, had been checking a ground-mounted transformer near the Tauranga-Taupo River. They returned to Turangi to find the Tongariro rising rapidly and workmen frantically trying to remove pine trees from the State Highway 1

1958	1470
1964	1037
1967	773
1986	810
1998 - 2 July	814
9 July	838

*Table 4: Peak flows in cumecs (cubic metres per second) of big floods in the Tongariro River at Turangi, 1958 to 1998*

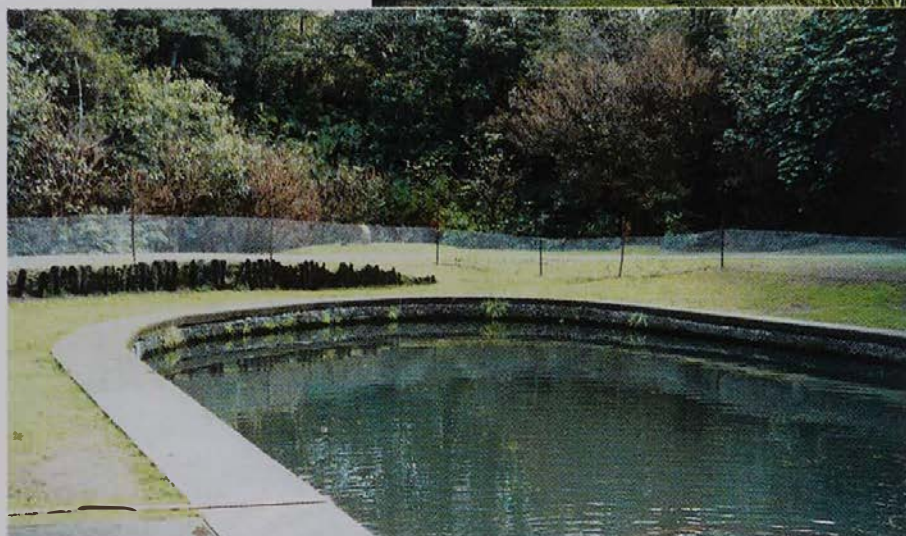
bridge. It seemed that the bridge could be lost so John elected to stay on the north side. Ron crossed over and thought that he would have a look at the Major Jones Bridge.

At about 4.30 p.m. he got to the bridge. "I walked out to the middle and another bloke was there. It was like standing on a bridge over a motorway with the rush-hour traffic passing beneath at 100k but the cars and trucks were logs and trees and you could hear big boulders



*The Major Jones Bridge was hit by a pine tree being washed down the river. Note the kink, caused by the weight of the debris on the broken sway wires*

*Staff securing sections of the boardwalk at the National Trout Centre as the river rises on the 9 July. Four sections were saved but 24 sections were washed away. Some were later recovered from the lower river but most were turned into matchwood*



*A temporary wire netting fence was erected to prevent trout escaping from the children's fishing pond when the NTC grounds were flooded by the Tongariro River and the Waibukahuka Stream*

rolling and crashing down. I looked up and saw a big pine tree in mid-stream. It was standing vertically on its roots and was coming straight for the middle of the bridge. Every so often it would catch on something and teeter over about 45 degrees then swing back upright and it was rapidly getting closer." I said to the other chap "Do you think we ought to move?" to which he replied, "Definitely." "Near the bridge the tree changed course and moved over to the true right bank. Then it hit one of the wires that stops the bridge from swaying, something broke and the wire was turn out. The tree tilted over, swung back up and hit the downstream stay wire and carried on its way, still vertical. The bridge bucked and tipped and swung around, I suppose I held on, it all happened fairly quickly. I wasn't scared so much as in awe and felt very small and insignificant in the face of such force."

The Major Jones bridge was closed for four weeks on an engineer's

*Many fishing access tracks ended like this section of the river walk at the National Trout Centre*



*Major changes occurred on the Tongariro. One of the bigger changes was above the Red Hut bridge where much of the river returned to an old channel where it last flowed in the early 1980s*

advice and it cost over \$4500 to replace six of the eight sway wires, three of the four anchors and a tower support wire. It was a little disconcerting and disappointing to see the number of anglers and others who ignored its closure. Some even broke down the barriers. The aftermath of the floods, as the water cleared, was likened to a

gold rush as anglers “prospected” the new and changed pools. Rumours of success spread like the floodwaters and started “rushes” to new pools. The new pools are described in a booklet written by John Gendall, “August 1998 – Complete Fishing Guide to the New Tongariro River” which is available locally. The effect of the floods on the fish and fishing is discussed in detail in the Winter Fishing Update in Something Fishy in this issue.


At this time most tracks and structures have been repaired or replaced. The Blue Pool road reinstatement awaits discussion and a decision; it seems that most anglers are happy to walk the extra 20 to 30 minutes to fish the three pools (where once there were seven) above the washout.

The viewing chamber at the NTC has been re-opened but the display area is bare while assessments and decisions are made about whether or not to raise the sides of the concrete tanks that it sits on to above the current floor level. The chamber was built by the Turangi Lions in 1983. The floods of 1986, 1995 and 1998 all flooded it, necessitating extensive drying out, carpet replacement and repairs and replacement of displays. We aim to have it back in operation before Christmas 1998.

### Blue Pool Access Road Damaged


A 20 metre section of the Blue pool access road was washed out by the flooding that occurred on 9 July this year. The flood scoured out the river bank immediately above the Breakaway Pool, removing the car park beside the river, the big old pine trees around it and the road behind. All forms of access to the upper fishing pools were temporarily unavailable, but a foot track was cut the following week to allow anglers access to the upper pools.

Prior to the early 1980s and the opening of the Blue pool access road anglers wanting to fish the upper Tongariro River had to walk from the main highway. During the same period there was a growing number of raft operators rafting the upper Tongariro down from Poutu dam. Their only option to exit from the



**LOOK FOR  
UMPQUALITY  
LEADERS  
AND TIPPETS.**

Check our complete line of tough, tapered materials. For quality you can see. And fish can't.



**TRADE ENQUIRIES WELCOME  
FAX: (04) 570 1277**



*The Blue Pool access road washout where the Breakaway Pool car park once was*

river was at the Judges or Bridge pools which meant they had to travel through the upper and middle fishing pools. This upset many anglers who urged us to rectify the problem, hence the Blue pool access road which is on Department of Justice land, was opened. This allowed the rafters to remove their rafts at the Blue pool but it also meant that anglers had vehicle access to a point much higher up the river. While this did not initially meet with all anglers' approval, in general the opening of the road has worked well.

The situation as it now stands with no vehicle access past the Breakaway pool means anglers have a longer walk to the Whitikau and Sand pools than previously, though still not as long as anglers prior to the 1980s. In addition rafters are again unable to remove their rafts from the upper river. In an attempt to avoid the conflicts of the past we have agreed that it would be preferable for them to exit above the Breakaway pool. As the Fan and Boulder pools were destroyed in the floods the rafts would only travel through three fishing pools in the upper river and therefore cause limited disturbance to anglers. To this end we assisted with cutting a track up

from the Breakaway pool wide enough for the rafts to be carried out. We also erected signs asking anglers not to park in the last 80 metres of road past the existing car park so that the rafts could be removed from this confined area without risking damage to parked cars.

Unfortunately this arrangement has not worked very well and the blame for this rests fairly with anglers. While rafters have done their best to work with other river users, anglers have demonstrated a singular selfishness which does not reflect well on them. Anglers have persisted in driving past the sign and parking in the narrow roadway, even parking their 4WDs in the rafters' access track. This makes it very difficult for the rafters to lift their rafts past without risking damage to the parked vehicles.

