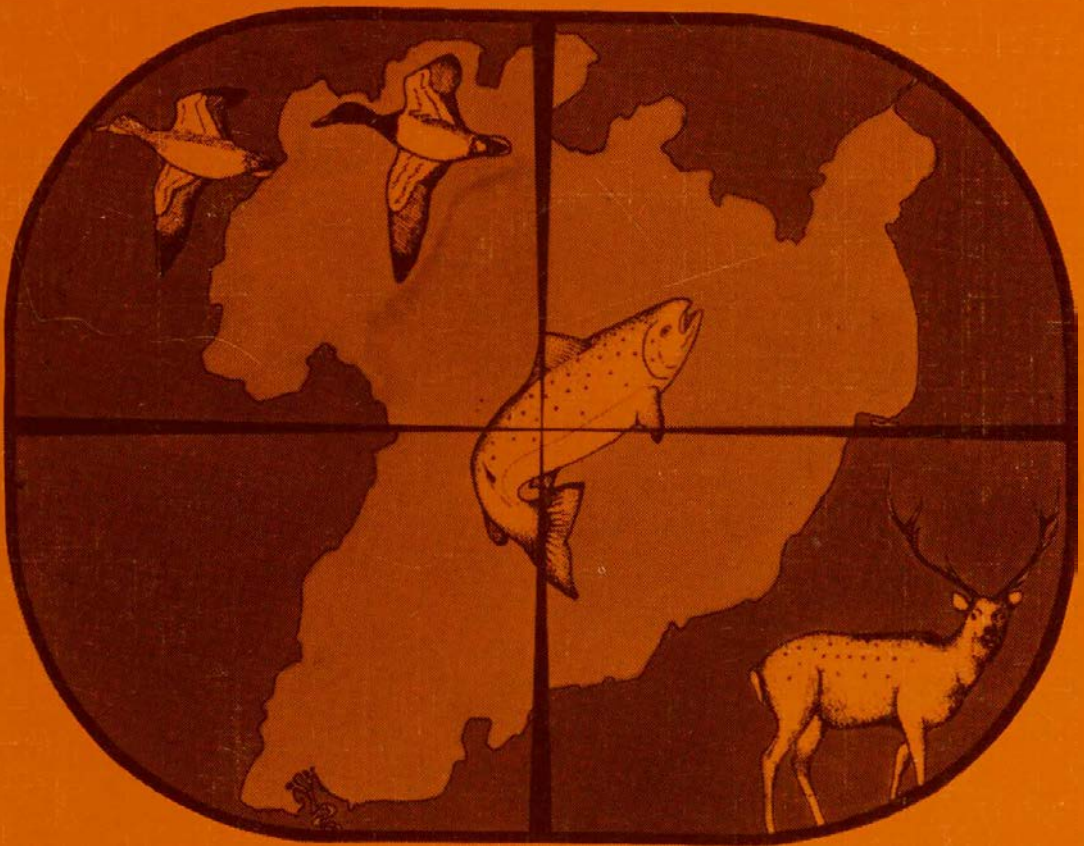


NOVEMBER 1992

ISSUE 11

TARGET AUPO

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



CONSERVATION
TE PAPA ATAWHAI

SPORTING LIFE 86



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TARGET AUPO

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

Published three times a year (March - July - November)

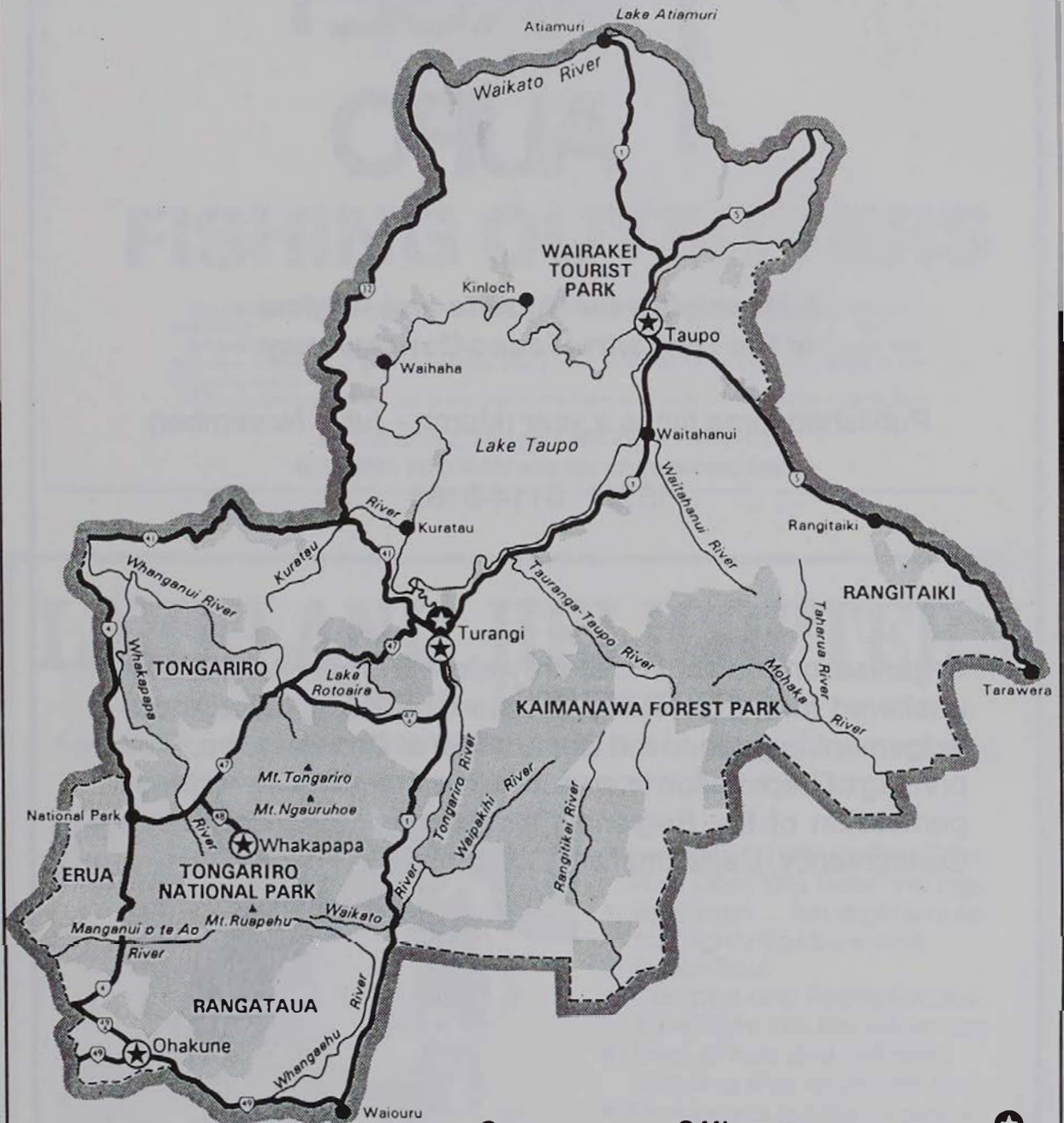
ISSN 0114-5185

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Published by
Department of Conservation
November 1992

Printed by Taupo Times Commercial Printing

Tongariro/Taupo Conservancy



★ Conservancy Office
 ★ Field Centre Office
 — Conservancy Boundary
 — Protected Areas



0 5 10 20 30 40 Kilometres



CONSERVATION
TE PAPA ATAWHA

Dear Anglers and Hunters

Welcome to this, the 11th issue of "Target Taupo". We trust that the information presented continues to be of interest and of practical value to you.

In the last issue, we suggested that the winter fishing season looked like being a good one and this certainly proved to be the case. Anglers across the board have commented that the fish were bigger and there were more of them than the previous couple of seasons. These observations are consistent with what our surveys and population monitoring has also told us. Anglers can take considerable pride in the knowledge that your acceptance and willingness to reduce the number of fish killed has had a big part in the substantial improvement in the fishery we are now experiencing, compared to the situation that prevailed in the late 1980s.

In an effort to reach a wider cross section of the fishing community with information about the fishery, we have decided to circulate an annual newsletter. The first of these was published last July and was posted to all whole season licence holders from last season. As a consequence of an advertisement in the newsletter we have received over 300 new subscriptions to this magazine.

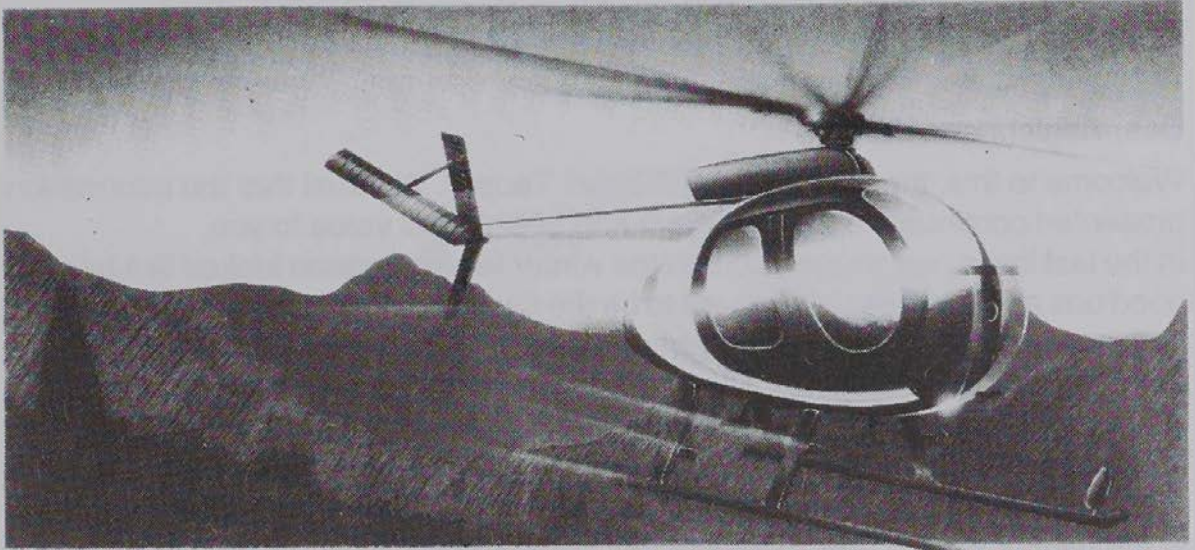
Although the winter has been a generally happy time for anglers on the Taupo rivers, the weather has been particularly unkind to those of you in search of a bit of venison for the freezer. As a result, the deer harvest has been lower than usual for the time of year and this perhaps bodes well for the spring. New growth is now evident around the lower altitude parts of the conservancy and hunters should be planning a visit to their favourite clearings and slips if they are not already doing so.

In addition to the onset of spring hunting, the evening rise is commencing in the rivers, the smelting rainbows are on in the lake and Otamangakau looks likely to continue to live up to its reputation of providing some outstanding trophy fish through the summer. All in all, there should be some exciting and rewarding moments ahead.

Whether you hunt or fish, we wish you well in your sport. Safe journeys.

Rob McLay
Co-Editor

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TONGARIRO/TAUPO REGIONAL OFFICE
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NGARURORO

— Rainbow trout, 5-6lb average, double figure potential, good numbers.

RANGITIKEI

— rainbow trout, 7-8 lb average, plus excellent double figure potential. Average numbers.

RIPIA

— Brown trout, smaller fish, low numbers.

TAHARUA

— Brown trout, smaller fish, good numbers.

TARUARUA

— Rainbow, average size, average numbers.

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

Please contact compliance staff:

Wayne Boness, Taupo Phone 378 5450 (work) 377 0112 (home)
Bryan Taylor, Turangi Phone 376 8607 (work) 386 6549 (home)
Sid Puia, Turangi Phone 386 8607 (work) 386 6700 (home)
or Conservancy Duty Officer Phone 386 8607 after hours.

ANYTIME

1. YOUR VIEWS

In keeping with the intention that "Target Taupo" should serve as a vehicle for discussion and debate on hunting and fishing issues, the next issue will include a new feature 'Your Views'. This is an opportunity to put your view forward on a particular issue or aspect of the management of your resource.

It is not intended to be a 'Letters to the Editor' in which you extol our virtues or otherwise (though we do appreciate receiving your comment, good or bad).

In this issue there is an excellent example of the sort of debate we would like to encourage with the article by Brian Burgess. Brian disagreed with aspects of a previous article we had published and so put his own views forward. Brian's response adds new ideas to the debate rather than simply criticising a previous point of view.

The editors of Target Taupo will publish any letter so long as we feel it displays a reasoned approach which contributes in a positive way to the discussion. We do not intend to publish letters which contain wild unsubstantiated claims, gross exaggeration or make personal attacks on any contributor. For fairly obvious reasons we are not interested in political grandstanding though letters certainly do not have to support departmental policy - just keep them constructive!

With the issues raised about the merits or otherwise of managed hunting in Target Taupo issues 10 and 11, the Fishery Issues and Options Paper and the soon to be released Draft Management Plan, there is plenty of opportunity for comment.

