NOVEMBER 1990
Vol 1
Issue 5

TARGET TAUPO

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

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TE PAPA ATAWHAI

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TARGET TAUPO

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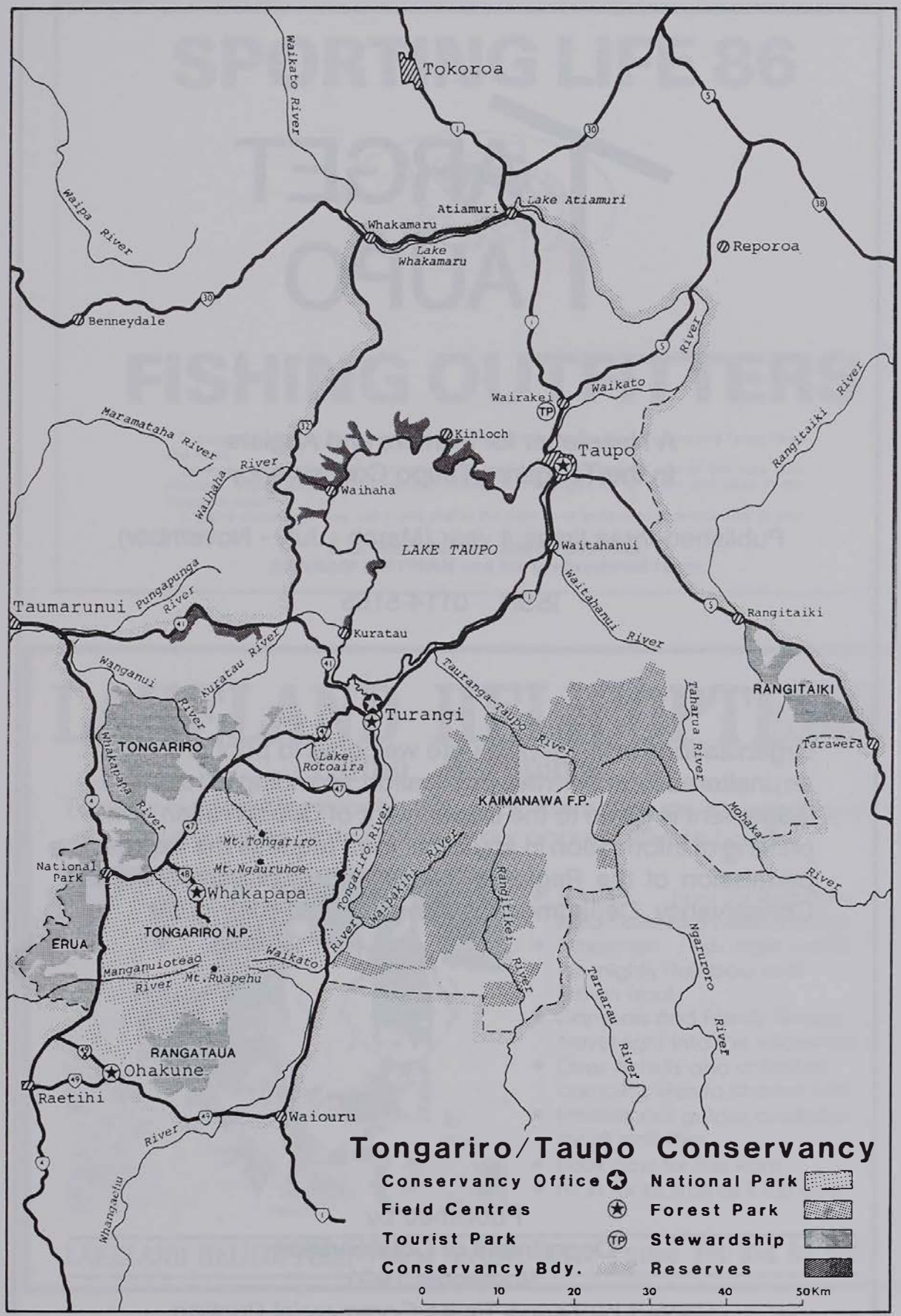
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LAKE TAUPO
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Pungapunga River
Kuratau
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Kuratau River
Tauranga-Taupo River
RANGITAIKI
Turangi
TONGARIRO
Lake Rotoaira
Tarawera
Taharua River
KAIMANAWA F.P.
Whakapapa River
Mohaka River
Mt.Tongariro
National Park
Mt.Ngauruhoe
Whakapapa
Tongariro River
Waipakihi River
Rangitikei River
TONGARIRO N.P.
ERUA
Manganuioteao River
Mt.Ruapehu
Waikato River
Ngaruroro River
Taruarau River
RANGATAUA
Ohakune
Raetihi
Waiouru
Whangaehu River
Tongariro/Taupo Conservancy
Conservancy Office
Field Centres
Tourist Park
Conservancy Bdy.
National Park
Forest Park
Stewardship
Reserves
0 10 20 30 40 50Km

CONSERVATION
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DEAR SPORTSPEOPLE

Welcome to the fifth issue of "Target Taupo" and thank you for your response to the questionnaire included in the last issue. We have been encouraged by the favourable nature of comments received to date and we believe from this that the publication is on the right track in terms of providing information on the status and management of your fishing and hunting resources. We have received many useful suggestions for further development of the booklet although we suspect that the recommendations from our 'fans' in Hokitika may be a bit difficult to implement.

You will have noticed a few printing errors in the July issue of "Target" and we apologise for this. We are continually trying to improve the technical standard of the publication and trust that you will see the benefit of this in this issue.

Throughout the latter half of the winter there have been some notable occurrences concerning the future welfare of your sport. These include the completion of the Lake Taupo trout production study, goat control by recreational hunters, the resolution of the channel catfish issue, the establishment of a diet study for sika and red deer and the establishment of the interim Taupo Fishery Advisory Committee. The Taupo angling harvest survey is continuing satisfactorily and some important information has already come to light from this. Our compliance/enforcement staff have maintained a high profile throughout the winter and have recorded many successful apprehensions for fishery offences. Read on for more detail on some of these issues.

We consider it important that reader input to "Target Taupo" continues and for that reason, have included the Reader Questionnaire again in this issue. Letters to the editor are also welcome so if you have any ideas, comments or criticisms concerning fish or game animals, or their manangement in this conservancy, please let us hear them.