In the longer term there are three possible options. Firstly the road could be rebuilt at some considerable cost. Very little can be done to eliminate the possibility of the river moving further over and so the new road would need to be constructed at the base of the small escarpment. It would be necessary to construct the road through the existing swamp formed originally when gravel was extracted for use in the construction of the Tongariro Power Development.

Secondly the Breakaway Pool car park could be extended to accommodate more vehicles and hopefully remove the temptation to park further down the remaining piece of road. This is likely to be less expensive but is constrained somewhat by the production forest planted around the edge and the problem of inappropriate parking would also need to be resolved.

A final option would be to create an additional car park at the bottom of the cliff pool for use by rafters. The disadvantage with this option is that it would require rafters to run the Breakaway and Cliff pools before exiting.

It comes down to what anglers would like. Prior to the road washing out we had received some comment from anglers seeking to have the road closed so that the upper river was only accessible to anglers on foot. Now the road has gone there may be a larger group who would prefer to retain vehicle access. So let us know what you think. In the absence of any funding from rafting operators the costs (about \$25,000) would have to come from fishing licence review. If there is not a major demand for the road there are plenty of other management activities the money can fund.

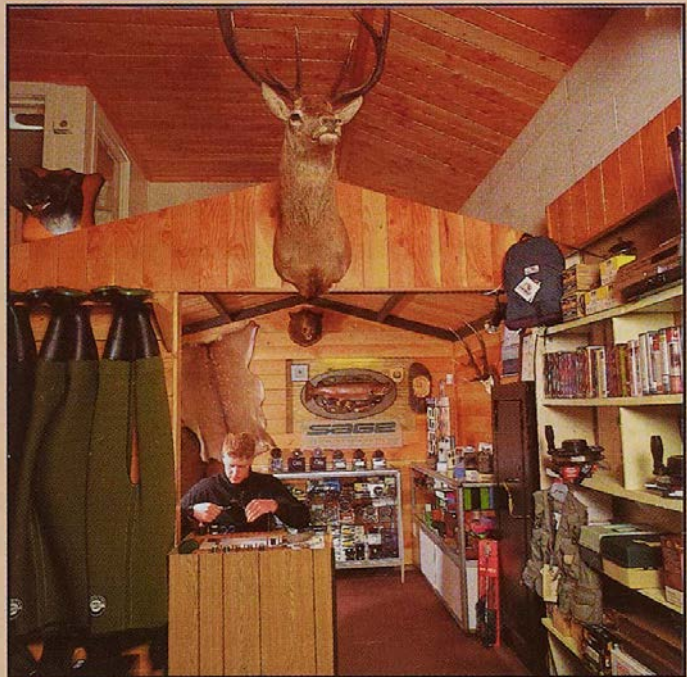


## Progress on the Development Concept for National Trout Centre

As reported in the last issue of *Target Taupo* the Department, in association with the National Trout Centre Trust, is preparing a concept plan to guide future development at the National Trout Centre (NTC). The plan covers not only the physical layout of the grounds and the desired facilities but also how we should operate the site, the services we should provide, whether we should charge for access and so on.

# SPORTING LIFE - TURANGI

*Outfitters to the Famous Tongariro River*



*Fly fishing specialist outfitters, providing a complete range of all tackle, hireage and accessories from leading manufacturers including Cortland, Scientific Anglers, Umpqua, Sage, Composite and Kilwell.*



**Sporting Life Turangi**

Graham and Kathy  
The Mall, Turangi

Telephone: (07) 386-8996

Fax: (07) 386-6559



F&G 163

Once the concept plan is finally agreed in October the next step is to develop the detail of each aspect identified in the plan. Many of the components are likely to be quite simple, cheap and easy to construct or implement. However, several other aspects will require considerable planning and design and ultimately funding. The intent is to undertake the development in a series of steps as funding and resources allow. It is hoped, however, that the majority of the plan will be in place within five years.

The first work is already underway and involves upgrading facilities damaged in the July floods. We have commissioned architects to design modifications to the viewing chamber so that the walls of the chamber are lifted above flood height. The chamber itself is watertight, but at present the top of the sealed wall is below the height of a large flood which then pours in. It is a major effort and cost to pump the water out and dry the chamber each time this occurs, as had to happen following both floods in July. If funding allows, the proposed work will involve jacking up the upper storey and then adding to the existing walls of the concrete chamber. At the same time as this work is undertaken we will take the opportunity to make some other changes to the building as well. All going well this work will be completed by the end of the year.

The other work involves reinstating the river walkway with assistance from the Department of Corrections. Much of the previous boardwalk was lost when large sections of the river bank were washed away in the July floods. Acknowledging that it is likely to occur again the new track is designed instead to be cheap to construct and easy to repair. It is however, labour-intensive but with the support of the Department of Corrections this has been overcome. A gang of inmates is currently reinstating the 150 metres of track washed out and also extending a new track to the mouth of the Waihukahuka (hatchery) Stream. The concept plan seeks to rationalise the tracking and the inmates will also dig up several other tracks which are no longer needed. This work, and the alterations to the viewing chamber, mark the start of the NTC developments and all going well there should be a number of noticeable changes each time you visit. A full description of what is proposed will be featured in the March 1999 issue of *Target Taupo*.

## Winter Fishing Update

This winter has been a season of extremes. As predicted in the last issue of Target Taupo the average size and condition of the trout caught have been significantly better than for many years, probably since the golden years of the 1920s. A comparison of the average size of angler-caught fish from the Tongariro for a number of years between 1985 and 1998 is presented in Table 5.

Despite the very large average size of 2.6kg or 5.7lb there were not large numbers of trophy size fish (fish greater than 4.45kg or 10lb) reported. However, if the conditions continue to be conducive for such exceptional growth then it is expected that there will be a number of such fish by next winter.

In contrast, angling success on the Tongariro in particular was extremely variable this winter, likely as a consequence of both the impacts of the eruptions in 1995 and 1996 and the unusual weather patterns through July. The fishing when it was good was exceptional but for long periods, particularly through August, it was very poor. Our measured overall catch rate of 0.12 fish per hour (one fish for 8 hours of fishing) is a fair representation of the fishing on the Tongariro in August but it does not reflect the fishing during some other periods. Such a catch rate represents little more than half the success anglers had in 1990 which was a well publicised low point in the fishery. However we have not had anything like the comment we received from anglers in 1990. Supporting the view that the fishing was not as bad as 1990 are the other results obtained from the angling surveys on the river. In Table 7 the average catch rate, the mean score for

*Table 5: Average weight and length of angler-caught fish from the Tongariro River, 1985 to 1998*

Year	1985	1986	1987	1988	1989	1996	1997	1998
Length (mm)	541	530	539	540	544	541	569	589
Weight (kg)	1.89	1.81	1.89	1.96	1.95	1.93	2.36	2.63

*A similar average size was recorded for fish from other Taupo rivers, as shown in Table 6.*

*Table 6: Average length and weight of trout measured from Taupo rivers in 1998*

River	Tauranga-Taupo	Waimarino	Waiotaka	Waitahanui
Length (mm)	597	615	596	599
Weight (kg)	2.53	2.76	2.59	2.61

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Average catch rate	0.19	0.27	0.27	0.30	0.21	0.24	0.24	0.24	0.12
Angling success			3.5	3.7	3.6	3.4	3.3	3.5	3.4
Angling enjoyment			4.3	4.8	4.6	4.6	4.5	4.8	4.7
Lack of fish (%)		18	< 2	< 1	2	< 2	< 2	< 2	< 1
Overcrowding (%)				30	17	24	11	22.5	13

*Table 7: Summary of angler responses to the survey questions 1990 to 1998*

anglers rating their season's success and enjoyment (where 1 = terrible and 5 = exceptional) and the percentage of anglers raising a lack of fish or overcrowding as a detraction are compared between 1990 and 1998.