We encourage you to take it.

All letters will be published under the author's or organisation's name.

Pseudonyms will not be accepted.

2. GUEST ARTICLE - "ANOTHER POINT OF VIEW"

By Brian Burgess

Editor's note: The material which appears in 'Target Taupo' does not necessarily reflect the policy of the Department of Conservation. The aim of the magazine is to act as a vehicle for useful discussion and debate on hunting and fishing issues, and to keep users of the Tongariro/Taupo Conservancy informed.

Brian Burgess is a Gisborne hunter who has many years hunting experience of both the Urewera and Raukumara areas, as well as most other game hunting this country has to offer.

He has been involved with the New Zealand Deerstalkers' Association at a national level and more recently with the Raukumara Urewera Hunting Club as Treasurer and Editor of their club magazine.

Brian offers the following guest article for our consideration.

In the 'Guest Article' in the March 1992 issue of "Target Taupo" the author promotes the concept of "Managing game herds in the same manner as introduced fish and game birds" and in particular the Kaimanawa Sika herd. As a long time sceptic of the "Managed hunting in NZ" philosophy, I feel I should put pen to paper and attempt to throw another point of view into the debating arena. My scepticism arises from the frustration I've experienced trying to get managed hunting promoters to spell out the practical application of their ideas to NZ hunting. This would simply involve them in answering some very basic questions. Questions which to date remain unanswered.

The article in question does somewhat qualify the author's beliefs by stating that such management should be applied to "given areas" and refers specifically to recreational-hunting areas. This at least in my opinion does give the concept some credence, as all too often ideas of managed game herds are aimed at a New Zealand wide philosophy encompassing all deer in all areas.

Where I take issue with the article is simply in its total lack of detail. The article, like so many that have previously been printed in N.Z. hunting literature, shares this all too common trait, a lack of detail. What does it imply, by "Game herd management"? What would the author wish for, if the herds were able to be "managed"? I'm sure N.Z. hunters reading such articles would want to know this. Would managed herds give hunters more deer to hunt and thus a better hunting success rate? Would it give them an exclusive block hunting system whereby they would hunt as an individual or party, a particular block for a given period? Would it be a "pot hunting" philosophy or a trophy hunting concept? Could it be both?

In reading the article, a hunter could not be blamed for having such questions come to mind, after all, if you're going to "manage" a herd the "management" must be for a purpose, a goal, or particular aims. But those goals are hardly ever, if ever, spelt out.

From the land administrator's point of view, they too would want to know answers to a few basic questions when considering the worth of these managed hunting concepts.

To start with, they would probably like to know if hunters actually want such "management", keeping in mind that herd management means hunter supervision, supervision means regulations, regulations means control, i.e. control of hunters.

What about control of the herds? After all if animal density can't be controlled, herds can't be managed and vice versa. Would the control (supervision? or regulation?) of hunters compliment herd control, or would it hinder it?

And both the hunter and land administrator would want to know about the cost. Who would the cost be to? And how much? These are just some very basic questions which need to be answered in articles that promote "game management" in New Zealand, if the reader is expected to seriously consider the idea. Some people would answer these questions with the all too often used phrase "It's practised in other countries so it must work here in New Zealand". Or "fish and game birds are managed in N.Z. so why not deer, etc". These sweeping statements don't even begin to take into account the different circumstances between game birds and "game" herds, between other countries and N.Z. in regards to social, economic and environmental differences.

N.Z.'s fauna and flora evolved over tens of thousands of years. Deer have been here for a mere 100 years.

The massive curbing of the deer population that has brought deer numbers to today's ecologically "acceptable" densities was not an evolution bought about by mother nature. It was, if people need reminding, bought about by considerable and expensive effort of the helicopter wild animal recovery industry, PAID FOR BY AN OVERSEAS DEMAND FOR WILD VENISON.

The future of that demand for wild venison is uncertain and in jeopardy. The future of the wild animal recovery industry is likewise. A massive wild animal control tool is now slowly being dismantled and may never again be available on a "no cost" to taxpayer basis. Recreational hunting can and will play an important role in helping curb animal densities. However in a lot of areas that effort on its own will not be sufficient. So given this situation, our deer herds may soon embark on another stage of their "evolution". And how will "managed" or "regulated" hunting cope with this possible situation?

Some will say, leave the herds alone, nature will look after the problem. Deer numbers will build up and deer will starve themselves into decline. The bush will (given time) rejuvenate, but of course in a somewhat modified form. This cycle may repeat many, many times over hundreds (or thousands) of years until a balance between palatables and browsers is met.

Well that's great, no problems. However, what of the food chain that's either destroyed or vastly altered during this "evolution"? What of the existing ecosystems that support the native bird and insect life? How many more species would disappear before the balance in game herds and habitat is attained? One hundred years of deer presence in N.Z. hasn't even begun to scratch the surface of evolution.

It's now generally accepted that our introduced wild animals are here to stay and the forest will be modified by their presence. Hunting must become recognised as a natural and important part of N.Z.'s "ecosystem" so as to minimise the impact on our forests.

Today in New Zealand, four years down the track from the 1988 survey of hunting in N.Z. we are, after some 20 years of intense "harvesting" of wild animals by ground and helicopter commercial operations and a 40,000 strong army of recreational hunters, still able to produce an annual harvest of 260,000 wild "big game" animals.

Without management, without regulation, without cost. This harvest is twice as great per capita as many other countries which boast "game management". Game management, which stringently controls the hunters and at considerable cost to the hunter. This is to the extent, that in many countries only the well-off, the affluent, can afford to hunt.

Our N.Z. harvest of 260,000 animals, most of which is produced on public land, is set to increase with the demise of the wild animal recovery industry and with that increase will come even better hunting successes.

So what is it that people who promote the concept of game management want? What are their goals? Do they want quantity or quality? Do they want more animals, or do they want trophies? Are their goals practical, achievable? Would hunters accept the hunter control aspect of managed herds? What could it cost? Who would pay?

I guess my article too, raises more questions than it attempts answer. However I'm not doing the promoting. But as sure as hell I'm one of those who may have to live with the 'regulations' and 'the cost' that game management proposals may bring.

So, in all fairness I feel that people who have beliefs and opinions on how 'managing game herds' can enhance N.Z. hunting, should be prepared to spell out the practical application of their ideas which in turn can then be objectively dissected by the reader, and the worth and logic carefully considered and debated.

In concluding it should be remembered that N.Z. has a mere three million people on a land area similar to that of many other countries with populations of 20 million and even more. When N.Z. reaches that level of human density there may be a real need to regulate hunting. Until then New Zealand hunters should enjoy and appreciate what we have. There are hundreds of thousands of hunters around the world who would cherish our hunting freedom and rate of hunter success, all at nil cost.

There are some herds in N.Z. that could benefit from some management (Sambar for example), and which could be applied with reasonable chance of success. But is it "game management" or only hunter control.

Instead of looking, with envious eyes at the organised hunting and game management that other countries have (countries I might add who have to control their large number of hunters to ensure the future of their wild (natural) animals), N.Z. hunters should look more closely at what we have here in N.Z. and compare that with what other countries have not.

It's quite possible, and even probable, that hunters from other countries look at what we have with envious eyes.

We enjoy (almost) total hunting freedom, 365 days of the year on large expanses of public land.

Even after massive commercial deer recovery operations and government shooters spanning 40 years plus, New Zealand hunters still enjoy a hunting success rate greater than most other countries.

On a land area of similar size other countries which practice managed hunting have human populations seven times more dense than ours (e.g. N.Z. three million, West Germany 20 million). West Germany has 300,000 hunters, N.Z. has 40,000!

Our New Zealand climate and forest habitat allow our deer to maintain a reproduction rate greater than our recreational hunters can harvest (in most areas).

Many N.Z. hunting experts write about what "could be" and what "should be". They write about hunting ethics and somewhat look down their nose at our average N.Z. hunter, who simply enjoys "pot hunting" at will.

They write about selective hunting and the need to "protect" and to "administer and manage our herds"; to "regulate" the N.Z. hunter.

They dream of the day they roam the hills to "take" that 14 pointer which has reached that "takeable" trophy standard, under the rules of game management. These are fine sentiments.

However, I shall remain a sceptic until these same people formulate that workable, acceptable game management plan which spells out the practical application of the same. Not just dream about it and write about it. But put pen on paper and explain how it may be applied to New Zealand so that hunters and land administrators can give it in-depth consideration, instead of just flicking the page and moving on to the next story.

3. WINTER HUNTING SUMMARY

Heavy, persistent snow falls and constant westerlies influenced hunting patterns in the central North Island this winter. Ruapehu recorded a snow base of four metres and Umukarikari was under snow for nine weeks solid, it's no wonder a massive 35% of the hunting diaries returned for the winter period showed "No Hunting Done". Those that did manage to get out tended to stay close to the car with Clements Road and Kiko Road, two of the more popular destinations.

While local helicopter and air charter firms reported slow but steady interest in the private land down the Mohaka this winter, there was little interest in the higher altitude blocks on the public conservation estate. Boyd airstrip and some of the private air strips were unusable due to heavy snow for much of the winter.

As a result, both the hunting effort and harvest was well down this year. This was reflected in the low number of jaws submitted for analysis with just thirteen collected between 1 June and 31 August. A few knowledgeable regulars took a small number of well conditioned animals out of the more secluded sheltered gullies along Clements Road. The Tikitiki catchment also hunted well for those in the know. The data obtained from 323 hunting diaries presented in Table 1 shows just how few deer were harvested this winter (remember this is only a sample of the hunting effort because so many of you forget to return your hunting diaries!)

After a false start in October, spring finally appears to have arrived. As a result of the low winter pressure hunters can expect to find plenty of deer moving out to the margins in the low country to utilise the new grass. These deer will be in good condition and fawning rates should remain high among the breeding hinds.

Up in the mountain beech forest of the central Kaimanawas and in the western Kawekas however, expect to find fewer deer than you've experienced over the past few summers. The deer you find are likely to be in poor condition and the proportion of breeding age hinds in fawn will be well down. Don't be surprised if you also find dead deer that have succumbed to the cold. Two harsh winters in a row with a poor summer in between, especially in the high country have had a serious impact on deer populations in these areas. This is a good example of how climate and habitat quality take over as regulators of the population when hunting mortality is insufficient to maintain deer numbers below levels that can be sustained by the habitat.

The plus side of this for hunters though, is that with lower animal density and (hopefully) a good summer this year, animal condition in the high country will improve markedly. Barren hinds will have a whole summer to regain condition and this might well improve prospects for the roar next year. Only time will tell!

Winners of the diary prize draw for the June to September hunting permit period are as follows:

Air transport with Helisika:	Stan Bowen, Te Awamutu
Air transport with Lakeland Helicopters:	A Krippner, Cambridge
Air transport with Air Charter Taupo:	W Rickerby, Hamilton
Ammo from NZ Ammunition Co Ltd:	Dave Johansen, Taumarunui
Sports goods from Taupo's Fly and Gun Shop:	J Ormond, Te Puke
Accommodation at Sika Lodge:	A Van Driel, Howick

Ten hunters also receive complimentary copies of this issue of "Target Taupo". Congratulations to all winners and thanks to all who returned diaries for the data. Areas to keep an eye on during the spring are, as ever, the Waipakihi Valley river flats, the Hauhangatahi tops west of Mount Ruapehu and the northern part of the Kaimanawa Middle Range should be worth the effort from mid-December onwards. The 'Te Hiwiokaituri' ridge is an often overlooked but very productive area.

By the time this edition goes to press the handy deer in the Boyd block are likely to have had a stir up but we hope at least some of you had a crack at these animals.

The Oamaru area has been quite hard over the winter but look to this block to produce the usual spring numbers of spikers that just can't resist the new grass. We hope you have an enjoyable successful spring/summer hunting period and look forward to receiving your diaries along with any comments and observations you make, at the end of January.