The "spring flush" is now upon us and this is an exciting time for deer hunters, who may be able to locate animals in exposed areas feeding on the new growth. At this time, we anticipate an increase in numbers of hunters concentrating on river flats, clearings and slips. If you are one of these, enjoy your sport but keep a "safe eye" out for other hunters who may be in the same area.

Good luck for the summer.

Rob McLay
Co-Editor

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

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Sid Puia, Turangi Phone: 68607 (work), 66700 (home)
or Conservancy Duty Officer Phone: 68607 after hours

ANYTIME

1. ANGLING FORUM, TURANGI

On 8 September, the Department of Conservation hosted an open forum for anglers at the Turangi Senior Citizens' Centre. Anglers were invited to listen to presentations by fisheries management and research staff on the current status of the trout population in the Taupo fishery. The key issues addressed at this session were the production of trout and current population size, harvest of trout by anglers, other factors affecting trout mortality and background trends in population size. An explanation of the fishery management planning process was also presented to the audience.

The information which was presented can be summarised as follows:

- Trapping records from the Waihukahuka Stream (a Tongariro tributary) and the Tokaanu Stream indicate that the number of adult fish returning annually to these streams to spawn is declining.

- Dr Martin Cryer's study indicates that the annual mean size of the legally takeable stock is in the order of 100,000 individuals and there appears to have been some decline in population size between 1988 and 1989.

- Data from angling surveys indicate that around 60% of the fishable stock is currently being harvested by the troll fishery. This is a high rate by world standards.

- There has been a recent upsurge in comments from anglers that there are less fish around.

Those present were told that there are a number of reasons which might be causing fish stocks to decline and that the true cause is likely to be a combination of factors and some of these (such as the incidence of summer floods) are beyond management control. However, angling pressure and harvest as indexed by licence sales has reached the point where it is likely to be compounding the effects of natural impacts and this can be managed.

Several options for lowering the current harvest rate were presented and discussed. These included:

- Lowering the bag limit;
- Increasing the minimum size limit;
- Introducing further closed seasons;
- Method restrictions;
- Limiting the number of licences issued;
- Increasing licence price.

Management staff expressed their preference for a reduction in fish killed rather than a reduction in opportunity to fish and so subsequent discussion focussed on lowering the current bag limit and increasing the minimum size limit.

The forum was well attended (150 present) and once anglers were acquainted with the status of the fishery as it is currently understood, they were invited to question staff and offer their views on future management direction. Anglers were very positive in their response to the need for actions which will enhance the long term sustainability of Taupo trout stocks.

Anglers were unanimous in their call for a lower bag limit. A short questionnaire handed out toward the end of the day revealed that 87% of the 90 respondents were asking for a bag limit of four fish or less and 79% wanted to see the size limit increased.

Standing room only for the anglers attending the recent anglers forum in the Turangi Senior Citizens' Hall *Photo courtesy Alan Simmons*

Fisheries staff have been heartened by the willingness of Taupo anglers to provide input to the development of management strategies for the future wellbeing of their sport. Alan Ross, Director of DOC's Resource Use and Recreation Policy Division, indicated to the meeting that the Taupo Fishery Advisory Committee would be established (see separate article in this issue) to provide anglers with a formal mechanism to represent their perceptions and aspirations to the Department. This was good news and together with the type of participation experienced at the forum, bodes well for the future of the fishery. ■

2. 1990 GOAT HUNT - TONGARIRO FOREST

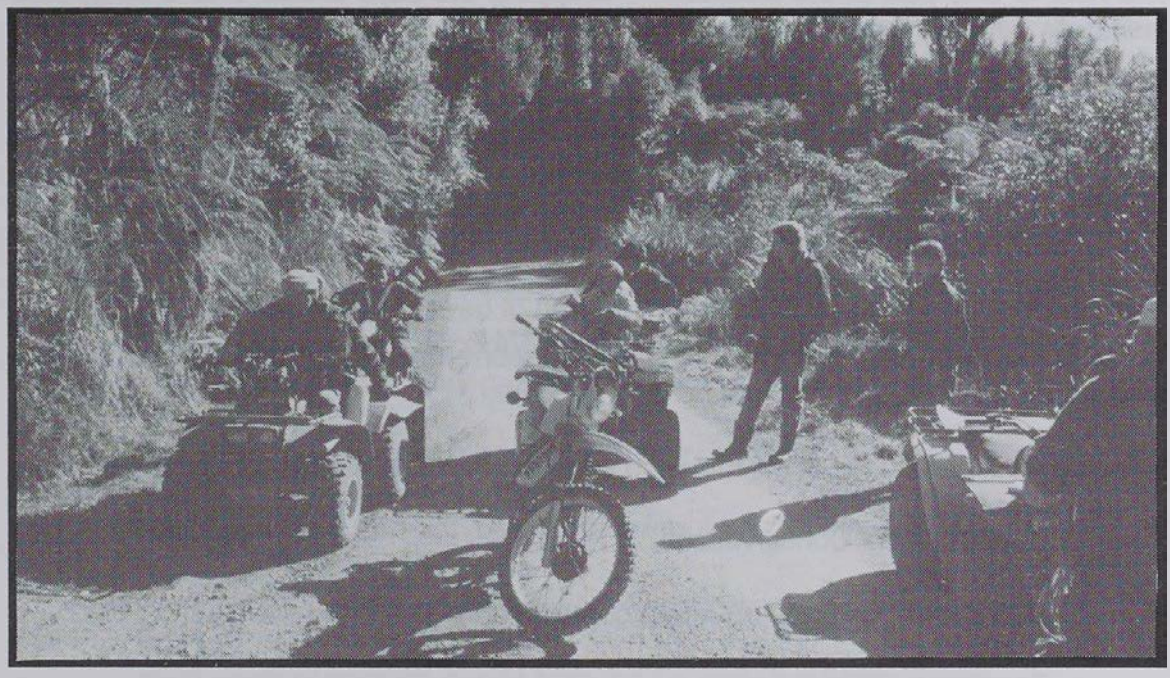
Late June saw the Taumarunui Rod, Rifle and Gun Club conducting a special meeting with two guests, Cam Speedy and Ian Goodison. There was only one topic on the agenda and that was planning for the removal of goats from Tongariro Forest. Results of aerial reconnaissance of goat populations were in and there were a few surprises.