Quite clearly, while the fishing was extremely hard at times, it was not as disastrous as a catch rate of 0.12 fish per hour would imply. It appears that the unusual patterns this winter have exposed some deficiencies in how we structure our surveys to collect the catch data. However, while we are suggesting the measured catch rate was not a true reflection of the overall state of the fishery, we are not suggesting by any means that it was a great season.

Anglers shouldn't forget that it was expected that the run in the Tongariro would be seriously affected as a consequence of the effect of the eruptions on spawning success in 1995 and 1996. This is why the minimum size limit was increased so as to protect a greater proportion of the few juvenile fish which did survive. Large spring floods in late 1995 which washed fry from all the rivers into the lake before they were large enough to survive were also expected to compound the impact on the trout population. However what was unexpected was that it appears that the eruptions also altered the ecology of the lake, allowing many of the young trout washed into the lake to in fact survive and grow. Thus the trout population measured last summer was significantly bigger than first expected and the runs of spawning fish this winter in rivers other than the Tongariro were larger than originally predicted in 1995. The extreme occurred in the Waiotaka where counts of spawning fish were the highest recorded since counts began in 1993. Counts in the Waimarino were also very high. The Tauranga-Taupo River did not clear sufficiently following the July floods to be able to count it accurately but we observed a lot of fish in the upper river though the run did not appear as substantial as that in the mid-1990s. This is also reflected in the average catch rate measured which is presented in Table 8. While the catch rate is higher than the last two years the higher flow and poorer water clarity this year were much

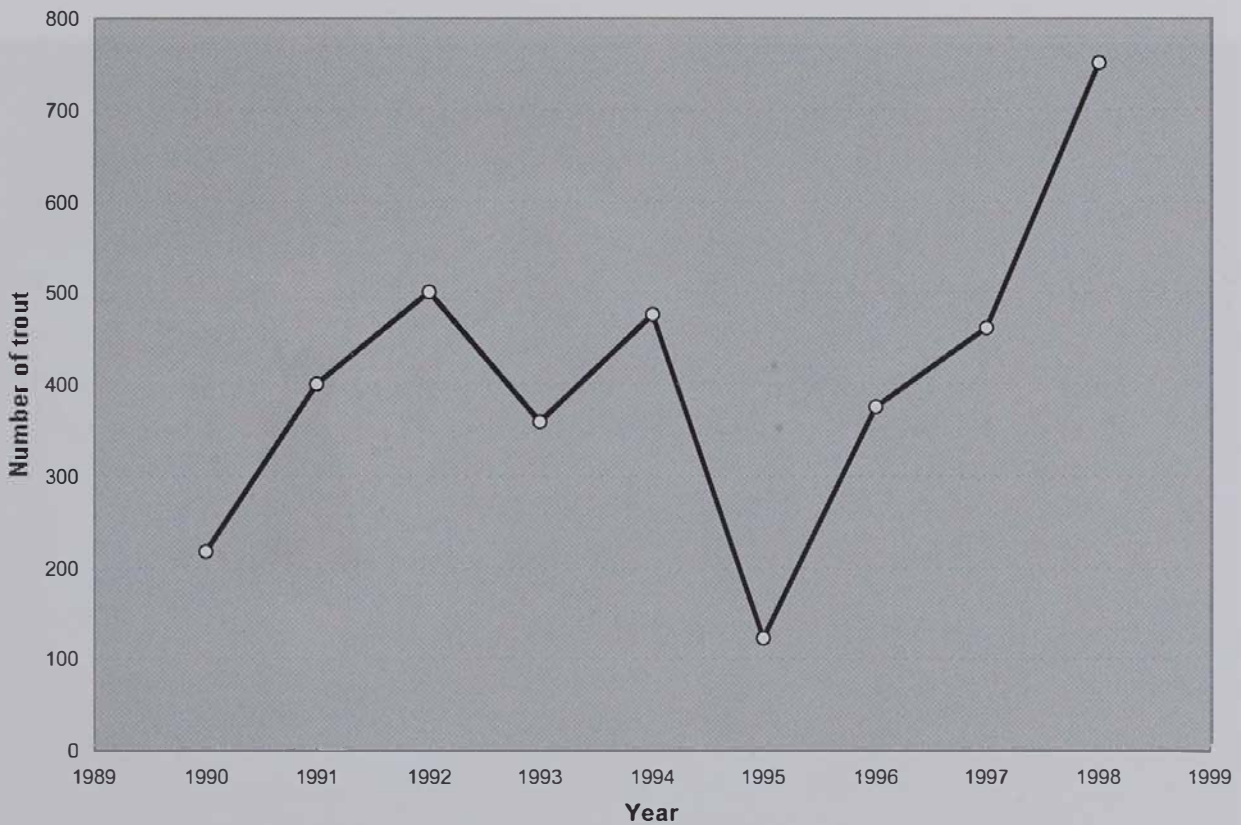


*Twenty-four hours after the flood peak, Fishery Manager John Gibbs wades below the Waipa trap. Every minute or so trout were surging out of the white water and up and over the trap structure*

*Table 8: A comparison of the mean angler catch rate on the Tauranga-Taupo 1992 to 1998.*

more conducive to angling success than in 1996 and 1997. Unlike the other rivers though, in 1995 and 1996 the Tongariro was affected by continuous inputs of ash washing off Mount Ruapehu. As a consequence of all the ash lying through the river it is likely that very few fry were even able to hatch, let alone survive in the main stem of the Tongariro. It is this lack of fry, which as mature fish would return this winter to spawn, which contributed to the lack of fish in the main river this winter. Radio tracking of spawning fish in the Tongariro in 1995 (*Target Taupo*, Issue 21) showed the majority of trout spawn in the main river and that most of these fish spent several months holding in the river prior to spawning. During this time these fish are normally the bulk of the fish available to Tongariro anglers. Confusing the picture this year is that production from the tributaries of the Tongariro such as the Whiti kau was much higher. These tributaries were not affected by the ash and counts of spawning fish in the Whiti kau in 1998 were the largest since counts began in 1990. The radio tracking experiment referred to above indicated that approximately one quarter

1992	1993	1994	1995	1996	1997	1998
0.23	0.41	0.31	0.27	0.13	0.17	0.20



*Graph 1: Peak counts of spawning fish in a selected reach of the Whitikau stream 1990 to 1998*

of the fish entering the Tongariro spawn in the Whitikau.

So in the Tongariro this winter there were two extremes, very few fish spawning in the main river and very large numbers in the tributaries. The other influence on angling success was the July floods. Early in the season the fishing was unusually good for that time of year but it slowed considerably through June when normally we would expect it to be improving. Then came the first flood on 2 July which at 814 cumecs in the Tongariro was the third largest recorded since monitoring began in 1957. Within 24 hours of the flood peak receding fish were actively running the river. The accompanying photo of the Waipa trap was taken at this time. While we stood watching, every minute or so another fish would leap over the main trap structure or more often swim up through the shallow water on either bank. The river never really became fishable before the second flood on 8 July occurred. At 838 cumecs this became the third largest flood since 1957 and the river remained unfishable for another 12 days. The very high spawning counts in the upper reaches following this highlighted that these floods obviously provided the necessary cues for most fish to run the rivers. Not surprisingly when the Tongariro finally cleared in the last week of July the fishing was exceptional but it didn't last for long. It was not until September that

the next runs of fish entered the river.