TABLE 1 - TONGARIRO/TAUPO CONSERVANCY RECREATIONAL HUNTING SUMMARY

JUNE - SEPTEMBER

AREA	BLOCK	DAYS HUNTED	ENCOUNTERS				KILLS				DAYS/ENCOUNTER		DAYS/KILL
			SIKA	RED	PIG	GOAT	SIKA	RED	PIG	GOAT			
KAIMANAWA RECREATIONAL HUNTING AREA	Clements	187.5	135	5	5		33	1	1			1.3	5.4
	Hinemaia	5.0	3										
	Cascade	23.0	13				3					1.8	7.6
	Kaijo	3.0											
	Oxmanu	35.0	19	3			6					1.6	5.8
	Tikitiki	11.0	9				7					1.2	1.6
	Ta Inga	5.0											
	Jap Creek	1.0	5	2			1						
	Upper Oamaru												
	ALL	273.5	183	11	5	5	49	1	1		1.4	1.4	5.4
1991 FIGURES	568.0	401	10	5	5	66	3	2				1.4	7.8
KAIMANAWA FOREST PARK (excluding RHA)	Waipahiti	41.5	24	15			6	3				1.1	4.6
	Desert Road	4.0	3				1					1.3	4.0
	Access 10	3.0											
	Umukariki												
	Mount Urchin												
	Waioata/Whitika	7	8	4	1		4	1	1			0.5	1.2
	Waimarino	14	7	5			3	3				1.2	2.3
	Kiko Road/Tauranga-Taupo	80.5	64	2	1		14	1	1			1.2	5.4
	Tiraki												
	Rangitikei												
Ecology													
Ngaruro													
ALL	181.5	120	34	2		33	9	2		1.2	1.2	4.1	
1991 FIGURES	289.5	194	77	15		60	28	2				1.0	3.2
TONGARIRO NATIONAL PARK	Rangataua	19.0		7									
	Ohakune	13.0		2									
	Southwest	1.5		2									
	Hauhangatahi	3.0		1									
	Whakapapa	4.5											
	Pihanga/Tiha	18.0		4	2								
	Desert Road	3.0	3.0				1						
	ALL	83.0	3.0	40	2		1	14				1.8	5.5
	1991 FIGURES	184.5	5.0	115	2	2	5	44	6			1.5	3.4
	TONGARIRO FOREST												
ALL	64.5		34	1	31		12		11		1.8*	5.3*	
1991 FIGURES	150.5	5	36	11	64		16	4	81		2.8*	6.8*	
ERUA FOREST													
ALL	17.5		9		9		4		6		2.0*	4.3*	
1991 FIGURES	36.5		17	3	41		8		20		1.8*	4.5*	
RANGITAHI FOREST													
ALL	9.0	1	6								1.3		
1991 FIGURES	30.0	20	3	1		7	1	1			1.3	3.3	
LAKESHORE RESERVES													
ALL													
UNSPECIFIED RETURNS		80.0								11			7.2*
TOTALS		710					78	51	3	18			5.4*
		1,468.5					168	127	16	166			4.8*
		1,660.0					167	173	14	229			4.6*

(NO DATA PROVIDED)

* Deer and Pig Only

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4. LAKE BED OWNERSHIP AND ACCESS TO THE TAUPO FISHERY

Many people are aware that the Crown has recently negotiated a settlement with Ngati Tuwharetoa which will return the title of the bed of Lake Taupo to the tribe. Few probably know much about the background to this issue or the implications of the change for anglers.

Prior to 1926 the beds of the lake and inflowing rivers belonged to the various hapu of Tuwharetoa. From the turn of the century anglers' groups and the Crown established the fore-runner of today's trout fishery. While the fishery was a public resource for public use, access to it was hampered by the lack of public ownership of the beds and banks of the waterways.

In the years immediately preceding 1926, the Crown negotiated an arrangement with the tribe that would reserve the lake bed for public use. This agreement was formalised in the 1926 Maori Land Amendment and Maori Land Claims Adjustment Act.

Some provisions of the Act differed from points of the agreement. In particular, the lake bed and designated portions of the inflowing river beds simply became land of the Crown rather than public reserve vested in the Crown.

Some other key features in, or emanating from, the 1926 Act were:

- a special licence was required to fish at Taupo;
- the Crown was to pay the Tuwharetoa Maori Trust Board an annual sum approximately equivalent to half the revenue received from the sale of fishing licences;
- a public right-of-way, 20 metres wide, was provided over the margin of all Maori land adjoining the lake;
- a 20 metre wide right-of-way on foot for licensed anglers was provided over Maori land adjoining the sections of rivers where the beds were declared to be Crown land;
- compensation was paid to owners of riverbank Maori land which was subject to the right-of-way;
- the Crown was given the right to use and control the waters overlying these lake and river beds, and was empowered to make regulations governing fishing, boating and other use of the waters.

This led to a situation unique in New Zealand, whereby anglers have foot access as of right over lakeshore and river banks even though they were not in public ownership. Effectively some 95% of the lake dependant fishery is legally accessible to anglers.

The Tuwharetoa Maori Trust Board has long been concerned that the Act, in transferring title of the beds to the Crown, did not properly reflect the underlying agreement to create public reserves.

The recent negotiations have focussed on the mutual wish to restore the mana of ownership to the tribe, without impinging on existing public rights and privileges. The outcome has been to return the present Crown lake and river bed title to Tuwharetoa. This decision will not become effective until ratified by the Trust Board's beneficiaries, some time within the next 10 months.

So what effect does all this have on anglers? The main elements and effects of the agreement are listed below:

Elements

- The bed areas will be vested in the Trust Board. They will then cease to be Crown land.
- The Trust Board will hold title for its beneficiaries (in the case of the lake bed) and, in the case of the rivers and streams, for the members of the hapu who adjoin them, and in both cases in trust for the common use and benefit of all the peoples of New Zealand.
- The people of New Zealand (which is taken to include visitors) will continue to have freedom of entry to and access upon the bed areas and waters above them.
- Where not inconsistent with the general principle of public access the Minister may at any time release portions of the bed areas from the agreement (i.e. they will become freed from the trust for public use and benefit). (There was a similar arrangement in the 1926 agreement).
- A management board will be set up, in partnership between the parties, for administration of the bed areas. It will consist of four members appointed by the Trust Board and four members appointed by the Minister in consultation with the Minister of Local Government. The management board will appoint one of its members as chairperson (without a casting vote).
- The management board, where not inconsistent with the agreement, will as far as practicable act as if it was an administering body of a reserve under the Reserves Act 1977.
- The Trust Board and the Crown will share any revenue from new leases and licences granted by the Trust Board, and the Crown will continue to make annual payments on the basis of s.10 Maori Trust Boards Act 1955.

Duties of the Management Board

- Determine what, if any, conditions or restrictions are necessary from time to time for the protection of the bed areas and protection and control of users;
- to consider any application and recommend to the Trust Board whether or not it should grant a lease or licence over any portion of the bed areas;
- provide services or facilities for public use of the bed areas.

Effect on Fishing

There will be no change to the present fishing regime in the waters covering the bed areas, nor the present access rights to the fishery, nor to the present statutory right-of-way.

Effect on Boating

The status quo will be retained. Namely: - any person who holds or obtains a permit or licence under the Lake Taupo Regulations 1976 will not need a lease or licence from the Trust Board;

- boating facilities owned or controlled by the Department of Internal Affairs continue to be the property of the Crown;
- the rights of navigation and regulation of boating continue in the same way under the 1976 Regulations and the Harbours Act 1950.

Rights to the Water

The rights to use water and regulate water use will not be affected in any way by this agreement.

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FOR ALL YOUR HUNTING AND FISHING NEEDS

5. FINDING YOUR WAY: KAIMANAWA RECREATIONAL HUNTING AREA

The Kaimanawa recreational hunting area (RHA), (Figure 1), covers some 24,000 hectares in the north eastern part of the Kaimanawa Forest Park. It was gazetted in September 1982 in recognition of the area's sika deer herd which attracts hunters from all over the country.

This RHA is one of the most popular of New Zealand's ten RHAs with some 2,500 hunters undertaking 5,000 days of hunting annually. This hunting effort removes an annual harvest of some 600-700 animals. While the majority of these animals are sika deer, approximately 8% of the annual harvest are red deer or red/sika hybrids. Small numbers of pigs are also taken each year from the lower altitude forests along the northern boundary.

The forests of the Kaimanawa RHA are dominated by beech associations. To the north, red beech/silver beech/hardwood forests provide some of the best deer habitat in the area. Much of this northern part was logged between 1930 and 1970 and the subsequent regeneration provides a wide range of palatable plant species. Further south red beech/silver beech forest cloaks rolling hill country. In valleys, on river terraces and on lower slopes red beech is dominant often with an associated kanuka canopy. Some 400-650 metres higher on the ridge tops silver beech is the dominant canopy species, often with a very open understorey allowing the hunter to see for 100 metres or more. On the middle slope areas in between, the two beech species co-exist with scattered ferny clearings dense pepperwood guts and scrubby faces providing ideal understorey habitat for deer.

The lower Oamaru and Kaipō valleys have extensive river flats with a belt of heavy manuka scrub between the beech forest and the grass. This area is irresistible to deer in spring and early summer. The open country in the head of the Oamaru River and around Boyd Lodge also provides good spring prospects. Alpine tops occur in the head of the Jap Creek, upper Oamaru and Cascade hunting blocks with mountain beech ridges leading off the tops. This area provides some of the best hunting in the RHA.

Access to the RHA is via Clements Road off State Highway 5, 27km east of Taupo. Clements Road runs from 19km through the northern block. This road provides access to some very handy hunting, or for the more adventurous, opens up a network of high quality walking tracks that gives access to four huts and to the other major watersheds within the RHA.

For those who wish to fly to their hunting destination, Cascade Hut and Oamaru Hut have helipads, Boyd Lodge has an airstrip and two private airstrips give hunters further options to access the Oamaru and upper Cascade Stream areas. The aircraft companies advertising in this publication all have concessions to fly you into the RHA.

KAIMANAWA RECREATIONAL HUNTING AREA

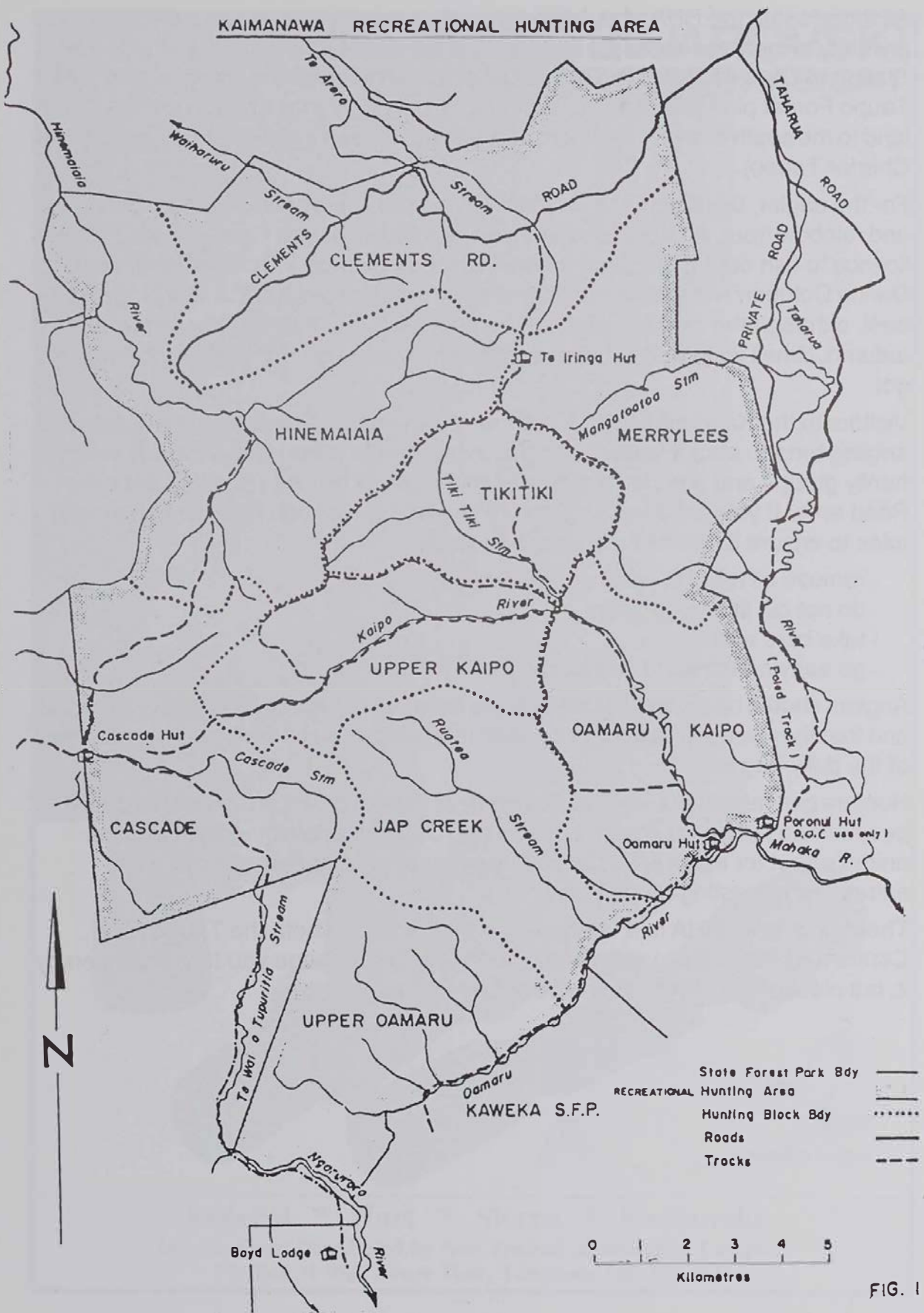


FIG. 1

All those using the RHA should be aware that much of the surrounding land is privately owned and access is restricted. In the east a poled route across Poronui Station to Oamaru Hut is the only legal public access across this property. Lake Taupo Forest pine plantation to the north is out of bounds and the private Maori land to the south can only be accessed with the leesees' permission (contact - Air Charter Taupo).