In 1989 the Taumarunui Rod, Rifle and Gun Club goat shoot had been a real success story, but we felt there was room for improvement. After three hours, the nuts and bolts of the hunt were in place with all parties agreeable to the way the operation should be run. The dates had been set at 11 and 12 August. There was a huge media build-up, with posters, newsletters and numerous articles in major papers. This build-up created much enthusiasm toward the hunt.

Unfortunately the weather was to have the last say and the first postponement was followed by two more.

Finally, however, Saturday 1 September saw an excellent day and the 1990 goat hunt was underway. Our venue was the Owhango Rugby Football Club and team leaders were ready for their hunters. The blocks had been pre-determined and by 9.00 am the bulk of hunters had arrived. Numbers were a little down on last year's hunt, but there were a lot more younger hunters. DOC staff had arrived to issue permits and generally help out. After the traditional "pep talk" on safety aspects, the flag was dropped and the hunt was underway.

In a roar of two strokes and four strokes, the steady thumping of four wheelers and pockets bulging with ammo, forty plus hunters disappeared into the Ohinetonga Reserve.



The maze of old logging tracks gives hunters, especially those on motorbikes, good access to much of Tongariro Forest. Club members take to the hills in search of feral goats.

Photo: Dick Scheyvens

Late afternoon saw the first hunters returning with their tallies. By 6.00 pm the day's tally stood at 109 goats, confirmed by removal of the ears. Top team took 33 goats but there was a bonus of three red deer with their tally also. The barbeque was fired up and all the boys were into a tinny or two with stories starting to flow.

Sunday saw a repeat performance with 24 hunters in the field and a return of 38 goats. A total tally of 147 goats was secured within the park. Like all events, there were some humorous times and there were certainly some stories to tell. A great weekend!!

The hunt is only part of the weekend. Recapping the days events over a beer, club members tally up the ears. *Photo: Dick Scheyvens*

One may ask what's this all about? The basic answer is that the Taumarunui Rod, Rifle and Gun Club is involved with DOC in the removal of goats from the park. In return, the park remains a non-recovery area in terms of helicopter hunting. There have been many other benefits with the continual dialogue between the club and DOC. Many barriers have been broken down with regard to game management and the wellbeing of the park. It appears we all share a common goal for the park.

The club's involvement in track maintenance has seen an increase in park users. Mountain bike riding has been on the increase.

The club would like to thank the following sponsors for their efforts during the goat hunt:

- Department of Conservation

  Bob Brown, Owhango Rugby Football Club

  Taumarunui Sports Centre

  Peter Sampson, Owhango Takeaways

To my hard working secretaries Eric Dodd and Wayne Douglas, and the committee Grant Ferguson, Andrew McKee, John Alker, Ranga Raharuhi and also to Pat Lacy.

The SPORTING LIFE trophy for the 'Best Billy Goat' was awarded to M Menefy. $25.00 vouchers were awarded to the following:

A Bole	W Douglas
J Corban	P Samson
P Lacy	P Scheyvens
R Raharuhi	G Ferguson
H Johnson	M Menefy

To all hunters who supported the goat hunt, many thanks for making it such a success. The high standard of safety was a credit to you all.

Dick Scheyvens
President ■

3. CONSERVANCY WINTER HUNTING SUMMARY

The 1990 winter hunting period saw just under 1600 hunters obtain permits to pursue the Conservancy's sika deer, red deer, wild pig and feral goats. As with other years, this number represented about half the number of hunters visiting the area for the roar. Snow was a significant and regular feature of the weather this winter. This may explain why 22% of hunting dairies received for the period so far have been returned "No hunting done".

A total of 385 diaries were received in time for the prize draw on 23 October, approximately25% of the total number of permits issued. This is another very disappointing effort from hunters! Winners of the diary prize draw were as follows:

Helicopter Transport with 'Heli Sika' - Stephen Rosie, Epsom

Helicopter Transport with Lakeland Helicopters - Shane Ryder, Tauranga

Air transport with Taupo Air Charter - Paul Lisignoli, Hamilton

$100 worth of sporting goods from the Fly and Gun Shop, Taupo - Peter Barrie, Opotiki

Weekend accommodation at Sika Lodge - R N Canhan, Rotorua.

AREA	BLOCK	DAYS HUNTED	ENCOUNTERS				KILLS				DAYS/ ENCOUNTER	DAYS/ KILL
			SIKA	RED	PIG	GOAT	SIKA	RED	PIG	GOAT		
KAIMANAWA RECREATIONAL HUNTING AREA	Clements	225	139	4	2	-	13	2	-	-	1.6	15.0
	Hinemaiaia	14	18	-	-	-	3	-	-	-	0.7	4.7
	Cascade	3	12	3	-	-	2	1	-	-	0.2	1.0
	Kaipo	16	23	-	-	-	5	-	-	-	0.7	3.2
	Oamaru	72	54	2	1	-	10	-	-	-	1.3	7.2
	Tikitiki	17	26	-	-	-	3	-	-	-	0.7	5.7
	Te Iringa	36	68	6	-	-	14	-	-	-	0.5	2.6
	Jap Creek	-	-	-	-	-	-	-	-	-	-	4.0
	Upper Oamaru	-	-	-	-	-	-	-	-	-	-	-
	ALL	395 *(418)	348 *(389)	15 *(15)	3 *(6)	- *(2)	51 *(87)	3 *(6)	1 *(1)	-	1.1 *(1.0)	7.3 *(4.5)
KAIMANAWA FOREST PARK (excluding RHA)	Waipakihi	84	43	18	-	-	9	8	-	-	1.4	4.9
	Desert Road	18	15	2	-	-	2	-	-	-	1.0	9.0
	Access 10	23	2	5	3	-	-	-	-	-	-	-
	Umukarikari	16	3	11	-	-	7	-	-	-	1.1	2.3
	Mount Urchin	3	2	-	-	-	1	-	-	-	0.7	3.0
	Waiotaka/ Whitikau	-	-	-	-	-	-	-	-	-	-	-
	Waimarino	5	1	1	-	-	-	-	-	-	2.5	-
	Kiko Road	69	42	8	-	-	16	7	-	-	1.4	3.0
	Tauranga-Taupo	4	4	-	-	-	-	-	-	-	1.0	-
	Tiraki	5	2	-	-	-	-	-	-	-	2.5	-
	Rangitikei	-	-	-	-	-	-	-	-	-	-	-
	Ecology	-	-	-	-	-	-	-	-	-	-	-
	Ngaruroro	-	-	-	-	-	-	-	-	-	-	-
	ALL	287 *(264)	137 *(163)	60 *(61)	4 *(5)	-	39 *(36)	33 *(15)	- *(2)	-	1.4 *(1.2)	4.0 *(5.0)
TONGARIRO NATIONAL PARK	Rangataua	51	6	45	6	-	-	19	-	-	1.0	2.7
	Ohakune	32	-	10	-	-	-	8	-	-	3.0	4.0
	Southwest	53	1	33	1	-	1	10	-	-	1.5	4.8
	Hauhangatahi	6	-	2	-	-	-	-	-	-	3.0	-
	Whakapapa	10	-	-	-	-	-	-	-	-	-	-
	Pihanga/Tihia	2	-	-	1	-	-	-	1	-	1.0	1.0
	Desert Road	7	4	-	-	-	1	-	-	-	1.8	7.0
	ALL	194	11	103	8	-	2	36	1	-	1.6	5.0
TONGARIRO FOREST (SF42)	ALL	128	-	27	6	184	-	14	7	116	(Deer & Pig Only) 3.8	6.0
ERUA FOREST (SF97)	ALL	42	-	40	-	63	-	15	-	38	(Deer & Pig Only) 1.0	2.8
RANGITAIKI FOREST (SF70)	ALL	11	2	4	-	-	2	-	-	-	2.0	5.5
LAKESHORE RESERVES	ALL	(1080 poison laid in early June)										
UNSPECIFIED RETURNS	Whole Conservancy	118	-	-	-	-	2	9	-	-	(Deer & Pig Only) -	10.7
TOTALS	Whole Conservancy	1185	-	-	-	-	97	117	9	211	(Deer & Pig Only) -	5.3