In summary, we believe that in all the rivers the floods were of sufficient magnitude to stimulate the great majority of spawning fish to make their spawning migration in July and that for much of this time the rivers were unfishable. In addition the number of fish spawning in the main stem of the Tongariro was very low and these are the fish which would normally support much of the angling on this river. As a consequence the fishing through the more settled periods was very poor. However the numbers of fish spawning in the Whiti kau, Waipa and other tributaries were very high and as these fish passed through the Tongariro River they provided some excellent angling. These fish though were only available for short periods before they reached the tributary streams hence the rapid fluctuations in angling success which often occurred between one day and the next.

The numbers of fish in the other eastern rivers were much higher relative to the Tongariro, though some were obviously more affected by the events of 1995 than others.

So what for the future? We are optimistic about the next few seasons. Spawning in 1996 in the Tongariro was affected once again by the eruption of Mount Ruapehu but not to the same extent as in 1995. In all the other rivers and the tributaries of the Tongariro it was a very good season for spawning and juvenile rearing. The results of this appear to be evident already in the lake, with anglers reporting catching unusually large numbers of smaller fish. These are the young of 1996. This hopefully will be confirmed when we undertake our annual acoustic assessment of the trout population in the lake in November. The 1997 year class also experienced ideal spawning and rearing conditions throughout the spring and summer and conditions in the main stem of the Tongariro had improved significantly. It is likely though that the fishing in the

*"Value..It's unwise to pay too much,  
but it's unwise to pay too little.  
When you pay too much you lose a little  
money, that is all.*

*When you pay too little,  
you sometimes lose everything,  
because the thing you bought  
was incapable of doing  
the thing you bought it to do.*

*The common law of business balance  
prohibits paying a little and getting a lot.  
It can't be done.  
If you deal with the lowest bidder,  
it's well to add something  
to the risk you run.*

*And if you do that,  
you will have enough  
to pay for something better."*

*John Ruskin (1819 - 1900)*

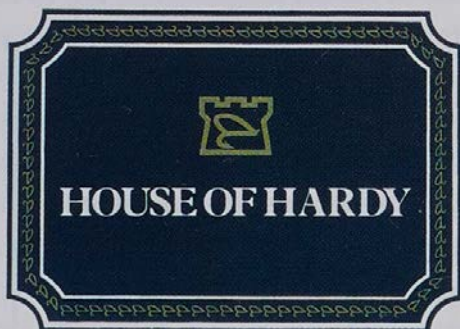


*See our advertisement on page 54*



## REEL COLLECTION

There is something about the sound a reel makes as it plays out a line that tells you it has true quality. That sound is instantly recognisable to anyone who has brought a reel from us. It is the sound of unsurpassed engineering excellence married to a real understanding of what fishermen need on the water. That understanding is why our range is comprehensive. It gives the angler a choice of 6 series of disc, drag and click-check fly reels. All designed to radically improve performance. A reel from House of Hardy is more than just a superbly balanced piece of machinery. It is a symbol. A symbol of our commitment to manufacture only the very, very best.



**Hardy Tackle is available at these House of Hardy Dealers**

TISDALLS  
176 Queen St  
Auckland  
Ph: 09 379 0254

CREEL TACKLE  
189 Taupahi Rd  
Turangi  
Ph: 07 386 7929

TISDALLS  
51 Broadway Ave  
Palmerston North  
Ph: 06 358 6377

THE COMPLETE ANGLER  
Cashel & Barbados St  
Christchurch  
Ph: 03 366 9885

TISDALLS  
52 Willis St  
Wellington  
Ph: 04 472 0485

CENTREFIRE FIELD & STREAM  
358 Moray Place  
Dunedin  
Ph: 03 477 3266

For the latest House of Hardy Catalogue please write to:  
Tisdalls, Box 269, Wellington or phone 04 472 0485



Tongariro will not be as consistent as for the lake or other rivers over the next couple of years.

The floods in July brought a frown to many anglers and concerns over their likely impact. In fact, occurring when they did, they were probably beneficial especially for the Tongariro River. While many fish enter the rivers prior to July the bulk of spawning doesn't actually take place until September. Any eggs that were in the gravels were certainly lost in the July floods but that amounts to only a small fraction of the total spawning. More than balancing this was the improvement to the spawning areas, particularly in the Tongariro. Huge amounts of ash were washed through the river exposing extensive areas of prime, clean spawning gravels previously suffocated by ash. Despite the vast amounts of debris which came down, all the rivers look in excellent condition and as our subsequent counts showed there were lots of fish present following the floods to take advantage of the ideal conditions.

If a similar flood should occur in late summer it could be much more catastrophic, depending on whether young fish washed into the lake are able to survive. We will just have to wait and see what La Nina brings.

### **1997/98 Licence Sales**

Total licence sales for the 1996/97 season are shown below, with the previous year's sales in brackets:

Adult Season	11,843	(11,848)
Child Season	5067	( 6045)
Adult Month	857	( 912)
Adult Week	10,069	( 9631)
Adult Day	27,832	(33,380)
Child Day	6922	( 6479)
Total	62,590	(68,295)

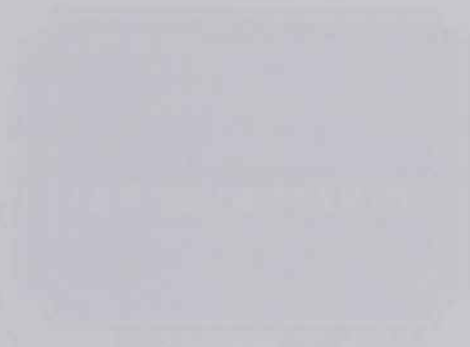
For the 1997/98 season sales decreased by of 5705 or 8%. However, at the end of September of this season (1998/99) sales are up by 536 (4%) on the same period last year. Let's hope this trend continues.

### **Children's Fishing, National Trout Centre**

The last open day for the year in September ended on a high note

with the largest attendance (268) in the past two years - despite a rainy start which must have turned many back toward their TV/computer screens/indoor games, etc.

The replies to calls for more volunteers to help out have been heartening, with new helpers ringing and turning up, many prepared to stay all day. You're all welcome, even if you have an hour or so to spare. We will be looking for some help next year, watch this space!



# Bitz 'n' Pieces

## News Items from Around the Conservancy

*by Cam Speedy*

### Pest Control Operations Involving Poisons

1080 poison has been laid to kill possums at several locations on conservation lands around the conservancy through the autumn and winter periods. These include:

- a Along the northern boundary of Erua Forest in the upper Kaitieke Valley. This involved aerially distributed 1080 carrot baits in June. The operations were conducted by the Manawatu/Wanganui Regional Council as part of Animal Health Board operations to control Bovine Tb.
- b The following scenic reserves between National Park and Taumarunui were also treated by Manawatu/Wanganui Regional Council staff by hand and/or bait stations during the last few months: Raurimu, Mangatepuhi, Raurimu Spiral, Hukupapa, Whakapapa River.
- c Kawakawa Bay Scenic Reserve. This involved aerial application of 1080 carrot baits in September and was undertaken to protect new forestry plantings on adjoining private land.
- d South Taupo Wetlands. This involved aerial application of 1080 carrot baits in late August between the Tongariro River and Motuoapa. The work was part of Animal Health Board Operations.
- e An aerial 1080 carrot bait operation conducted by Environment Waikato within Rotoaira Forest on the eastern slopes of Mount Pihanga in June 1998 may also have resulted in some toxic possum carcasses along the boundaries with Tongariro National Park.