For the angler, the Kaipo and Oamaru Rivers provide opportunity for both brown and rainbow trout. Anglers require a Hawke's Bay Fish and Game Council fishing licence to fish during the open season which begins on 1 October each year. During October/ November trout numbers are at their peak and the fishing is at its best, although the skilful angler can be successful right through summer and autumn. Small weighted nymphs or carefully presented dry flies are the way to go!

Visitors to the Kaimanawa RHA are many and varied. Tramping, hunting and angling tend to attract visitors into the more remote parts. However day visitors, family groups and campers make extensive use of the very scenic Clements Road area. If you are a visitor to the RHA, we ask that you follow these simple rules to ensure it retains its beauty and value:

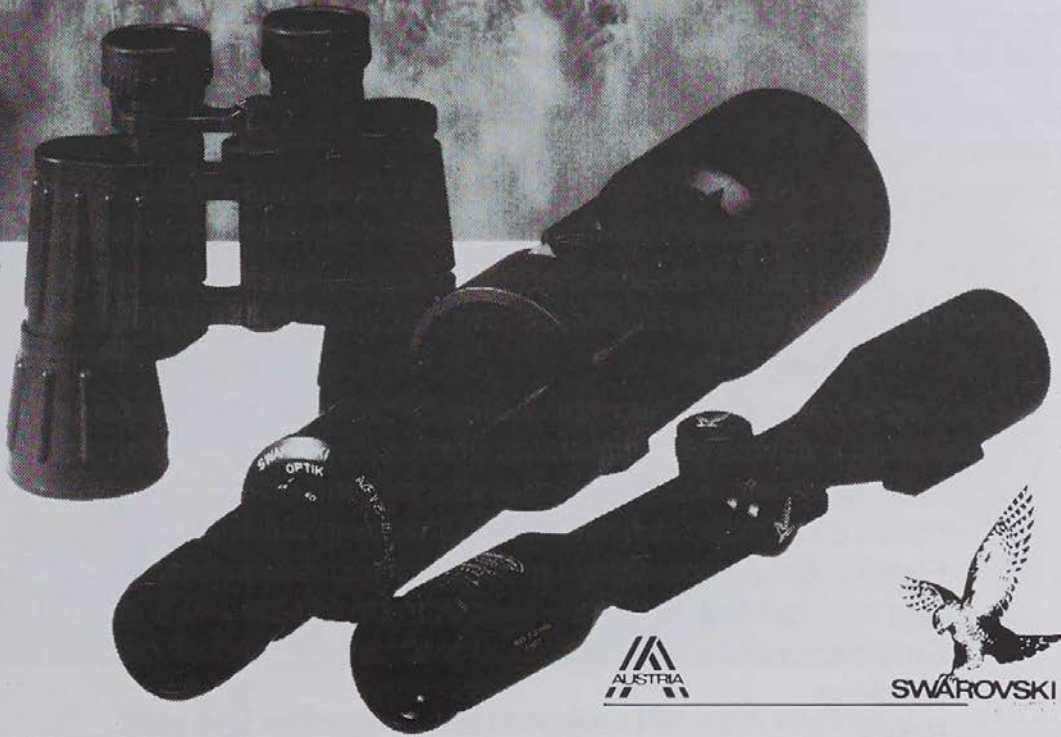
- remove all rubbish upon departure;
- do not cut live vegetation;
- take care with fire;
- go easy on firewood consumption.

Anglers should be aware that wilderness fisheries cannot sustain heavy harvests and that they need to carefully consider releasing most of their catch, regardless of the daily bag limit.

Hunters can help our understanding of deer management issues within the RHA by returning hunting diary information to DOC, and submitting jaws from all animals shot for ageing. Finding out the age of your animal can often be extremely interesting for you also.

The Kaimanawa RHA is a very special area, one that both the Taupo Field Centre and the Conservancy are proud of. We encourage you to visit and enjoy it, but please treat it with the respect it deserves.

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6. FISHERY ISSUES AND OPTIONS PAPER A SUMMARY OF COMMENT RECEIVED

In February 1992, the Department of Conservation (DOC) released a public discussion paper titled "Issues and Priorities in the Taupo Trout Fishery." In doing so, DOC provided an extra opportunity for public input to the preparation of its management plan for the Taupo fishery. Although not a formal requirement in the planning process, this has been a useful step in the preparation of the draft management plan. The following is a summary of comment generated by the discussion paper.

Copies of the discussion paper were sent to every organisation and individual that DOC thought might have an interest in the fishery. In addition, copies were forwarded to groups and individuals who requested the paper after learning of its existence through public notices or word of mouth. In this way, 324 copies were sent out and 30 submissions were received. Given that there are around 50,000 anglers using the Taupo fishery annually, this involvement and response rate is quite disappointing.

Because of the low response rate, it is not possible from the anglers' perspective, to conclude what the issues and priorities are in the Taupo fishery. Nevertheless, most respondents used this opportunity to provide constructive comment on a range of issues and when analysed collectively, they create a picture which may at least be regarded as indicative of anglers' views.

Anglers comments can be grouped under a range of general headings and these are listed in the following table, together with the corresponding number of respondents (out of a total 30) who make mention of each issue.

Issue	Number of respondents who commented
Access/Use	24
Commercial use	17
Angling methods	16
Water quality	15
Licensing	15
Hydro development	14
Fishery status	13
Bag limit/harvest	12
Enforcement	11
Stocking	9
Policy	9
Angler awareness	5

Two issues stand out as being substantially different from the rest in terms of the number of respondents that commented on them. Matters associated with fishery access and use generated the most comment and this suggests that anglers view this as the most significant issue in the fishery at the moment. At the other end of the scale is angler awareness and the limited comment would seem to indicate that this subject is not particularly important to anglers.

Access/Use

There was some opposition to the department's programme of selective snag and willow removal with four respondents saying that this has caused stream bank destruction and sedimentation. They also felt that trees and debris provide part of the fishing challenge and there is enough easy access available in the fishery anyway. However, six submissions supported an ongoing programme of selective willow management and snag clearance, so long as this does not cause a deterioration in trout habitat.



Snag and willow removal provoked the most comment.

Where payment for access through private property may become an issue, those who commented were unanimous in their desire to see DOC negotiate and pay for this on anglers behalf.

With regard to overcrowding on the rivers, one respondent felt that DOC should manage this by substantially increasing licence fees. However all other submissions on this matter indicated that anglers should be left to resolve the issue among themselves.

Banning power boats on Lake Otamangakau, artificially creating habitat in rivers, closed fishing season in the lake and improving track standards were also issues that a small number of respondents raised.

Commercial Use

Comment in this category is related to the single issue of whether or not commercial fishing guides (boat based and land based) should be paying a resource rental toward the management cost of the fishery. Not all guides who responded to this issue were opposed to the notion. Two acknowledged that a charge on the benefits they derive from the public resource would be appropriate. However, they qualified this by saying that if they were to pay, then other financial beneficiaries of the fishery such as local businesses should also be levied. However, most guides who responded opposed the concept pointing out that they already contribute to fishery management through extensive advertising and the generation of licence sales. Nine of the 17 respondents (this included seven non-guides) felt that guides should definitely pay a management fee as the fishery was established for sport, not commerce.

One angler wanted to see all commercial guiding banned from Lake Otamangakau and another wants a limit set on the number of commercial launches operating on Lake Taupo.

Angling Methods

Most of the comment in this category focused on the lake fishery and seven submissions called for a ban on wire lines. Some of these respondents also wished to see the use of lead lines and echosounders excluded from the fishery, citing the need to maintain the depths of the lake as a haven for the trout as the main reason for this. Two respondents called for the introduction of downriggers as an alternative and more sporting means of deep water fishing. However, three others were specifically opposed to the introduction of any new methods (e.g. downriggers, jigging) which would target fish in the deep water.

Most respondents supported the principle of catch and release but many qualified this with the need to assess post release survival of angler caught fish. One group promoted a catch and total release policy upstream of the winter angling limits in the rivers when these areas are open in the summer.

One angler considered that if the bag limit is set at a sustainable level there is no reason why all Taupo rivers should be restricted to fly fishing only. In a similar vein, another respondent felt that restrictions on such things as hook size, weighted flies and strike indicators have little to do with protecting the fish stocks and only serve to restrict the logical advancement of the sport.

Two respondents called for some restriction to be imposed on nymph fishing.

Water Quality

Comment on this issue was almost equally focused on two key aspects. Anglers are calling for more intensive and detailed monitoring of Taupo water quality on a regular basis. It was suggested that DOC, on behalf of anglers, put pressure on the Waikato Regional Council and Taupo District Council to achieve this. The other main concern was the effect that pine plantations in the catchment might be having on water flows and quality. Respondents were worried about the potential disruption to streams during pine harvesting and one angler was strongly opposed to any timber processing facilities being established in the catchment.

Respondents also mentioned stock access to the Waiotaka, waternet, impacts of sewage from urban settlements, and build up of weed growth and debris in Tokaanu Stream, as issues that need to be addressed.

Licensing

Most comment in this group related to the question of differential (i.e. more expensive) licence fees for overseas visitors. The majority of those who commented did not favour a differential fee, saying that the price should be the same for everyone. However, one respondent argued that local anglers should pay more than visitors as they catch most of the fish.

Two respondents felt that the current fees should be reduced to compensate for the reduction in bag limit that occurred two seasons ago and one of these felt that fishing licences should be free to people over 65 years of age. At the other end of this scale, three respondents called for fee increases to pay for additional enforcement effort and help control overcrowding. One of these submissions recommended a whole season fee of \$250.00.

One respondent recommended that DOC investigate the possibility of a boat licence and seasonal catch limits for commercial charter boats.

Hydro Development

Most of the comment on this subject centred on the effects of power development on the Tongariro River. Respondents identified flow variations, shortened flood recessions, unseasonal flow patterns and sedimentation as issues of concern associated with the power scheme.

Most respondents were opposed to the notion of any new power schemes in the fishery although one angler made the observation that reduced river flows can improve fishing access along the banks.

Fishery Status

Respondents commented on a wide range of subjects and issues that fall beneath this heading.

There was a strong call for DOC to specifically manage Lake Otamangakau as a trophy fishery. Most anglers who referred to this also suggested a one fish daily bag limit in support of the concept.

Two respondents perceived a loss of large trophy fish from the Taupo fishery and requested that the department take measures to remedy this.

Respondents noted a range of concerns which they feel are detrimentally affecting the fishery as a whole. These include low flows and silting in the Tongariro Delta, catfish, deterioration of Tokaanu Stream and waterfalls and obstructions which prevent spawning fish from reaching upstream spawning grounds.

One respondent was concerned about the possibility of a smelt harvest being allowed and another identified conflict between anglers and rafters as an issue.

Bag Limit/Harvest

Among the 12 respondents who commented on this issue, five called for a reduction in the limit on Lake Otamangakau to one fish per day. One respondent asked for a two fish limit on this lake.

Respondents were generally happy with the three fish limit for Taupo. Two submissions called for a further reduction to two fish per day and one asked for an increase to four fish per day.

There was strong support for the principle of catch and release with the proviso that an assessment be undertaken to ensure that fish are in fact surviving in significant numbers after release. One angler made the point that there is no need to worry too much about this if the bag limit is set correctly. In that case, any fish that survive after release are a bonus.

One respondent called for a boat limit to be set at six fish per day, regardless of how many people fish from it. Another suggested that anglers be made to keep the first three fish they catch, regardless of size or condition, and then stop fishing.

Enforcement

In the light of comment received in recent years we were a little surprised that only 11 respondents mentioned this issue. Those who did comment were unanimous in their desire to see an increase in enforcement effort by DOC and an increase in penalties handed out to offenders.

One respondent suggested that enforcement should be carried out by the armed forces.

Other aspects that were raised were the need for more licence checking, more input on Lake Otamangakau and the Tauranga-Taupo and Waimarino Rivers and a need for anglers to see more evidence of enforcement being undertaken.

Stocking

All but one of the respondents to this issue were adamant that Taupo should continue to be managed as a wild fishery, i.e. no stocking of hatchery reared fingerlings. The exception was an angler keen to see a "big fish" programme implemented in the Taupo fishery along similar lines to that which has been carried out at Lake Tarawera.

Lake Otamangakau received two comments, one for and one against stocking. One angler considered that it would be appropriate to stock the Taupo fishery if it was clear that the wild fishery had been lost.

Policy

The key question in this category was whether or not necessary management actions should be compromised or deferred if they are likely to have an impact on commercial interest in the district. Only one respondent considered that this should be the case. The rest considered that management should be strictly targeted toward the welfare of the fish and associated sport and recreation. Most argued that if this is done, commercial benefits will be guaranteed as a flow-on effect, as has been the case to date.

One other policy matter was the question of fish salvage and who should pay. This only drew two comments and both agreed that the cost of salvage should not be borne by anglers (licence fees) but by the agency responsible for creating the need for the salvage.

Angler Awareness

Very little comment was made on this aspect. Two respondents thought that there wasn't much more that DOC could do except perhaps get information across to anglers through television. Other suggestions were sending information to clubs and developing a public awareness campaign.