TABLE 1: Tongariro/Taupo Conservancy Hunting Summary, June - September 1990 * (1989 figures)

Ten hunters also received free copies of this, the November issue of Target Taupo. Congratulations and thanks for your support. Remember, if you have an old hunting diary lying around, please send it in. If you know someone who forgot - jog their memory for them!

Proof of the difficulty in locating animals in winter was the low percentage of successful returns. Only 28% of diaries recorded at least one kill, down from 46% in the roar.

A total of 1185 days of hunting, one third of the effort reported by hunters over the roar, was recorded during the winter for a harvest of 434 animals (97 sika deer, 117 red deer, 9 pigs,

211 goats). A summary of this effort on a block by block basis is presented for your information in table 1.

Comparisons with last year's data for the RHA and Kaimanawa Forest Park show some interesting trends. The effort required to shoot a deer in the RHA continues to increase. A decrease in effort required to shoot a deer in the Forest Park, can be attributed to a larger red deer harvest this winter. This is consistent with the observation that red deer numbers are slowly increasing within the southern Kaimanawas.

Interestingly, Erua Forest produced some good red deer hunting for those who made the effort. Perhaps there is a seasonal movement of animals from the southwestern slopes of Mt Ruapehu to the lower altitude forests of Erua?

A strong trend towards greater hunting effort in accessible areas is apparent from the data, with the more remote and higher altitude blocks receiving little pressure. The high pressure at Clements Road is likely to have caused the very high days/kill figure for this block, and no doubt has biased the overall figure for the RHA as a whole.

Pleasing to note is the very high number of goats removed from both Tongariro and Erua Forests. The Tongariro effort is mainly attributable to the Taumarunui Rod Rifle and Gun Club weekend goat cull (147), however many other hunters have contributed and the Department of Conservation is most grateful.

Area	Hunter Days	Helicopter Hrs (Hughes 300)	Kills Goats	Kills Other
Omori	1.0		13	-
Pukawa	0.5	0.3	6	-
Kuratau	2.0		5	-
Mangakowhiriwhiri	7.0		59	-
Waiotaka Swamp		0.5	23	-
Makatote		0.5	1	-
Tongariro Forest		5.0	95	-
Whakaipo Bay	1.0		5	-
Erua Forest	0.5		2	-
Totals	12 days	6.3 hours	209	Nil

TABLE 2: Department of Conservation - Official Animal Control Operations, June-September 1990

Table 2 summarises departmental goat control operations for the winter. The combined efforts of recreational hunters and official control have had a major impact on goat numbers so far this year.

The end of this hunting period concludes the first full year of the new hunting permit/hunter diary system for the Tongariro/Taupo Conservancy. For the year ended 30 September 1990, a total of 7656 hunter days have been recorded, accounting for 721 sika deer, 858 red deer, 84 pigs and 497 goats. These totals have been recorded off diaries from only 30% of the total number of permits issued, so the real figures could be as high as three times those that appear here!

Recreational hunting takes the single most significant harvest of wild animals from lands administered by the Department of Conservation in the Central North Island.

A more generalised breakdown of how this hunting is spread and the relative numbers and species taken appears in table 3.

Area	Days hunted	Kills Sika	Red	Pig	Goat
Kaimanawa RHA	2072	333	18	5	-
Kaimanawa F.P. (excluding RHA)	2054	273	202	22	-
Tongariro N.P.	1124	16	279	6	-
Tongariro S.F.	601	3	120	27	296
Erua S.F.	154		53	2	170
Rangitaiki S.F.	140	20	11	1	-
Unspecified	1460	74	167	15	37
Totals	7656	721	858	84	497

TABLE 3: Recreational Hunting Effort and Harvest by Area - 1 October 1989 - 30 September 1990 ■

4. AUGUST ANGLER SURVEY

During selected days of August this year, some anglers on the Tongariro will have been approached by DOC staff and asked about their day's fishing. These angler interviews have been conducted every August since 1985 to establish an index of angler satisfaction. This year only four of six chosen days were able to be surveyed (two were lost due to flooding) with a total of 486 anglers being interviewed. From these interviews, 196 fish were measured, from 1164 hours of anglers fishing effort.

The six days are chosen at random during the month and it is hoped that by obtaining data on randomly selected days, we will hit some good fishing days and some bad ones. As well as the annual angler survey being carried out, the 12 month trout harvest survey underway at the moment was incorporated into the survey days. This resulted in some additional information being obtained and included aerial counts of angler numbers on the Tongariro River.