Brodifacoum in the form of "Talon" or "Pest-Off" baits has been laid at numerous sites around the conservancy as a means of maintaining low pest densities where successful knockdown operations have previously occurred. This bait is laid in bait stations but pigs may get access to bait either directly out of the bait stations or by consuming the carcasses of rats or possums that have died from eating bait. **It is recommended that hunters do not eat game (especially game liver) that has been taken from the following areas:**

- In the vicinity of Whakapapa Village and the Ohakune Mountain Road within Tongariro National Park
- Rangataua Forest around Rotokura and Dry Lake and on the lower half of the lava flow east of the lakes
- The Kapoors Road Frost Flats in Tongariro Forest
- Waituhi/Kuratau Scenic Reserve -100 acre Bush Block
- Around extensive areas of Erua Forest south of Erua Road
- Opepe Scenic Reserve
- Tirohanga Scenic Reserve
- Pakuri Scenic Reserve
- Ohakune Lakes Scenic Reserve
- Along the lower Tauranga-Taupo River at Te Rangiiita
- Ohinetonga Scenic Reserve
- Whakapapa Gorge Scenic Reserve and the adjoining north-western boundary of Tongariro Forest
- The farm boundaries of the Taurewa and Raurimu Landcorp Farm blocks in southern Tongariro Forest
- Kaiapo Bay Scenic Reserve between Kinloch and Taupo on the northern lake shore.

*ALL POISONED AREAS ARE WELL SIGN-POSTED  
PLEASE DO NOT REMOVE SIGNS*

### **National Deer Control Plan**

Since the 114 page analysis of submissions on the Department of Conservation document *Issues and Options for Managing the Impacts of Deer on Native Forests and Other Ecosystems* was published in June, there has been nothing more to report regarding this process. Copies of the analysis of submissions can be obtained at a cost of \$5.00 per copy from: Department of Conservation, PO Box 10 420, Wellington.

### **Dog Control Policy**

Staff have begun the process of identifying the various issues in relation to dog access on conservation land in the Tongariro/Taupo conservancy as required by the 1996 Dog Control legislation. The public discussion process is a complex one and there is still no timetable for the release of a discussion document, but watch for updates if you have an interest in this issue.

## Kaimanawa Bovine Tb Survey

Aerial recovery of up to 50 deer carcasses for autopsy to determine the Bovine Tb disease status in the deer herds occupying some 15,000ha in the north-western Kaimanawa Range will occur again this spring/summer. This year will be the fourth annual sample taken since highly successful possum control work in 1994. Together with information collected on possum population density and disease status, this survey will help provide information on the persistence and pathways of Bovine Tb infection in wild animal populations. The study is being conducted by Maanaki Whenua - Landcare Research New Zealand Limited on behalf of the Animal Health Board. The Kaimanawa study site is one of a number spread around the country.

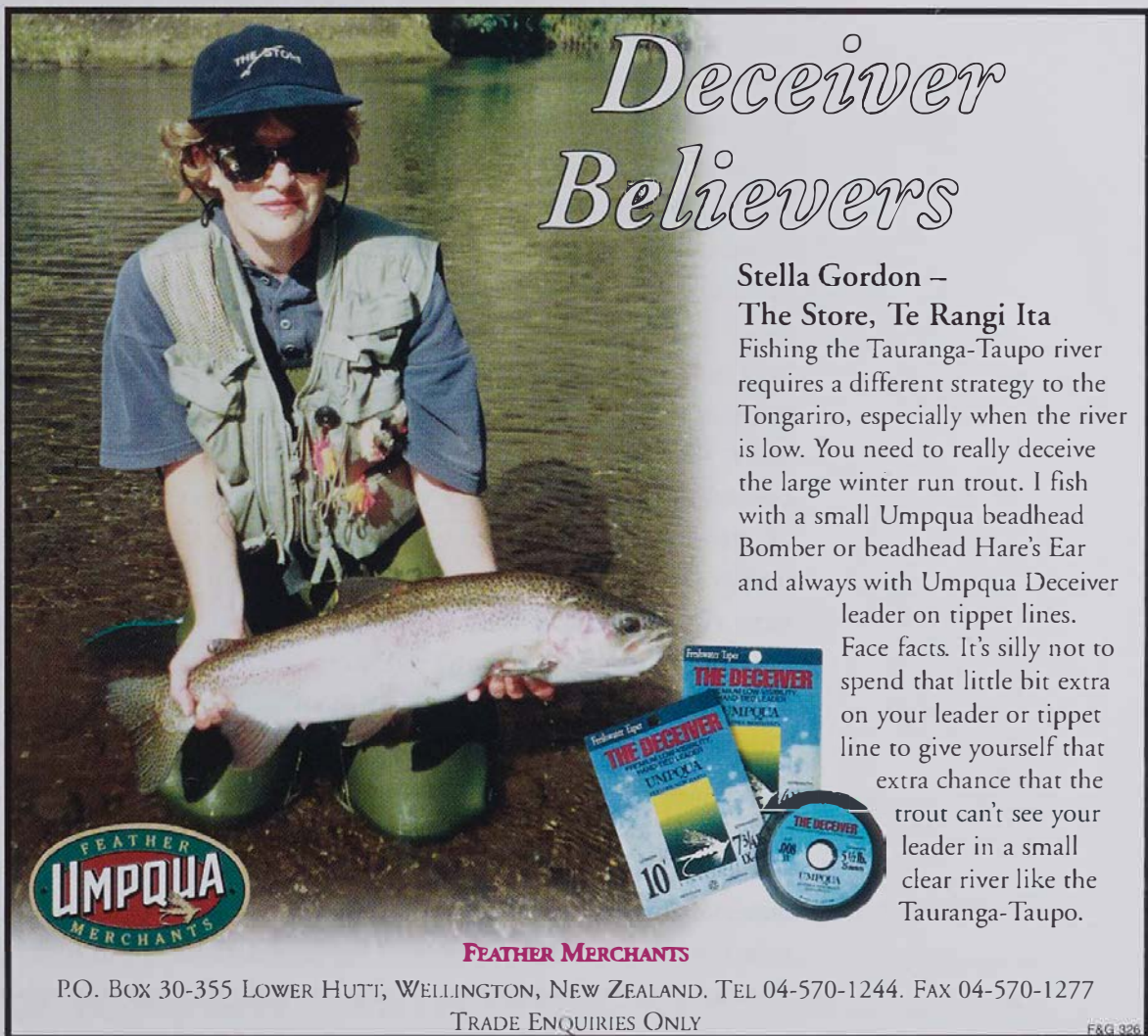
# Deceiver Believers

Stella Gordon –

The Store, Te Rangi Ita

Fishing the Tauranga-Taupo river requires a different strategy to the Tongariro, especially when the river is low. You need to really deceive the large winter run trout. I fish with a small Umpqua beadhead Bomber or beadhead Hare's Ear and always with Umpqua Deceiver leader on tippet lines.

Face facts. It's silly not to spend that little bit extra on your leader or tippet line to give yourself that extra chance that the trout can't see your leader in a small clear river like the Tauranga-Taupo.