One respondent thought that DOC was not doing much to educate anglers.

THE NEXT STEP - YOUR OPPORTUNITY

The views of anglers, as submitted in response to the discussion paper, are now being considered as an integral part of the formation of the draft management plan for the Taupo fishery.

The draft plan will be completed and published around the end of December 1992 and this will provide another opportunity for anglers and interested parties to provide input. Unlike the release of the discussion paper, this will be a formal process and will be managed according to requirements laid down in the Conservation Act 1987.

From the date of public notification of the availability of the draft plan, people will have 40 working days within which to comment. It is also intended to hold a public meeting following release of the draft plan to further enable anglers to express their views. The department will prepare a summary of submissions received and this will also be made public. The draft plan, together with the submissions summary, will be sent to the Minister of Conservation for approval of the plan subject to the comment received. Once approved, the plan will bind the department in terms of management activities to be undertaken in the Taupo Fishing District. The plan must be reviewed at least once every ten years but can be reviewed more frequently if appropriate.

If you would like a copy of the draft management plan please contact The Fisheries Planner, Attention Rob McLay at this office.

TAUPO, NEW ZEALAND



Situated right on the boundary of Kaimanawa Recreational Hunting Area and Kaimanawa State Forest Park, Sika Lodge provides budget accommodation with hot showers, full toilet facilities and well equipped communal cooking area. Your own sleeping bag will be necessary. Vehicle security services can be offered.

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for Reservations (please book early)

7. BITZ 'N' PIECES

1080 - Oamaru Hut Area

The Hawke's Bay Regional Council at the request of the owners of Poronui Station placed bait stations along the Kaimanawa RHA boundary in September. These bait stations were pre-fed for a period then baited with 1080 poison.

While hunters are not at risk from this poison, hunters using dogs in the bush areas of the RHA adjoining Poronui Station should be aware that toxic carcasses are likely to be lying around for some time. If your dog has a habit of scavenging old carcasses, leave it at home on your spring trips to the Oamaru- Kaipo area of the RHA this year.

Warning signs have been placed in Te Iringa and Oamaru huts.

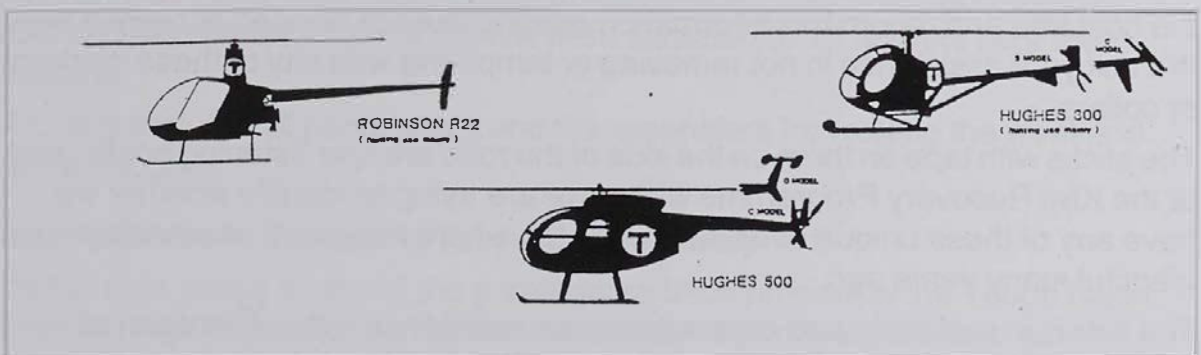
Illegal Helicopter Venison Recovery

Tongariro Forest produces some of this conservancy's best red deer trophies. These deer are a valued resource by local and visiting hunters alike and an informal agreement between DOC and local hunters not to authorise any helicopter venison recovery operations within the forest in return for continued vigilance by them against the build up of feral goats in the forest, is still in place.

Illegal and unscrupulous helicopter venison operations threaten to undermine this agreement which has obvious benefits to both DOC and local hunters.

If you hunt Tongariro Forest and you see helicopters stealing your prized red deer, you can do something about it by reporting, as accurately as possible, the following information to either the Whakapapa or Turangi DOC offices:

- the type of helicopter (see silhouettes)
- the colour
- time, date and location
- registration or other distinguishing marks



*Silhouettes of the helicopters most commonly used for venison recovery.
Note location of identification letters.*

This information should be passed on as soon as possible to give us the best possible chance of prosecution.

It is highly likely that illegal hunting by helicopter will occur in Tongariro Forest this spring and summer but you can do something about it!

Sika trophy competition - Autumn 1993

Those who hunt Sika deer in the central North Island will be interested to know that a Sika Trophy Competition is being organised next year. The competition will run from early April to late May and all feral sika stags harvested during that period on any land in the central North Island will be eligible to enter. The only stipulations are that all heads must be registered at one of a number of registration points within seven days of being taken, and that the lower right jaw must be brought along on the measure-up day. The venue for this day, Sunday, 23 May 1993, has been arranged at the Spa Hotel in Taupo.

The competition is designed to promote sika hunting and to provide information on the trophy status of one of New Zealand's premier game species. Many local businesses are supporting the competition and some great prizes will be up for grabs. Keep your eyes open for further publicity and information over the next six months and be sure to register all sika heads shot next year. Anything with antler will be eligible for a prize!

Clements Road happenings

Some of you may be wondering at some unusual activity along Clements Road - trees with 'clerical' collars on, sticks with tape tied to them and trees with tape and tags on. It is all endangered species related work.

The 'collars' are not for ornament purposes but to prevent the possums from devouring, possibly to extinction, an endangered species of our native mistletoe.

The tape and tags on trees is so that we can monitor the health of the mistletoe in the host tree and record this information relating to each banded or tagged tree. We ask your assistance in not removing or tampering with any of these markers or collars.

The sticks with tape on them on the side of the road are kiwi 'listening posts', part of the Kiwi Recovery Programme where we are trying to identify whether we have any of these unique birds left in an area where they were reasonably plentiful many years ago.

The kiwi is in real strife and once again your assistance with information of possible sightings or the hearing of kiwis calling would be most welcome.

Please don't hesitate to contact your local DOC office with any information or queries about these birds.

A bonus for Clements Road users is the 'smoother ride' for six kilometres as a result of negotiations with Transit N.Z. to use surplus sealing chip metal from roadside stockpiles.

Recent snowfalls have resulted in some debris on the road, however at the time of writing the access is in good order and clear of windfalls and encroaching vegetation.

Tongariro Forest Hunter Questionnaire

Over the next 12 months you will receive a small questionnaire attached to your Tongariro/Taupo Hunting diary, seeking information on hunting patterns in Tongariro Forest. This questionnaire is designed to provide information on hunting patterns and access in the forest to help us better manage this activity in the area.

We ask all hunters who utilise Tongariro Forests to please complete the questionnaire as accurately as possible and to return it with their hunting diaries upon expiry of their permits.

Tongariro Forest Goat Shoot

Goat shooters in Tongariro Forest made a significant contribution to conservation during the weekend of October 9 and 10.

Forty shooters destroyed 85 goats on the Saturday, at the fourth annual goat shoot organised by the Taumarunui Rod Rifle and Gun Club. They were joined by a further 15 shooters on Sunday with another 35 goats destroyed.

Goat numbers have been drastically reduced in Tongariro Forest since the first shoot was organised in 1989. This success can be attributed to the efforts of club members, other recreational hunters and the Department of Conservation.

Young hunters in particular enjoy taking part in the now annual goat shoot. It gives them an opportunity to learn from more experienced shooters who are happy to share their knowledge. The shoot has an excellent safety record.

This year the Sporting Life trophy for the "Best Billy" went to visiting Palmerston North hunter, Peter Alan. Spot prizes of sports good vouchers sponsored by DOC and Taumarunui Sports Centre were awarded to 15 hunters over the weekend.

DOC is grateful to all participants and the organisers for making the weekend such a success.

Canada Geese in Tongariro/Taupo Conservancy

The Canada goose is one of the prime game birds present in the Taupo basin. However, high populations of geese can be damaging to agricultural areas, especially cereal greenfeed and saved pasture. The Eastern Region Fish and Game Council manages the Canada goose populations in most of the Tongariro/Taupo Conservancy.

The ERFGC does have some gaps in their knowledge of the movements of Canada geese within the area. An example of this is that we do not know the level of use by geese of the tussock areas of the Kaimanawa Forest Park or the Desert Road. At present we believe that these areas have little or no use by the geese. The problem is that occasionally we find congregations of Canadas which would represent all known birds in the area. Are these all the birds? Or are these birds moving in from areas which are not counted because of the belief that they have very low use?

To answer these questions, we require information from users of these areas. We ask that all users of the conservancy back- country drop us a line if they see Canada geese during their travels. Please contact either:

Cam Speedy, DOC, Turangi - telephone (07) 386 8607; or

James Holloway, Eastern Fish & Game Council, PO Box 1098, Rotorua - telephone (07) 348 0369, with details of the:

Location Date and time Number

and activity, such as flying over from .. to .., nesting, feeding.

Your help with this will be very much appreciated.

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*RAFT - Mohaka * Ngaruroro*

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8. SOMETHING FISHY

Comment on the winter spawning runs

The spawning runs of trout up the rivers this winter appear to have been substantially larger than those of recent seasons, as reflected both by the increased numbers of smiling anglers (see survey results in Something Fishy) and the results of our regular monitoring.

Since 1991, from May to October, fisheries staff have counted spawning trout in sections of selected streams monthly by walking and drift-diving. During this time the sections chosen have slowly been refined. For example, several sections which were ideal to count early in the season proved impossible to count under late winter flows. Other sections which we would have liked to have counted were impractical because of the amount of instream cover or poor access along the stream. So not until this winter have we really been able to settle on the stretches and rivers to use.

As a result not all our counts this winter can be compared with previous years. However several can and we have compared the peak counts in these between 1991 and 1992 in Figure 1.

Percentage change in spawning trout numbers 1991 to 1992

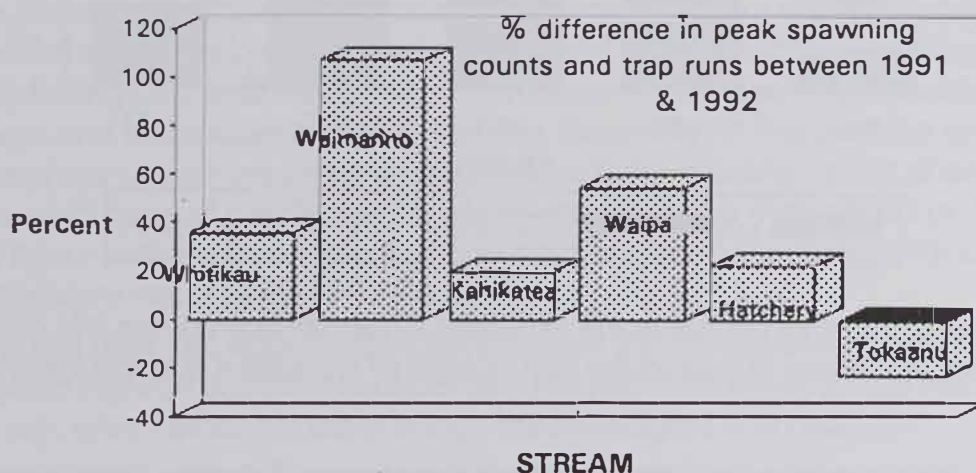


Figure 1: Graph showing the proportional change in peak counts in the Whitikau, Waipa, Kahikatea and Waimarino Streams and in the total run through the Hatchery and Tokaanu traps

The Whitikau and Waipa are important tributaries of the Tongariro and the Kahikatea stream is a spring fed tributary of the Waimarino. Counts are also done on the Hinemaiaia. It is evident that peak counts are substantially up on last season in these waters which fits with our observations on other streams such as the Tauranga-Taupo and Waitahanui.

As managers, we tend to look at the overall trend rather than the actual increase or decrease between particular counts. At any time there will be new fish entering the stretch and others leaving. Such things as how long they spend in the stretch we count (and are included in monthly totals), when they arrive, and so on, are all likely to be quite variable between years.

Figure 2 illustrates changes which occurred in the total count in the Whitikau between June and September this winter. The total only fluctuated between 1426 and 1849 fish yet it is evident nearly all the trout which were spawning in the top of the river in June had left the redds by August.

Similarly a whole new group of fish was building up in the lower river and by September had moved onto the major spawning areas in the upper river to replace the earlier fish. Not surprisingly the changeover occurred during a period of regular freshes after a prolonged dry spell.