The total number of fish caught for the total amount of effort expended , or catch per unit effort (CPUE) , has in the past been thought to be a good index of the number of fish present. In the light of recent research it appears that CPUE is a good indicator of angler satisfaction, but may not have a good relationship to the number of fish present.

If a large number of fish are present in a pool, the chance of a particular fish being caught is low. As the numbers of fish diminish due to angling mortality, that particular fish has more chance of being caught as its buddies are removed. Therefore, a small change in catch rate may mean a large change in the proportion of available fish being caught.

August has been chosen for the survey as trap data shows that it is generally the peak month for spawning migrations up the Tongariro River. With increasing angling pressure early in the season, natural selection may tend to favour later running fish. This would give the effect of shifting the peak spawning time to later in the season so trap catches have to be carefully monitored each year.

The Tongariro River in 1990

Results from the August angler survey this year showed an overall catch rate of 0.22 fish per hour. This was a slight drop from 0.26 fish per hour recorded from 1989, although not as low as 0.20 fish per hour recorded in 1988. The catch rates for all anglers and experienced anglers (10 days or more on the Tongariro) are shown in figure 1.

This figure shows that it is the experience on the Tongariro River which gives anglers a higher chance of fishing success. Surveys in the last few years show that actual days on the Tongariro per year have a stronger correlation with the CPUE than the total number of years fishing.

Obviously the number of inexperienced anglers encountered during the survey will vary from day to day due to factors such as weather, ability to travel, whether the skiing is good, etc. This varying number of unfamiliar anglers can markedly affect the overall catch rate,

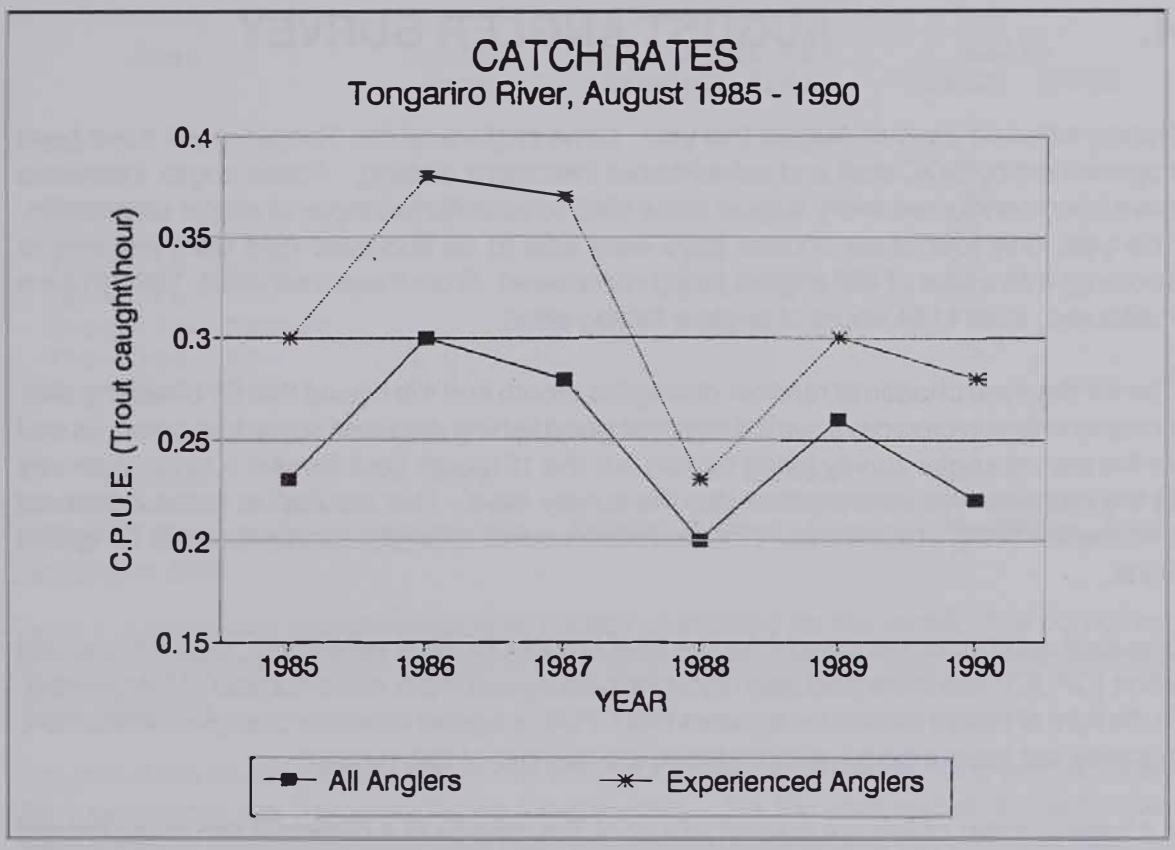


Figure 1

and so the catch rates of experienced anglers only are a much more useful tool for managers to measure angler success.

The time of the day

As part of the 12-month harvest survey being undertaken by DOC, the survey days have been further broken down into three time zones. It is common knowledge amongst anglers that fishing in the early morning and late evening is generally more productive than fishing in the middle of the day. Figure 2 shows this is supported by catch rates established over the 1990 August survey. The data showed that far less angling effort was expended after 2 p.m. compared to that between 10 a.m. and 2 p.m., although the catch rates during the evening were higher than the midday period.

During interivews on the 12-month harvest survey and the August angler surveys, many anglers have commented that the fish they were catching in the Tongariro appeared to be in better condition than they had been in previous years. Figure 3 shows that there has been a small increase in the mean length of the fish measured since 1985, yet the weights taken have increased significantly. This supports anglers' observations that there appears to be an increase in the overall condition of many fish. This is particularly true for the 1990 catch sample compared to the 1989 sample.