**FEATHER UMPQUA MERCHANTS**

**FEATHER MERCHANTS**

P.O. BOX 30-355 LOWER HUTT, WELLINGTON, NEW ZEALAND. TEL 04-570-1244. FAX 04-570-1277

TRADE ENQUIRIES ONLY

F&G 926

## Winter Hunting Summary

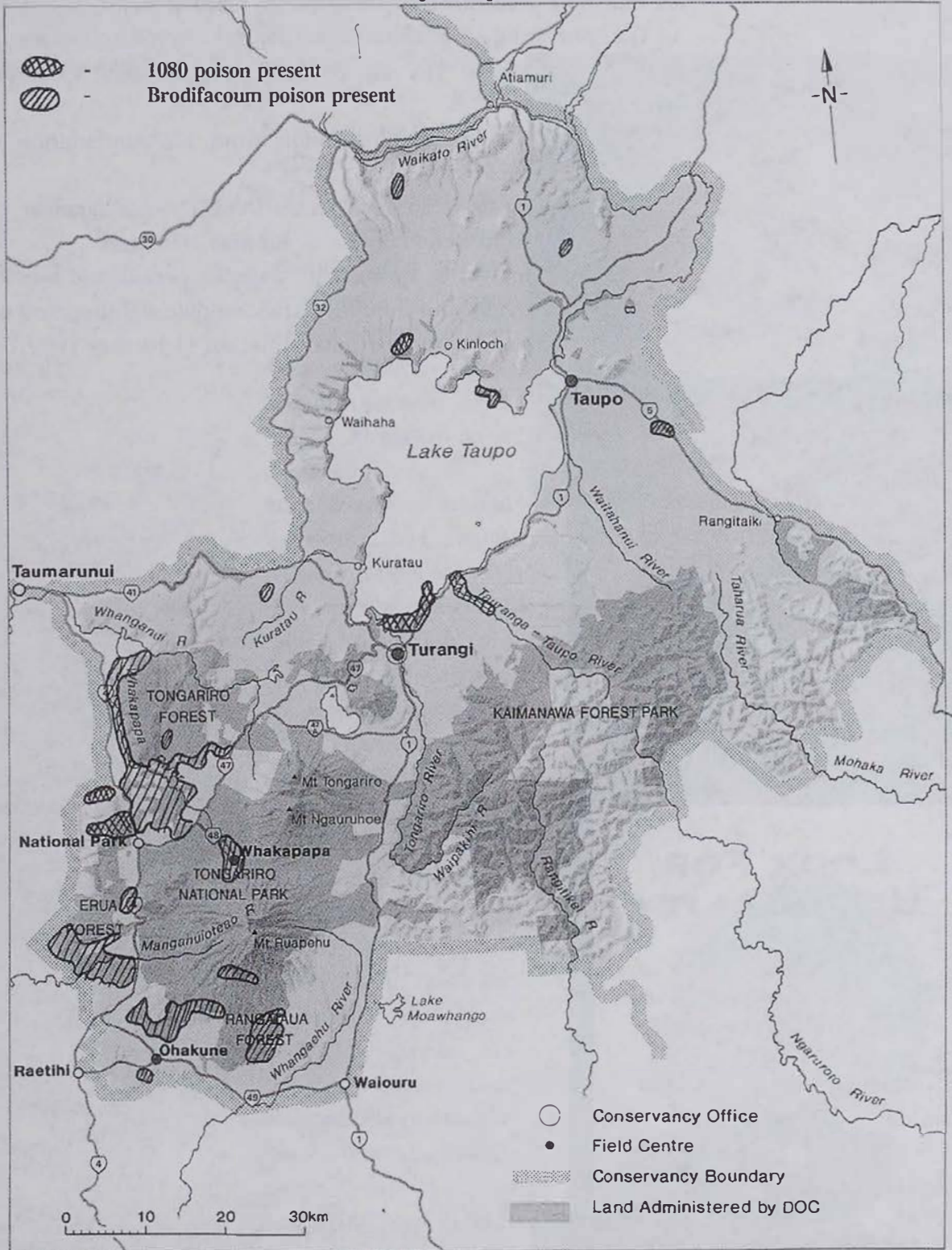
The winter of 1998 will be remembered for the rains that lashed the central North Island throughout July. Hunters and anglers can expect to discover major changes in most catchments as they venture out on their spring-time trips this year. Rivers have changed their course while fresh slips and erosion scars are evident throughout much of the steeper country.

On the plus side, the wetter than normal weather has come mostly from the north and as a result it has been very mild with snow falls and frost severity well below normal. This has meant spring has come as early as Labour Weekend in the high country which is four to five weeks earlier than previous years. Certainly spring in the low country is well advanced with broom flowering a month early and solid grass growth by late September. A mild winter and an early spring often result in increased winter survival for wildlife so those visiting the high country this spring can expect to enjoy all sorts of interesting sights.

Locals noticed deer activity in the pine forests and even down the Desert Road as early as late September which is always a good indicator of the change in the seasons. Antler growth could certainly be affected by such an early change. Deer antler production is related to stag body condition at casting - the better condition the stag is in, the less spring nutrition goes into regaining body condition and the more that can go into velvet production. If stags lose less body condition than normal over winter and then get three or four weeks of strong feed before casting their antlers in late October then hunters may realistically expect some good sets of antlers to be taken next rut. Time will tell - we might get a drought yet to ruin the growing season completely! Hunters can, however, certainly expect to see bigger sets of velvet earlier this year.

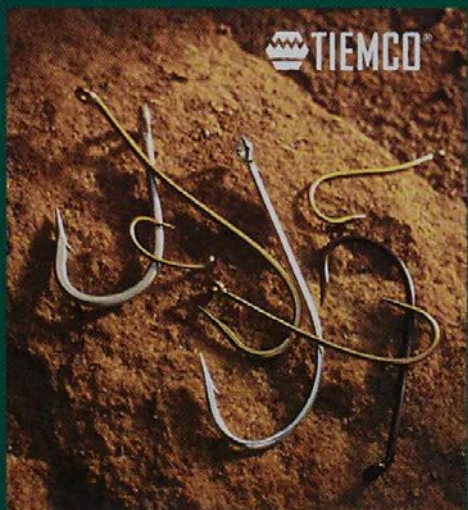
This winter seems to have seen fewer hunters around than normal, despite the warmer temperatures. Perhaps the heavy rain was a major contributing factor but permit issues were certainly down on previous years. Limited winter hunting data was available by the time material for this issue of Target Taupo was due (5 October) but we now have a reasonable sample of hunting data for the autumn period. Thanks to those hunters who took the time to send this information

# Land Administered by Department of Conservation



ALL POISONED AREAS ARE WELL SIGN-POSTED - PLEASE DO NOT REMOVE SIGNS

in. Winners of the Autumn Hunter Diary Prize Draw were as follows:  
Air Transport from Lakeland Helicopters: Gordon Major, Hamilton  
Air Transport from Air Charter Taupo: Brian Cotterell, Te Awamutu  
\$100 Voucher from "The Fly & Gun" Shop, Taupo: V Colcord, Waitakere  
100 Rounds of Federal Ammunition from NZ Ammunition Co: Malcolm Hogg, Te Puke  
Hunting Garment from "Stoney Creek": Denis Thomas, Taranaki  
Hunting Video from Neil Philpott: G Burgess, Hamilton.  
Get out and enjoy the spring and summer period and we look forward to receiving your hunting diaries, wildlife sightings and deer jaws when current hunting permits expire on 31 January 1999.



## LOOK FOR UMPQUALITY HOOKS.

Stick with Tiemco—the originators  
of chemical sharpening.

We do.

On 1,000,000 dozen flies a year.



TRADE ENQUIRIES WELCOME  
FAX: (04) 570 1277



# Team Profiles

## *Robert Hood (Bob)*

Yet another Rob joins the Fisheries team! Now there are Rob, Bert, and Bob.

Rob (Bob) comes from a dairy farming background. He studied agriculture at Telford Rural Polytechnic and then agriculture business management in the United Kingdom on a scholarship.

After travelling around Europe and the United Kingdom, Bob returned to take up a sharemilking position at Levin.