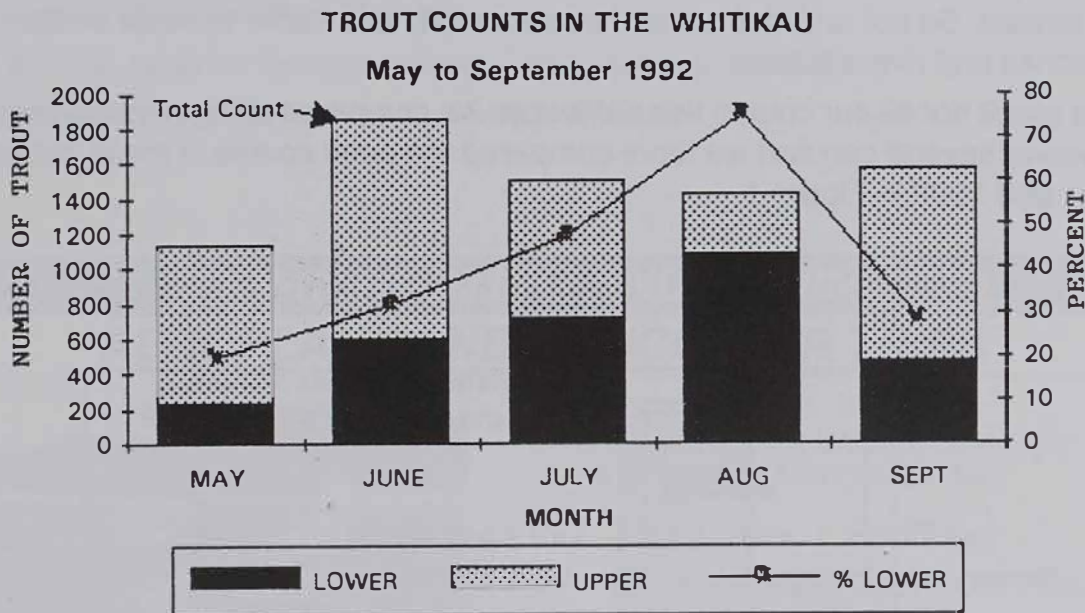


Figure 2: 1992 monthly counts in the Whitikau stream broken down into counts for the upper and lower river and the percentage of the total run in the lower river

Table 1 compares the total run through the hatchery and Tokaanu traps between 1 April and mid October. Both of these do not appear to reflect the overall trend. The pattern in the Tokaanu Stream is complicated by the fact that the bulk of the run occurs very late in the season (41 percent of the total run occurred in September and October in 1991). In some years the peak monthly run has even occurred in November. The trap is situated near the source of the stream and there are, at present, a lot of fish lying in the lower stream which have still to pass through the trap.

Year	HATCHERY		TOKAANU	
	Total Run	Maiden run as % of run	Total Run	Maiden run as % of run
1991	524	87.4	1150	94.5
1992	644	86.5	887	92.7

* Only trout 40cm or longer
Maiden fish are first time spawners

Table 1 - Comparison of the total run through the Hatchery and Tokaanu Streams in 1991 and 1992

The hatchery stream is more of a concern. Since 1963 this stream has been trapped and the run used as an index of the total run in the Tongariro. Historically the annual run fluctuated around 2000 to 2500 trout, compared to approximately 700 this year.

We just don't believe, on the basis of our observations in the Tongariro and other streams and rivers, that the Tongariro run this year was only a quarter to a third of the historical run. Indeed a common comment made to us this year has been along the lines of "the numbers of fish in the upper river are like they were when I first started fishing 15 years ago." We suggest something has changed in the hatchery stream and the relationship between the hatchery trap run and the total Tongariro run is now quite different to that of 10 to 15 years ago. Two possibilities seem most likely. The stream is now much more subject to flash flooding and increased sediment load caused by increased run off from the development of a neighbouring farm and realignment of the main road. This might affect spawning success and subsequent juvenile rearing. Secondly, in the past the entrance of the hatchery stream was a natural funnel for fish migrating up the channel along the true left bank of the Tongariro. However, since the major flood of January 1986 it has entered inconspicuously at right angles to the Tongariro amidst the fast bouldery water of Barlows Pool.

This doubt over just what the hatchery stream tells us about the overall run in the Tongariro highlights a need to undertake the planned research into the Tongariro trout run, which amongst other things will investigate this problem.

As predicted the strong year class which dominated last seasons runs as smaller 2+ fish have come through as the larger 3+ fish this year as shown in Table 2. The size and condition of the fish was perhaps the outstanding feature of the runs this season and was commented on regularly by anglers.

Year	HATCHERY Average		TOKAANU Average	
	Length (cm)	Weight (kg)	Length (cm)	Weight (kg)
1991	49.5	1.47	50.4	1.52
1992	52	1.77	52.7	1.78

Table 2: Average length and weight of fish through the Tokaanu and Hatchery traps in 1991 and 1992

It also seems to have been a good winter for juvenile trout rearing in the rivers. Regular rain but a lack of any major floods should not have proved too detrimental to the survival of last seasons fry. It was quite noticeable that with the lack of late summer floods many of the juvenile trout which would have been expected to enter the lake in March were still in the lower river several months later. If it is true that the larger the fingerlings are when they enter the lake the better they survive, then the extra few months spent growing in the rivers could prove very beneficial to the trout population.

It will be interesting to see if this year class shows up more strongly than usual in the regular acoustic survey planned for November to monitor the size of the trout population in the lake.

Major Compliance Effort

With the increased numbers of trout in the rivers this winter it seemed inevitable that poaching would increase after the lull over the past couple of seasons.

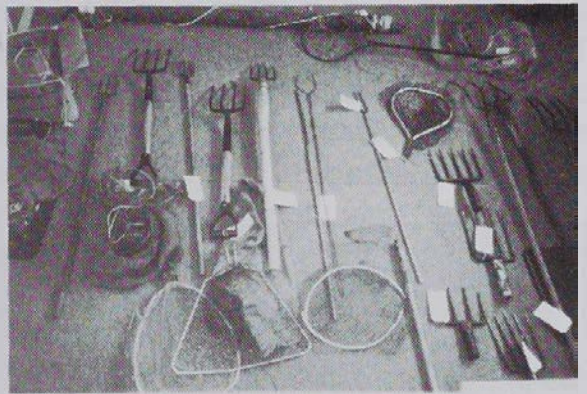
This proved to be the case and in response all the fisheries staff (13 officers) plus other DOC staff and Honorary officers spent a great deal of time involved in compliance activities.

This effort proved very worthwhile with 17 people at present facing a variety of serious charges relating to disturbing and taking of spawning fish. The majority of these are offences against the Conservation Act which involves a maximum penalty of \$10,000 or one year imprisonment. A great deal of information was also collected which will assist future compliance activities as will the experience gained by a number of 'non compliance' staff. However the biggest benefit occurred as word of our activity spread through the community. By late winter the large numbers of spawning fish were being left undisturbed in nearly all the spawning areas, which is, after all, the primary goal.

If you have lost a garden fork lately the odds are it is amongst the gear we have seized, along with assorted nets, spears and a vehicle and trailer.



Senior Compliance Officer Sid Puia stands amongst some of the seized gear.



Some of the gear seized this winter.

We are sincerely grateful to all our staff and to the honorary warranted officers for the commitment shown.

Lake Otamangakau, Lake Kuratau and the Kuratau River opened on 1 October 1992. The open season continues through to 30 June 1993. Reports indicated a very quiet day. The upper reaches of Taupo rivers open on 1 December 1992.

On a more personal note, retired former Wildlife and DOC Officer Brian Campbell has resigned his honorary warrants to undertake a new vocation which he has been contemplating for some time.

We wish Bryan and Christine all the very best for the future.

Ma Te Atua korua E Manaaki Kia Ora

Research Fieldwork Begins

The end of the year, which is always an extremely busy time for fisheries staff, is even more so this year with the implementation of two major research programs.

A fish trap, much like a huge whitebait stand, has been built in the lower Tongariro River, in the vicinity of the Poplars' reach as part of the Tongariro Runs project. This project involves trapping pulses of trout as they enter the river, tagging them and releasing them to continue on their way. Recovery traps will be operated in the Whitikau stream, the principle spawning tributary, and the hatchery stream. Anglers can also expect to be approached and their bags checked for tagged fish. This project will provide an estimate of the total run size, information on whether the hatchery run is a reasonable index of the total run along with other information which will be of interest to managers and anglers alike. This includes such things as how long it takes the trout to move from the lower to the upper river, how long they spend in the river, characteristics of the run and under what conditions the fish enter the river. It is intended to begin by trapping the summer run early in the new year, by which time we will need to have built the second trap along with moving a hut onto the site of each trap. During operation each trap will be permanently manned.

If you are boating on the lower Tongariro, please take care in the vicinity of the 'Poplars'. The trap and screen is signposted and is very obvious and a clear channel exists around the end of the screen on the true left bank. Anglers should note it is an offence under the Taupo Fishing Regulations 1984 to fish within 100 metres of the trap.



Fisheries staff drive the supports for the screens to sit against. The cage trap sits in the foreground.

The second project involves an investigation into the mortality associated with different trolling methods and was discussed in the last issue of Target Taupo. Basically it involves placing a holding pen 30 metres deep and 4 metres square in the lake in the vicinity of Whakaipo Bay. Once this is set a number of commercial operators will attempt to catch a hundred trout during a single day by a variety of methods using anglers of varying skill. As these fish are landed they will be transferred to a waiting Department of Conservation boat where the fish will be finclipped and quickly transported to the holding pen. Once in the pen the fish are free to return to whatever depth or water temperature they prefer. This is a novel approach but may be critical for the survival of fish caught at depth. Four days later we will lift the pen and record the number of fish caught by each method which are still alive. If possible blood samples will also be taken from surviving fish from which information about sub lethal stresses can be gained (see "The Stresses of being caught").

It is intended initially to use two methods, downriggers at 60 metres depth and wirelines at 30 metres (200 metres of wire) making the presumption that these will induce the greatest trauma on the fish. If mortality is negligible with these methods we will assume that mortality with methods such as leadlines, which induce smaller pressure and temperature changes, is also insignificant. However if the mortality is large we will repeat the experiment using the other methods. The initial experiment is planned for mid November when the major effect on fish caught at depth will be a pressure change. The experiment will be repeated in late summer after the lake has stratified, when the fish will also be exposed to a rapid temperature change of several degrees.

The results of this experiment will provide information on a variety of issues. It is important to realise that a number of regulations involve a component of releasing fish eg, minimum size limits, daily bag limit. If mortality is significant we will need to consider the value of these regulations as well as the more obvious worth of different trolling methods.

Results of Winter Angler Satisfaction Surveys

Last year we modified our annual angler surveys in an attempt to better measure anglers' satisfaction with aspects of their sport. It was a difficult task and our initial surveys were not entirely successful. However in light of our experiences we made further changes to the survey and this season the new format proved much more suitable.

The survey involves interviewing all the anglers on stretches of the Tongariro and Tauranga-Taupo rivers on days chosen at random throughout the winter. Information about the catch and effort for all anglers interviewed on that day is recorded. In addition those anglers who have spent four or more days fishing on the river during winter are asked for their perceptions about

- (a) the overall size of the fish
- (b) the overall quality or condition of the fish
- (c) how they rate their angling success
- (d) how much they have enjoyed their angling experience

Anglers are asked to select their answer from a scale of 1 to 5 where 1 = Terrible, 3 = Acceptable and 5 = Excellent, based on their personal view of what they regard as acceptable or not. Using this sort of scale will allow responses to be compared between years. A third section asks the angler what, if anything, detracts from their angling experience.

This winter 280 anglers were interviewed on the Tongariro and 91 anglers on the Tauranga-Taupo. The average catch rates (fish per hour) for each method are summarized below in Table 3.

Method	TONGARIRO		TAURANGA-TAUPO	
	No. Anglers Interviewed	CPUE	No. Anglers Interviewed	CPUE
Nymph	170	0.31	65	0.39
Wetfly	73	0.18	18	0.08

* CPUE = Number of fish caught per hour

Table 3: Average catch rates by method for anglers interviewed on the Tongariro and Tauranga-Taupo rivers this winter

It is obvious anglers nymph fishing on the days interviews were carried out were having by far the most success. Average catch rates of 0.3 to 0.4 fish per hour for anglers of all levels of experience reflect the improvement in the fishery this season.

Table 4 summarizes the anglers' perceptions about the winter fishing.

Feature	TONGARIRO		TAURANGA-TAUPO	
	Average score	S.D	Average score	S.D
Size	3.7	0.7	4.0	0.6
Condition	3.8	0.7	4.1	0.6
Success	3.5	0.8	3.6	1.0
Enjoyment	4.3	0.7	4.8	0.7

S.D = 1 standard deviation

Table 4: Summary of anglers' perceptions about the winter fishing

In general anglers felt the size and condition of the fish was good to very good, though not all were that satisfied with their catch rates. The most important thing though was that the vast majority rated their enjoyment of their angling experience good to excellent, and that, after all, is the bottom line.

	TONGARIRO 189 interviews	TAURANGA-TAUPO 57 interviews
Detraction	Percent of anglers	Percent of anglers
Overcrowding	8.5%	21%
Bad manners	6.9%	3.5%
Poor tracks	1.6%	28%
Lack of fish	1.6%	7%
Nothing	65%	38.5%
Other	18%	2%

Table 5: The most common detractions for anglers fishing on the Tongariro and Tauranga-Taupo rivers and the percentage of anglers who commented on them

While it is not possible to compare most of this years survey with that of last winter, it is interesting to note 18 percent of Tongariro anglers commented on a lack of fish as a major detraction in 1991 compared to only 1.6 percent this season.