Methods used and section of river fished

Nymph fishing on the Tongariro River is still the most popular method although in recent years its continued climb in popularity has halted and in fact the proportion of anglers

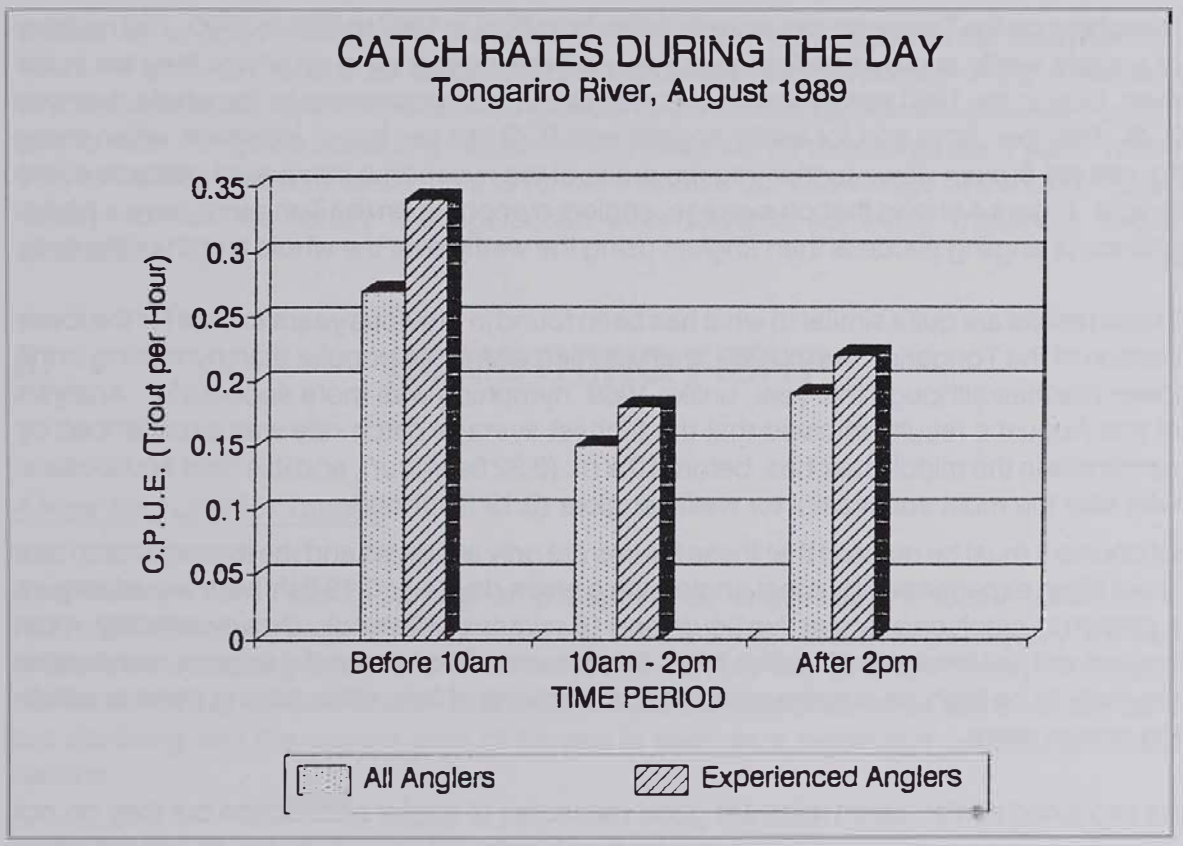
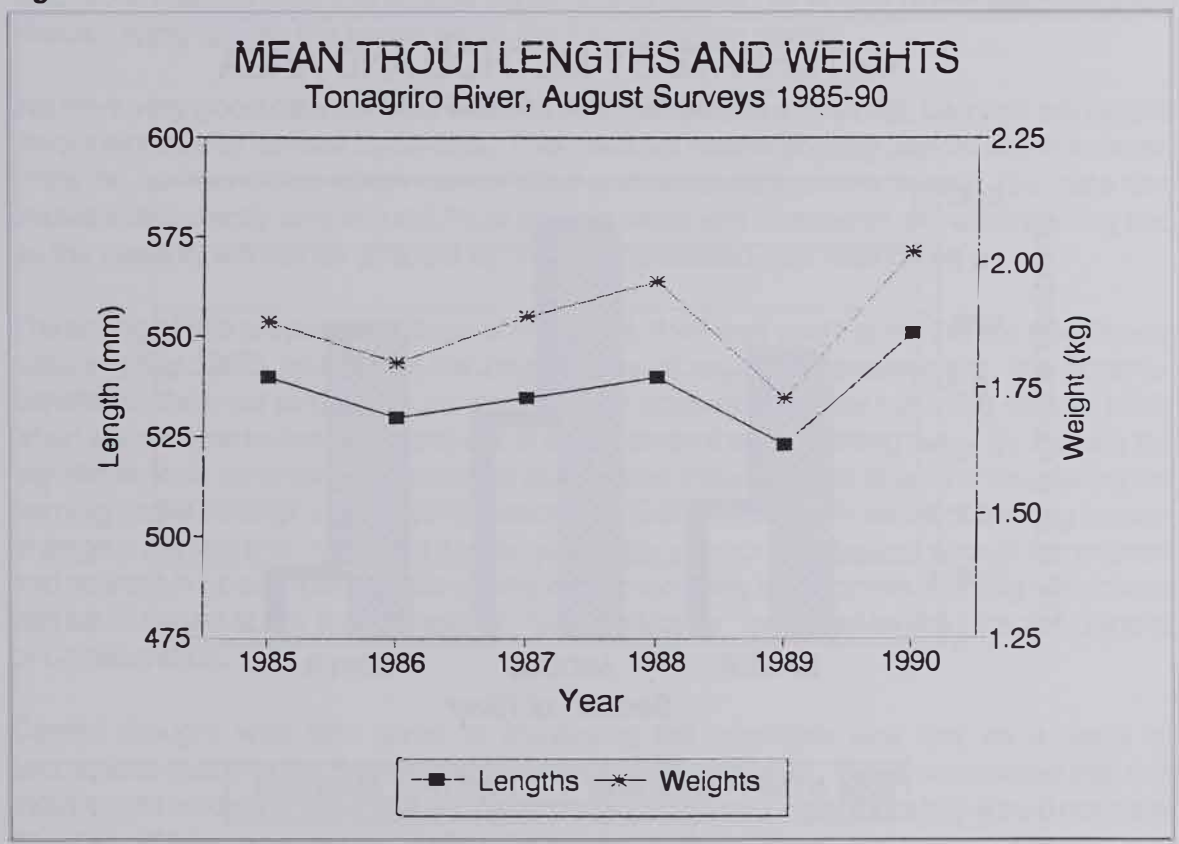