His interest in conservation work has developed from his enthusiasm for fishing, hunting and various voluntary wetland and wildfowl projects.

Bob is married with two daughters, and the family is looking forward to enjoying the outdoor experiences that the area has to offer. Being a keen angler, Bob hopes to improve his own catch rate by making his own contribution to the management effort.

Time will tell!



## *David Moate*

As a youngster, David and the Moate family moved around, with time spent in Tasmania, Australia, Wellington and four years in Rangipo Village near Turangi. The majority of his early years though were spent in Southland on various farms near Invercargill. Since 1983, David has



lived in the Nelson region, mostly at St Arnaud, Nelson Lakes National Park. During this time he was involved in a variety of occupations and businesses including owning and running a backpackers' hostel and a dinner, bed and breakfast farm stay; driving the Lake Rotoiti water taxi and hunting for the Forest Service. However, David's main occupation for 10 years was guiding anglers and game animal hunters throughout the South Island and for one season in Alaska, for 12 species of sports fish and various gamebirds. For the last three years David has worked as a Field Officer for Nelson/Marlborough Fish and Game.


Like other members of the Fisheries team, much of David's spare time is spent hunting or fishing. This he does with his wife Dianne and two daughters, who share his outdoor recreation and conservation interests.

"Most years have included a trip to the North Island pursuing my chosen sports," says David. "Living in Taupo will now enable me to explore the many opportunities available throughout the area and beyond. Working for Taupo anglers with the DOC Fishery team is going to be both challenging and rewarding. I look forward to this, plus being part of a team who are at the forefront of fisheries management in New Zealand."

In turn it is likely several of the Fishery team (we are not mentioning any names) will benefit considerably from David's own angling prowess.

# Taupo Field & Stream Directory

To advertise in the Taupo Field & Stream Directory and reach 12,000 annual fishing licence holders, contact Peter McIntosh on (09) 579 3000



**Discover the Central Plateaus Fishing & Hunting**

**We have:**

- Quality budget accommodation
- Power/tent sites
- Meals (breakfast/dinner)
- Spa pool
- Transport
- Fishing Licences
- Guides available

**Centrally located to:**

- Ruapehu & Tongariro National Park
- Taupo/Turangi
- Lake Otamangakau
- Lake Rotoaira
- Rivers - streams
- Woumarina • Rotaruke
- Manganui-a-Te-Ao
- Poiptotea • Ruatiti Domain
- and many more

**For Booking: Box 24 National Park.  
Ph: (07) 892 2882. Reservations: 0800-785-368**

**GUIDED**  
***FLY FISHING***  
*on the Mighty Tongariro River & Lake Taupo Tributaries*  
*Full Tuition & Quality Tackle*  
*with*  
**KEN DRUMMOND**  
**PHONE (07) 386 0411**  
**P.O. BOX 186 TURANGI**

MEMBER: NZ PROFESSIONAL GUIDES ASSN.

***The Store - Te Rangi Ita***



**The gateway to the famous Tauranga - Taupo River**

- Comprehensive fishing tackle shop, hire waders, guide
- Hungry trout cafe home cooking, cappuccino, espresso, yummy breakfast, lunches
- Petrol, diesel and well stocked groceries.

**Stella & Pete**  
**Ph: (07) 386 8953 Fax: (07) 386 0497**

**TURANGI SMOKEHOUSE and DELI**

**Trout Smoking**  
*– Just bring it in!*



MAF inspected and approved premises. World famous hot smoke technique. Vacuum packed for extended shelf life.

**Smoked Products** - Available ex-stock

- A: Venison salamis (six flavours, whole or sliced)
- B: Chickens, size 8 (smoked & cooked ready to eat)
- C: Salmon (hot or cold smoked)
- D: Venison pastrami (sliced & interleaved packs)
- E: Beef pastrami (sliced & interleaved packs)
- F: Kesler (sliced & interleaved packs)
- G: Venison meat loaf (cooked ready to eat)
- H: Middle bacon (double smoked, superb flavour)

**ORDERS: Phone/Fax (07) 386 0235 or A/h (07) 386 8454**  
A more comprehensive price list is available on request

## WILDERNESS ADVENTURES

# Fly Fishing

- **Novice** —→ **Master**
- **Local or Back Country**
- **All Gear Supplied**

For "Simply the Best" Adventure  
Let Us Guide You

Phone/Fax: (07) 378 4514  
e-mail: [ian@wilderness.co.nz](mailto:ian@wilderness.co.nz)  
34 Aubrey Cres, Rainbow Point, Taupo, NZ

## TONGARIRO RIVER RAFTING

**Tongariro River Rafting** offers you superb nymph and dry fly fishing on isolated water. We supply sumptuous lunch and all transport. Don't just dream, ask for our eight hour wilderness, chauffeured, raft fishing experience. We also run family white water rafting trips.

For Rafting and Raft Fishing in the North Island contact:

**Garth Oakden,  
Tongariro River Rafting**

PO Box 281, Turangi  
Phone/Fax 07-386 6409 - Mobile 025 478 535

## GREIG SPORTS

For your Fishing,  
Hunting and Sporting  
requirements

*Bruce & Joan Pascoe*

59 Town Centre,  
PO Box 71, Turangi

Ph/Fax: 0-7-386 7713

A/H: 0-7-386 6419



## Creel Tackle House



189 Taupahi Road, Turangi  
Brian Scott: Phone/Fax 07 386 7929

## FLY FISHING TACKLE SPECIALISTS

- Quality fly tying materials
- Hire tackle
- Open 7 days

Central North Island Agents for:



## THE Lakeland OF TAUPO

Taupo's Premier Conference Centre



63 guest rooms, A la carte dining 'Whispers' Award winning Licensed Restaurant and Bar. Tennis Court & Swimming Pool. Conference/Function rooms each handling up to 100 guests. Fishing Charters and Guides available on request. Come down to Taupo and learn to fly fish.

S.H.1. Two Mile Bay, Taupo  
Ph:0-7-378 3893 Fax:0-7-378 3891



## WAIORANGA SPORTS & TOURS

Specialising in:-

- *Fresh & Saltwater Fishing Tackle*
- *Fishing Trips*
- *Hunting Excursions*

Open 4am for fishing  
tournaments

147 Tongariro St  
Taupo, New Zealand

Ph/Fax: 0-7-378 3714, A/H 0-7- 378 7916





## KAYDISS RIVER GUIDES

*Come and fish the Tongariro and many other Rivers around the Turangi area with Kaydiss River Guides*



**FLY FISHERS PARADISE** - The winter runs of Steelhead are exceptional with summer providing large brown & rainbow's which make it a fly fishers paradise.

**GUIDE** - Your Guide Warren Kay has over 15 years experience fishing the Taupo Region & Central Rivers of the North Island.