Compliance Officer Bryan Taylor asks an angler for his perceptions of the fishing

Rubbish Clean Up

The Tongariro chapter of Trout Unlimited organized a very successful clean up of the Tongariro river as part of Conservation Week activities in early August. Volunteers, local brownies and pupils from Turangi Primary School collected nearly a truckload of rubbish from along the river, which included two dead sheep. The Department of Conservation provided rubbish bags, several staff and a truck to pick up the rubbish and Tokaanu Hotel generously provided refreshments.

While the rubbish was obviously from lots of sources, anglers can take little pride from the fact that they are by far the major offenders. Nylon, cigarette packets and beer cans litter all the major fishing pools - it's not a very good effort!

Plans to Improve the Whangamata Stream

A chapter of Trout Unlimited has also been established in Taupo and has undertaken to adopt the Whangamata Stream at Kinloch. This small stream is one of the most important spawning tributaries at the northern end of the lake. In the past it suffered from the effects of trampling and grazing of the banks by cattle but in recent years it has been retired. The problem today is that the stream banks are lined with Musk weed which grows rapidly over summer forming an impenetrable barrier to upstream migrating trout.



The problems caused by the musk weed in the foreground are self evident.

It is a major task every autumn for fisheries staff to hand clear the several kilometres of stream to allow trout access to the spawning redds in the upper river. A long term solution is to shade out the musk weed which requires direct sunlight, by using other plants. This has been achieved in the upper stream using flaxes in particular. While flaxes are very effective at this and at stabilizing the banks, they have the disadvantage that in the long term they also grow into the river impeding the water flow.

In 1989, a long term planting strategy was adopted for the lower section of the river involving annual plantings of several thousand *Carex* sp, manuka, toitoi, cabbage trees and other native trees.

In terms of shading the stream this planting wasn't particularly successful but we have learnt from our mistakes and it is now intended to revisit this area in conjunction with Trout Unlimited.

Over the next couple of years, regular working bees will be held with Trout Unlimited to plant the immediate margins with Carex sp and toitoi. One species of Carex most of us are familiar with is the 'Niggerhead'. This is an ideal species for it hangs out over the stream but does not grow into it and the light leaves provide no obstruction to the water flow.

It is also intended to build several foot bridges over the stream for use by local residents to avoid the need for the temporary bridges which inevitably end up in the stream further blocking it.

The other project planned for this summer with the assistance of Trout Unlimited is to put wooden baffles into the culvert under the Whangamata road. Low flow through the culvert results in sediment being deposited in the pipe which has the effect of flattening the bottom of the pipe out. Instead of a narrow defined flow it is spread over several metres but is only a few centimetres deep. The trout have trouble negotiating this shallow stretch. We intend to use a baffle design proven on other streams in the Taupo fishery which is self cleaning confining the flow down the centre of the pipe whilst still providing resting areas for the trout.

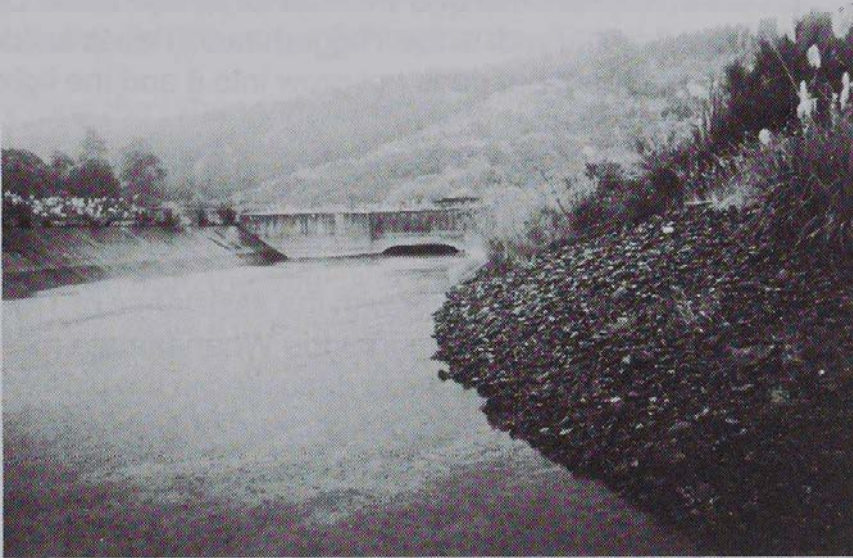
Unusual Stomach Contents

Elsewhere in Something Fishy we have commented on the rubbish left by anglers on the riverbank. In the last issue of Target Taupo we reported on a trout which previously must have swum through a carelessly discarded nylon loop. The body muscle had since grown around the loop so only the tag end protruded from the side of the fish. Since that issue we have had another unusual report. This time it involves a 2.5 kg male rainbow trout, caught by Mr Raymond Legg in the Island pool on the Tongariro river. This fish had several pieces of blue, yellow and green plastic, the remains of the wrapper from a tin of sardines in its stomach. This could have come from anywhere but likely was the remains of a picnic lunch on the lake. Just another example of the unforeseen effects your rubbish might have.

Monitoring the water quality at Lake Otamangakau

Concern has been expressed that reduced inflows into Lake Otomangakau this summer could affect this trophy trout fishery. This is as a result of the high court decision over the Wanganui River which requires Electricorp to meet both a minimum 3 cumecs flow below the Whakapapa River intake and a flow of 29 cumecs in the Wanganui at Te Maire from 1 December to 31 May.

In order to meet these requirements it is likely on a number of days over summer that there will be no flow from the Western Diversions into Lake Otamangakau.



On a number of days this summer it is likely no water will flow down the Te Whaiaiu Canal from the Whakapapa tunnel.

Just what the effects of this might be is difficult to determine. Despite the fact the lake is very shallow (maximum depth 12m) and exposed to the prevailing westerly winds and the water has a very short residence time (average four days) work by DSIR in 1989 and 1990 suggested the lake regularly stratified over summer. Stratification occurs when a layer of warm water develops over the colder more dense bottom waters. In the absence of strong winds and while the temperature profile remains, this difference in density is sufficient to prevent the bottom waters mixing with the oxygen rich surface waters.

If stratification persists the bottom waters may eventually become de-oxygenated, not a good state of affairs for most organisms occupying the zone. The anoxic conditions may also provoke chemical changes in the substrate occasionally producing toxic compounds.

However, as we have commented, stratification already regularly occurs, seemingly without any impact to the lake and the trout population. In recent years the Whakapapa tunnel has been closed for maintenance and repair for periods up to several weeks over late summer restricting the inflow to the relatively small flow from the Wanganui diversion and the Te Whaiaiu Stream. Again this has occurred apparently without any impact.

In order to assess the new regime we have initiated a regular monitoring programme involving measuring the dissolved oxygen and temperature profiles at various places on the lake on a weekly basis. This will give us a much better understanding of just what does go on and a feel for the extent of the potential threat to the fishery.

Children's fishing at the Trout Centre

The Tongariro and Lake Taupo Fishing Club (TALTAC) kids fishouts at the Tongariro National Trout Centre were well attended as usual but the upward trend in numbers has reversed. Numbers dropped back to pre-1989 levels. This is most likely a reflection of the times, as visitor numbers to the area are reported as being lower this year.

The trout were much bigger than usual and a lot of happy young anglers were very evident. The average weight of the fish they caught was up to 70% more than during the previous two years.

An upsurge in interest from educational groups in having special sessions is evident. This year staff and volunteers held seven extra sessions in addition to the five public and two disabled people's days held by TALTAC, and several larger groups had to be refused because of time and manpower restraints.

Harvest Survey

In the late 1980s it became evident that the trout harvest was at a critical level given the levels of trout production.

An intensive year-long survey of the annual trout harvest completed in 1991 suggested 30 to 50% of the total estimated trout production in 1988 and 1989 was being taken. In an attempt to limit the harvest the daily bag limit was reduced from eight to three fish. Given the potential for over-harvest in the Taupo fishery it is essential to continue to keep a close eye on the annual catch. However, it is too costly and time consuming to repeat the whole harvest survey each year.

The survey identified that the Spring (high catch rates) and Christmas (high use) periods were times of very high harvest which contributed approximately 28% of the total. We can therefore, by repeating the survey over just these two periods, get an indication of whether the total harvest is likely to have changed. This option is feasible and is now part of our annual monitoring plan.

Many of you who have fished on the lake will be familiar with the light plane circling overhead counting the number of rods in use. This Spring/Christmas, if you are aware of us flying overhead, hold your rods out and give us a wave. Similarly don't be surprised to be approached by a Conservation Officer when you return to the ramp. They will only take a couple of minutes of your time to record your success.

You are contributing towards the management of your fishery and we appreciate your co-operation.

Taupo District fishing licence sales

Licence sales in all but child day categories fell during the 1991/92 season, and these showed an increase of only 1%. This increase in child day licences is perhaps due to the success of the children's fishing days at the National Trout Centre.

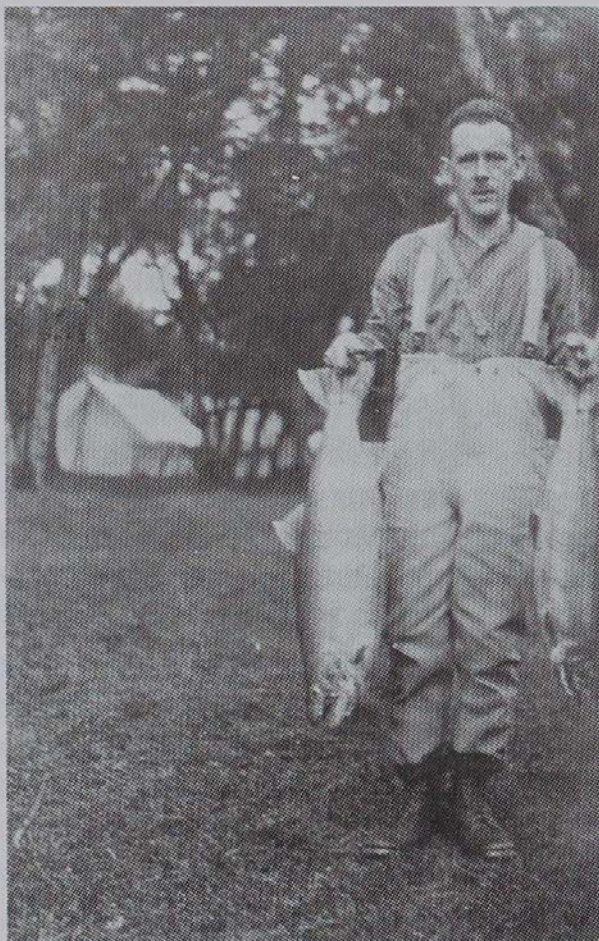
Sales for the 1991/92 season were:

Adult Season 10,511	Down 9%
Child Season 5,057	Down 4%
Adult Month 990	Down 19%
Adult Week 9,234	Down 12%
Adult Day 35,851	Down 9%
Child Day 7,437	Up 1%

an overall total of 69,080 licences sold, a drop of 6,687 from the previous season.

Interestingly, the decline in sales, which has been evident since the 1987 'crash', appears to have halted so far this current season. Total sales for the first four months have increased by 3% on the same period last year.

AND NOW A BLAST FROM THE PAST!



Mr Noel Wright of Feilding holding a 17lb (7.7kg) and an 11lb (5kg) rainbow trout caught in the Tongariro River on 30 April 1924. (Photograph supplied by Mrs F Whittaker)

9. TONGARIRO FOREST : A PROTECTED AREA

Over the past two years the Department of Conservation has carried out extensive work to protect Tongariro Forest from the impacts of introduced plant and animal species.

One of the major problems has been *Pinus contorta*, or lodgepole pine. A plantation of this north American import in the Taurewa area has spread thousands of wilding pine trees over the Tongariro Forest area. Many thousands of manhours have gone into the cutting and pulling out of this virulent species. The most cost effective method in the more inaccessible areas has been the use of teams of workers ferried around by helicopter.



*DOC staff member Mike Brown on the strop under Helisika's Hughes 500C during *Pinus contorta* control work in Tongariro Forest.*

Boundary fencing is now important to prevent nearby farm animals from damaging native bush and wetland areas. Last year six kilometres of boundary fence was erected, and a further four kilometres was built in June this year, all by local fencing contractors. Most of this fencing is on boundaries only recently finalised with adjoining Landcorp farms.

Feral goats are a problem in some areas of Tongariro Forest. A few years ago, the price of goats increased dramatically when it appeared that a substantial industry could develop around the production of Angora fibre. After the price of goats dropped back to almost nothing, many animals which escaped captivity were allowed to revert to the wild, which explains why today the feral herds are concentrated around the perimeter of Tongariro Forest. Several methods of hunting are used to reduce goat numbers. DOC staff spend over 100 person-days per year hunting on foot, and five hours per year are spent hunting the steep bluff areas by helicopter. Once a year the Taumarunui Rod, Rifle and Gun Club hold a special goat shoot in which members systematically hunt allocated areas. The worst area of infestation is along the Whakapapa River between the Papamanuka confluence and Owango, and around the Raurimu area. We have recently commenced using dogs trained for goat hunting to assist with locating animals in the dense bush and steep terrain of this area.