Figure 2

Figure 3



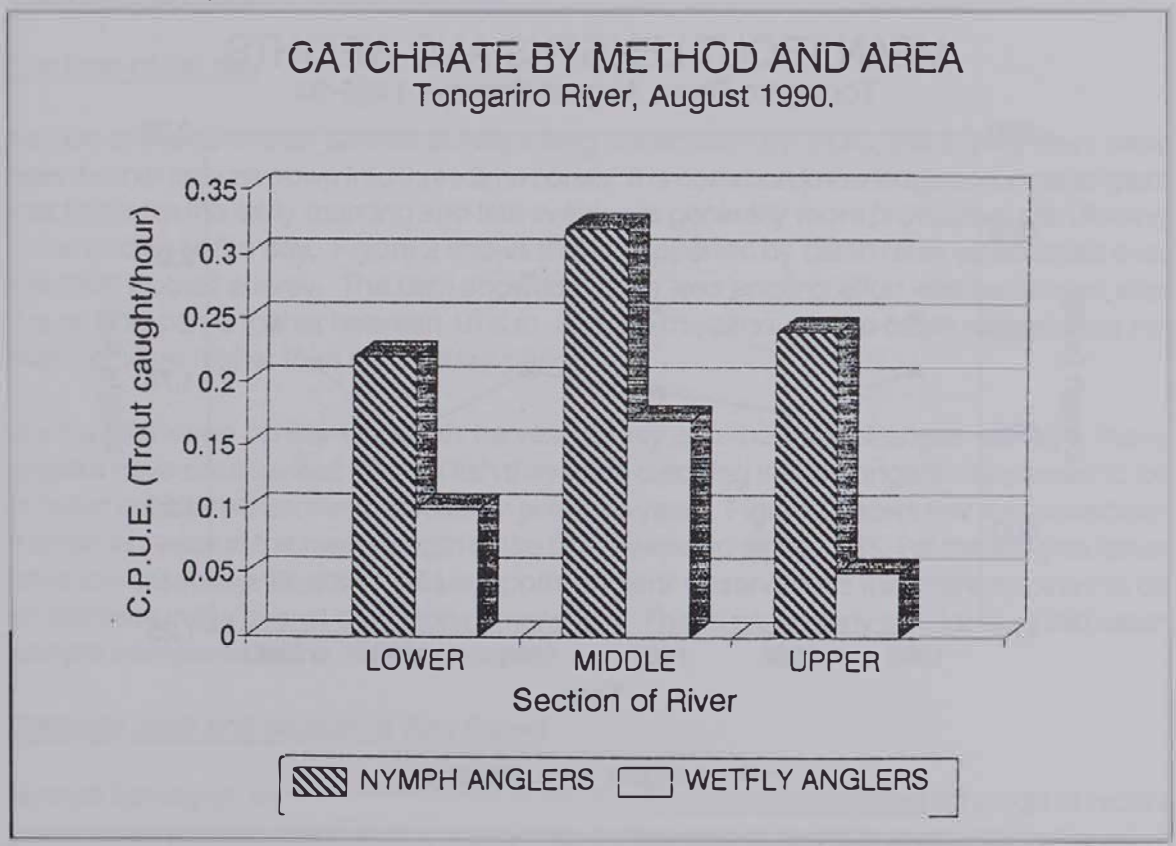
nymphing on the Tongariro has actually fallen from 80% in 1987 to 62% in 1990. The number of anglers wetfly and nymph fishing are very different depending on where they are in the river. During the 1990 survey the mean catch rate for all nymphers over the whole river was 0.28 fish per hour and for wetfly anglers was 0.22 fish per hour. However, when these figures are broken down further into the areas of the river some interesting patterns come to light. Figure 4 shows that on average, anglers nymphing on the Tongariro have a higher chance of angling success than anglers using the wetfly over the whole length of the river.

These results are quite similar to what has been found in previous years except for the lower section of the Tongariro. As in 1989, wetfly fishing was more popular than nymphing in the lower reaches although this year, unlike 1989, nymphing was more successful. Analysis of this August's results showed that the highest average catch rate was experienced by nymphers in the middle reaches, before 10 a.m. (0.32 fish/hour), and this time and location was also the most successful for wetfly anglers (0.19 fish/hour).

Of course it must be realised that these figures are only averages and the average catch rate is not often experienced by most anglers on a given day (e.g. 0.19 fish/hour would require a person to catch one fish for five hours and 16 minutes of fishing). On any one day, most anglers will not have caught a fish when interviewed. For successful anglers, catch rates are likely to be high, as anglers cannot catch fractions of fish, either having none or catching one or more.

As explained earlier, catch rates are good measures of angler satisfaction but they do not

Figure 4: The lower area of the river is that below the SH 1 bridge, the middle section is from the SH 1 bridge to the Red Hut footbridge, and the upper section is from the Red Hut bridge to the Whitikau pool.



appear to be good indicators of the number of fish which may be present in the spawning rivers. In order to monitor the escapement of the fishery (that proportion of the population which successfully reaches the spawning beds) directfoot and driftdive counts have begun on the main Tongariro spawning tributaries and these will be monitored each year. These counts will be used with catch rates to further increase our knowledge of the Lake Taupo fishery so that the fishery managers can work towards achieving maximum angler satisfaction. ■

5. SOMETHING FISHY

A New Bag Limit for Taupo?

At a fishery forum held in Turangi on 8 September, anglers unanimously called for a reduction in the daily bag limit which currently stands at eight fish. A large majority of those present were seeking a new limit to be set at four fish per day or less. Fishery managers consider that this action would be prudent because our indicators tell us that trout numbers are declining and the current level of harvest is seen as a significant contributor to this decline.

Since the forum, we have carefully considered what a new bag limit should be and when it should be implemented. We have recommended to the Director General and Minister of Conservation that a bag limit of three fish per day be set for the Taupo fishery. We have also recommended that this limit be implemented during December of this year and that it should apply across the board within the Taupo fishing district.

We have very good data from our surveys which show that a three fish bag limit will reduce the current level of harvest by 30-35%. This need not restrict angling opportunity but merely limits the number of fish which can be killed and removed from the fishery. Our data also shows that currently only around 7% of anglers catch and kill three or more fish per day and so the majority will not be affected by the recommended new restriction.