Contact: Warren Kay • 24 Puataata Road, Turangi • Phone/Fax: 07 386 7623  
Mobile: 025 490 973 • Email: Kaydiss\_River\_Guides@compuserve.com  
Internet: <http://ourworld.compuserve.com/> • Homepages: /Kaydiss\_River\_Guides/

## MOTUOAPA MOTOR CAMP

- Lake front camping in quiet bay with boat ramp & marina
- 56 Powered caravan sites
- Quiet tent sites
- Ideal sites for motor homes
- On-site caravans for hire, fully equipped, bring own bedding

Facilities include: Kitchen, Dining, TV, Showers, Toilets, Laundry, Fish cleaning facilities, BBQ, Spa pool

- 10 mins to Turangi
- 30 mins to Taupo
- 35 mins to ski-fields
- Permanent sites available

13 Parekarangaranga Rd  
Motuoaapa, PO Box 41, Turangi  
Phone: 07 386 7162

Fax both camps: 07 386 7162



## TURANGI CABINS & HOLIDAY PARK

- Campervans/Caravans
  - Tent Sites
- 96 Budget Cabins
- On-site caravans

Facilities include:

- Kitchens and dining rooms catering for over 100 people
- Laundries with automatic washing machines, dryers & drying room
- TV room • BBQ areas • Table Tennis
- Childrens Play Area • Telephone
- Fish cleaning area & fish freeze
- Caravan & boat storage

Ohuanga Rd,  
PO Box 41, Turangi  
Phone: 07 386 8754

## PETER CHURCH GUIDING

*(Member NZ Professional Guides Association)*

**OVER 10 YEARS EXPERIENCE**

*Specialising in:-*

- flyfishing ● lake fishing
- tuition ● all tackle provided

**PHONE/FAX: (07) 386 8621**  
**18 TAMAKUI GROVE, TURANGI**

## WINDSOR LODGE

MOTEL/CARAVAN PARK  
SH 1, Waitahanui, Taupo



- 8 fully self-contained units
- Fish cleaning room & Smoker
- 150m from fishing pools
- Wader & rod hire
- Children's play area
- Easy access to lake
- Shop - EFTPOS

Phone (07) 378 6271

Fax (07) 378 6246

Your hosts: Debbie & Brian Blackburn



Turangi  
New Zealand  
Adjoins State Highway 1

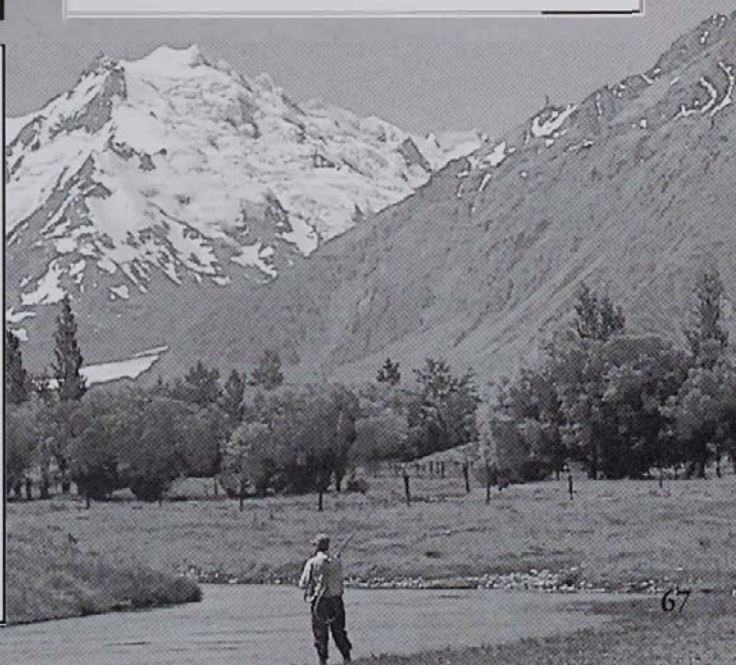
- All standards of accomodation from \$25 per night per person

- Self catering facilities and BBQ areas
- Fire side Bar
- A La Carte Restaurant
- Micro Brewery
- Spa & Sauna

- We'll even cook your catch!

For bookings: Box 174 Turangi 2751

PH: (07) 386 7492 FAX: (07) 386 0106



# MOTUTERE BAY HOLIDAY PARK

- ★ Over 230 sites / tourist flats
- ★ Plenty of caravan storage space
- ★ Lakefront camping / safe swimming
- ★ Public boat ramp & ski lane
- ★ Handy to main fishing rivers
- ★ Mt Ruapehu Ski field 50 minutes
- ★ Hot pools at Tokaanu 20 minutes
- ★ Childrens playground
- ★ Paraplegic ablutions & toilets



★ Public telephone  
★ Camp store, fishing tackle, licenses

**Phone/Fax: (07) 386 8963**

## BELLBIRD LODGE



**Turangi**

Budget priced accommodation, big on comfort and service. Only \$17 per night, guests supply own linen. Freezer and fish smoker. Shuttle service to favourite fishing possies. Enjoy one of our free desserts every night. Guides arranged.

Call Clint or Janeve Green  
for booking or quote.

**Ph/Fax (07) 386 8281**

bellbird@reap.org.nz

## Sportsman's Lodge

- Right on the Banks of the world famous Tongariro River
- Inexpensive riverside accommodation  
Doubles from \$45 per night.
- Large shared Kitchen/dining room with all facilities
  - TV lounge with open fire and sun decks
  - Fishing Guides available

**15 Taupehi Road, Turangi,  
New Zealand**

**Ph (07) 3868-150**



**TOKAANU**

- Superior and budget accommodation
- A la Carte dining • Heated outdoor pool
- Fishing Licences • Three minutes to Tokaanu boat ramp
- Minutes from the mountain - seconds from the lake

Highway 41, Southern Shores, Lake Taupo

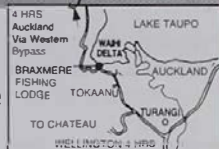
Tel: 64-7-386 8873 Fax: 64-7-386 8853

## Braxmere Fishing Lodge



*Tokaanu, Turangi*

- 5 mins from Tongariro River
- 30 mins from Whakapapa Snowfields
- 2 separate houses with own thermal pools & barbecue
- Licensed Restaurant ('The Place') on site conference centre
- 11 self-contained units all have lake views
- Thermal pools • Barbecue • Drying rooms/Laundry
- Mobile homes facilities • Mountain Bike hire
- Hire boats and fishing gear • Fishing guides available
- Wharf and launching ramp • Competitive rates - group rates



Little Waihi. Tel: (07) 386 8011

P.O. Box 11, Tokaanu. Fax: (07) 386 7513



## TONGARIRO

**ONLY  
\$20.00 pp  
per night**

**RIVER  
FISHING  
&  
ACCOMMODATION**



Fishing Guide  
Ron Horton

Ph: (07) 386 5441 evenings  
273 Taupahi Rd, Turangi



COLUMBIA

STONEY CREEK

LEATHERMAN

FENWICK

ABU

LEVI'S

LANDROVER

SCIENTIFIC ANGLERS

BUCK

SWAZI

AIR FLO

SAGE

OSPREY WADERS

DIAWA

UMPQUA

BARBOUR

R M WILLIAMS

FAIRYDOWN

SWANDRI

SWISS ARMY

KILWELL

DRIZA-BONE

GREAT OUTDOORS

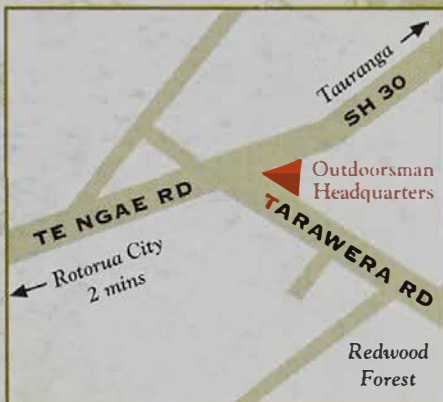
CORTLAND

BUSHNELL

# Outdoorsman Headquarters

EXPERIENCE NEW ZEALAND'S FIRST  
DESTINATION OUTDOOR STORE

New Zealand's Largest Range of  
Trout Fishing Tackle at All Year Best Prices



## Outdoorsman Headquarters

Tarawera Road  
Rotorua

0800 OUTDOOR  
6 8 8 3 6 6 7

PENN

LINE 7

MACPAC

WOODMAN

MAGLITE

SHIMANO

RAY-BAN