Possums are also a well recognised national problem, both for the damage that they do to native forest, and as carriers of bovine tuberculosis. The Department of Conservation has directed its effort at areas with a high national priority for protection such as the Waipoua Kauri Forest in Northland. However the Wanganui- Manawatu Regional Council has been carrying out possum control programmes in this area including the western perimeter of Tongariro Forest. The purpose of these programmes is to control tuberculosis because of the serious effect on dairy and beef cattle farming.

Possum hunters are permitted in Tongariro Forest under a block management system. There are a total of 11 blocks with seven currently active. Blocks are issued for a three month period with renewal for up to one year subject to demand and performance. Low skin prices mean that there is not a great demand for possum blocks at present, however a recent reduction in the applied rate of withholding tax for skin sales may make possum hunting more financially attractive. We would like to hear from anyone seriously interested in obtaining a possum block.

10. STRESS AND TROUT CAPTURE

What do you do when you are under stress? A good way of relaxing is to enjoy a days fishing. A pleasant day, capped with some angling success and you feel all right again, without realising that in a way you have transferred your stress to the fish. After all it has been deceived, hooked and struggled determinedly. If you have no use for the fish you may have decided to release it. However, the fish has had quite a rough time. Can it survive? If it does, for how long does it stay stressed and how significant is this stress? Does it have an effect on the next stages of its life?

What is stress?

A simple definition is that stress is a response of the body to any demand or attack upon it. The demand can be physiological, biochemical, or can be due to changes in the environment. The response to the stress can be divided into three steps - recognition of a threat, the stress response itself, and the consequences of stress. Each step is comprised of separate biological events that are initiated by the central nervous system. Fish respond to stress by physiological changes. But when response mechanisms are forced beyond their normal limits, the response may become detrimental to the fish's health.

Fish in the wild are subjected to continual external stimulations as part of their routine activity. Internal body conditions reflect these normal fluctuations accordingly. A stress response may be considered as a change in biological condition beyond these normal fluctuations and represents a possible threat to the fish's well-being.

How can we measure the response to stress?

When the fish is in a situation of threat its brain reacts by sending chemical information to the whole body through the blood system (e.g. when we are in a situation of intense fear our heart begins to beat quicker and we begin to shake). This chemical information sent from the brain is composed of different substances called hormones. The best known stress hormone in fish is cortisol, so to measure the stress response we measure the difference of blood cortisol concentration between a fish in an unstressed state and a captured one. In general, the magnitude and extent of the cortisol response usually reflect the severity and duration of the stress (i.e. capture).

An understanding of the unstressed condition in fish is critical in comparing the effects of stress since considerable variations may occur naturally. Variations in resting cortisol levels may be due to factors such as maturity stage, reproductive state, or water temperature.



Fisheries Scientist Michel Dedual takes a blood sample to measure cortisol levels in a captured Tongariro Rainbow.

Various effects of stress

Past research has demonstrated reproductive failure when fish have been exposed to various forms of toxic chemical stimuli, such as low oxygen, pollutants, and particularly reduced pH. Much less is known of the stressful effects of capture and release on fish reproduction. Some researchers have suggested that either stress-induced suppression or stimulation of reproductive function can be detrimental to fish. The elevation of cortisol in fish blood in response to stress and the subsequent suppression of reproductive function by that hormone seem contradictory to the natural increase in cortisol levels observed during final maturation. Many studies have documented an elevation of cortisol levels during final sexual maturation of fishes, notably salmonids, and have suggested that cortisol increases or surges are effective and even may be required, to stimulate ovulation. This could be quite pertinent when a trout is captured and released on its way to the spawning ground in the Tongariro. The elevation of cortisol level has also been shown to increase the secretion of estradiol, necessary to the building of egg yolk during egg maturation (vitellogenesis). The result is a decrease in the size of eggs which could affect the survival of the embryo. In the Taupo fishery the trout undergo the vitellogenesis in the lake before moving to the spawning stream. During this time

the fishing pressure is high and it is perhaps relevant to assess the effects of increased stress hormone levels in the fish which have been caught and released.

There is also a metabolic cost associated with stress. Stress may limit a fish's energy for other activity. In this regard fish like the unattractive "slabs" or kelts, putting a lot of energy into recovering from the demanding spawning period, may pay a high price when captured and released.

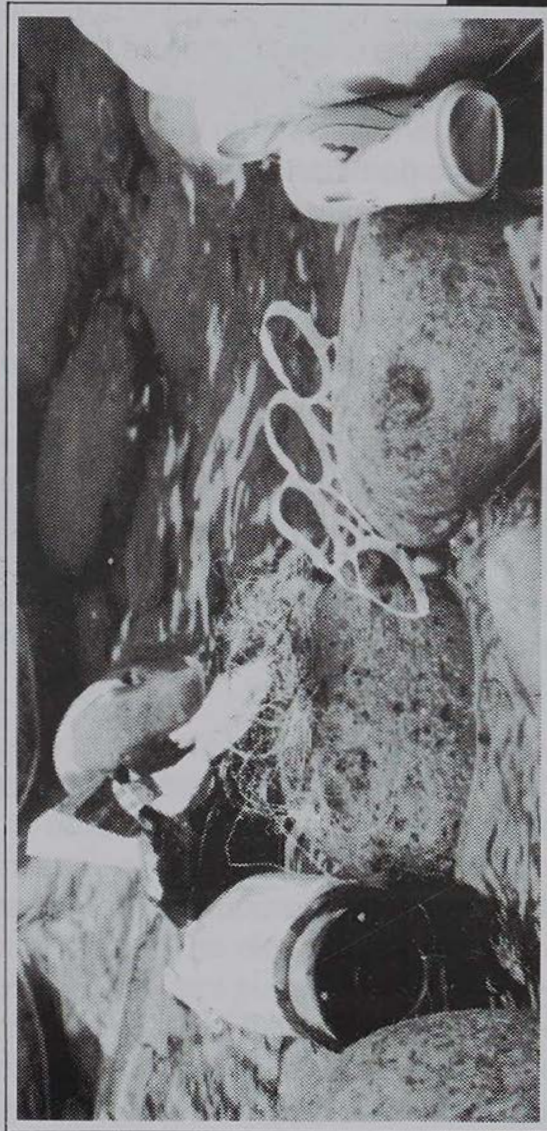
The effects of stress may be manifested at the population and community levels as well as in individuals; these changes may be the most difficult to ascertain but they have the highest ecological relevance. For example it has been observed in caught-and-released cut-throat trout that the hooking stress affects the ability to maintain their position in a dominance hierarchy. Such preliminary results suggest that social disruption may be a subtle consequence of capture stress.

Conclusions

Most of the research has been focussed on hatchery fish. The literature is much more scarce about the stress response of wild fish. Moreover the stress response to capture has not been well investigated and needs some further studies. We are currently analysing the mortality and the stress response of trout captured during their spawning runs. The effect of playing time, maturation stage and sex will be assessed as well. The same experiment will be carried out in Lake Taupo where it will be possible to analyse how fish withstand capture, de-pressurisation and the thermal shock before being landed and released. The final results of these experiments should give further information on the place of catch and release in the Taupo fishery.

IS THIS

ANYWAY TO TREAT A FRIEND?



Please take your tins, bottles, litter & nylon home!

11. KIDS FISHING ORGANISERS CALL IT A DAY

Pat and Doreen Nicholas, who have organised 50 fishing days for over 13,000 budding anglers at the Tongariro National Trout Centre since May 1983, have decided it's time for someone else to take over.



Doreen and Pat Nicholas

The rainbow trout centenary celebrations in April 1983 marked the official opening of the children's fishing pool and the underwater viewing chamber at the Trout Centre. An agreement had been reached between the then Wildlife Service and the Tongariro and Lake Taupo Anglers' Club (TALTAC) that Wildlife Service would stock the pool with trout and the club would supply equipment, arrange volunteers and run special fishing days for children once a month from May to September.

Pat recalls that he was told to organise the fishing days (or else!) by the then TALTAC president and he began phoning around for helpers (30-40 are needed for each day so at least 40 people have to be called), little realising that he would be facing the task for the next 10 years. Doreen, of course, gave her full support and took responsibility for licence sales, among the many other jobs that come her way on a typical day.

Both are touched by the level of support they have had from the more than 100 people who have helped out during the past 10 years. "The fishing days couldn't have happened without it". At least 20 people have been there from the first day. Most helpers are people who have retired to the Turangi area for the fishing, while some have come from Taumarunui, Taupo and Raetihi. There have been a few younger mums and dads but most of the active ones have been busy administering or helping with transport to other sports.

The children's fishing days, dubbed 'brats and sprats days' by a well known helper, have become immensely popular. From a quiet beginning - 77 on the first day - numbers doubled on the next and by the end of the first season they had more than trebled. Now 300 can be expected on a good day. In May 1989 and 1990 over 500 children were helped to catch a trout; 533 is the highest attendance. This is about 100 more than the optimum, Pat and Doreen feel. "There were a lot of aching backs and sore knees among the helpers after those days".



Pat Nicholas helping a youthful angler to land a fish

Memories of their 10 years as organisers and participants? An abiding satisfaction and thankfulness for being able to share in the children's delight and excitement and that of many of the parents too. Amazement that nobody fell into the pool and that no serious injuries happened to participants or spectators - there was a near miss when one of the helpers had to have a hook removed from an eyelid.

For the future? Doreen and Pat will continue to help but maybe not every day as in the past. TALTAC's Bill Colston, himself a foundation member among the helpers, will take over the organiser's responsibilities. Kids will keep turning up, DOC staff will keep stocking the pond with trout but what about the workers? Doreen and Pat are both concerned that they and their assistants are ageing and fading away faster than younger recruits are coming along. "Some of the young anglers will have to make a commitment to come along and pass on their knowledge - if they can't come on all five Sundays they should be able to do at least one".

There were encouraging signs of new faces and younger anglers helping out during the past season - several travelled from Taupo on more than one occasion. We think that Pat and Doreen Nicholas have started something that won't stop as long as the children's pool holds water and fish.

On behalf of 13,000 youngsters, their parents and 300 disabled people whom they helped to have an unforgettable experience, we thank you both sincerely.

12. MANAGER PROFILE



Vicki McLean

Vicki is a member of the fisheries team and is based at the National Trout Centre. Her responsibilities include stripping and fertilising trout ova, setting them into incubators and rearing them through the various growth stages. She is responsible for shipping eyed ova and transporting trout to Fish and Game Councils as ordered and for maintaining the grounds and visitor facilities at the Trout Centre. As well, Vicki is involved in many other projects in the wider fishery management field, particularly survey and monitoring projects.

Vicki grew up in the Taupo-Turangi district and after leaving school she worked for the Ministry of Works and had various other odd jobs. She started work at the Trout Centre on a temporary employment scheme in 1980 and was appointed to the permanent staff of the NZ Wildlife Service in 1981.

During her 12 years at the Trout Centre Vicki has seen a lot of staff members come and go and many changes made to the facilities.

Vicki enjoys meeting and talking to the visitors that come to the Trout Centre, so next time you are passing through Turangi call in and say hello.



Harry Hamilton

Harry is part of the fisheries team and is based at the National Trout Centre in Turangi. His responsibilities include stripping ova from mature adult fish, putting them through fertilisation for shipping ova south of Turangi and looking after the grounds and buildings around the hatchery. Like Vicki, Harry also works in a number of other fishery management areas, particularly compliance and enforcement. He has a special interest in fire control activity.

Harry grew up in the Taupo-Turangi district and worked for the Ministry of Works in Turangi for nine years. During this time Harry also spent six years in the Territorial Force.

After leaving the Ministry of Works in 1982 Harry worked at the Chateau for a few months before starting at the hatchery in 1983 on a PEP Scheme for six months, taking up permanent employment at the hatchery in 1987.

Harry is well known for his enjoyment of social activities and prepares a great hangi.

TAUPO

Do you hunt or fish at Taupo?

Do you want to know:

- The latest about the resource you use?
- Current issues so you can have an input?
- What the Department of Conservation is doing for your sport and why?
- How to get to those special spots and the techniques to use?

The answers to these key questions and more are:

TARGET TAUPO

A newsletter for hunters and anglers in the Tongariro/Taupo Conservancy.

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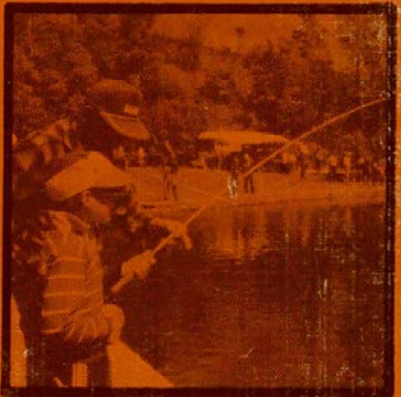
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