The timing of this proposed change is important. If we wait until the start of the next fishing season (July 1991) and adjust the bag by way of regulation amendment, the potential benefits to the trout population cannot become apparent until the following winter (1992) when we are able to monitor numbers of adult fish on their spawning runs. By making the adjustment this summer, we should be able to start measuring its effectiveness during the coming winter through our trapping stations. Equally important in terms of making a quick change is the fact that managers and anglers alike, concur that the limit should be reduced and so there is no compelling reason why we should delay the process. Fishing restrictions can be changed at any time by way of "Gazette Notice" instituted by the Director General of Conservation.

Careful thought was also given to increasing the minimum size limit as a result of promotions made at the September fisheries forum. However, it was considered that this move might actually encourage people to continue fishing longer than they would normally do, in an effort to secure their limit of three fish per day. We do not yet have an accurate

assessment of post-release mortality for the Taupo fishery so at this time we are reluctant to introduce measures which may unnecessarily add to the potential incidence of this. We will keep the size limit under review while monitoring the impact of a reduced bag limit. We are considering undertaking a project to study the relative impacts of different angling methods with reference to post-release mortality.

Please note that at this stage, a three fish bag limit in December is still in the recommendation phase and awaits official approval and legal ratification before we can say with certainty that it is going to happen.

Has anyone seen 1700 trout who have lost their way?

7000 rainbow fingerlings were counted into the kids' fishing pond at the Tongariro National Trout Centre in December 1989. 1793 were caught by kids up to September 1990 and 3516 were taken out for distribution. 1690 less than there should have been.

Where did they go? Shags took a few but there was a constant war waged against them and many feathers were shed; shag damage affected less then 1% of the remaining fish so maybe they took 100 or so.

The trout couldn't escape through the grille and on the two occasions when the flooded Tongariro River backed water up to overflow the grille, somebody was there to screen it and prevent any fish escaping.

No - a joker has to suspect foul play - the low forms of life that steal from others in the dark of night. An incident soon after the kids' pond was cleared testifies to this. Daylight revealed some nets alongside the raceway containing the 3516 two year olds so they were recounted and 45 more had gone - abut 20kg of fish - a good load for a couple of young blokes.

It seems that over a period there would have been a number of visits to the kids' pond to remove all those fish. There have been visits to other parts of the Centre as well - in August a raceway containing 110 rainbows raised for three years for a researcher at Massey University was drained and the taps were closed. Sixty of the 1.5kg trout were taken and the rest were left to die.

The increasing incidence of thefts like these and damage to structures - always at night - means that alarms and deterrents will have to be installed at considerable cost. Perhaps public access will have to be more strictly controlled, again at a cost; penalising the majority for the sake of a few amoebic warts on the rear end of progress .....

Litter

Why are anglers such a grubby pack of individuals? Maybe most of them aren't, but there are a few out there who give the casual observer good reason to have that impression. The litter problem generally on the Taupo rivers this year, but especially on the Tongariro,

seems to be as bad as ever. Perhaps the blame can be placed on a few thoughtless individuals, but by walking past and ignoring it, all anglers are guilty by association.

Surely an angler who carries a beer with him to enjoy on the streamside can crush the empty can to a small parcel of aluminium and put it back in his pocket. We are not begrudging anglers a beer, lets face it, most of us enjoy a cold ale after thrashing the river to a foam for a couple of hours, but there's no need to discard the vessel over one's shoulder into the scrub!

Car parks are the worst problem! Rubbish bins are deliberately being phased out because they encourage people to leave behind what they no longer need. The philosophy is "if you bring it, then you are responsible for removing it"! It's as simple as that.

Fortunately there are a few anglers, many of them locals, who care enough about the environment around their angling waters to take a supermarket bag with them when they go fishing. It only takes a few minutes to clear the car park of litter before leaving and perhaps a clean carpark will make those who don't give a stuff, think before emptying the effluent from their journey out on the roadside.

The other issue which needs addressing is the nylon problem. What do you think happens to 2 metres of knotty old nylon when you throw it in the Tongariro? No, it doesn't break down! It tangles around snags with other nylon to form "ropes" which create potentially fatal traps for all sorts of wildlife. One local sports shop alone sells nearly 100km of nylon per annum. Multiply that by all the sports shops that service Taupo anglers and that's a big rope. It only takes a few seconds to curl it around your fingers and put it in your pocket.

What you do can make a difference! If more anglers were a little proactive, the minority on the rivers would see that littering and discarding nylon are socially and environmentally unacceptable. What is needed, is a change in attitude - not just by those responsible for such acts, but also by those who ignore the fact that it is happening! It is time we cleaned up our fishery.

Taupo Fishery Advisory Committee

Following on from the item in the last issue of "Target Taupo", the Minister of Conservation has agreed to the establishment of the fishery advisory committee on an interim basis. This has been necessary due to the election year time constraints preventing the passing of regulations to formally establish the committee.

Until the regulations can be introduced (probably early next year) the committee will be appointed and operate on an interim basis. Nominations have been invited from the participating organisations and by the time you read this the inaugural meeting date should be set.

There have been some changes to the committee's membership structure since the last report. The Lake Taupo Commercial Launchmen's Association will now be a full member and the NZ Fish and Game Council have been invited to nominate a non-voting observer.

Lightstick Lures

Many anglers will have seen recent advertisements for a particular fishing lure that glows in the dark. Apparently developed in the USA, this lure uses a tiny Cyalume-type lightstick which activates by chemical reaction when the container is broken.

We have had several enquiries as to whether this lure may be used at Taupo. Well, unfortunately for those would-be millionaires who may have hoped to make a killing out of Taupo anglers, the use of any chemical preparation (other than fly floatants) is not permitted in all local waters. This clearly excludes lures of the kind described.

Fishing Licence Sales

Just under 79,000 Taupo fishing licences were sold in the 1989/90 season. This is virtually the same as for the previous year and represents a levelling-off during the past three seasons in the long-term trend of increase in sales.

However, it confirms the status of the Taupo fishery in continuing to provide about one quarter of the country's total recreational trout fishing.

It is encouraging to see significant increases in children's licence sales. This reverses a decline that had been apparent over the previous four years.

Adults season and day licences remained at the same level as in 1988/89.

Undersized Fish

Spring and early summer is the time of year when large numbers of young trout migrate out of the spawning rivers and into the lake. Many of these fish are close to the minimum legal size limit (35cm overall length) and considerable numbers may be caught by anglers trolling in the lake.

These fish are growing at a very fast rate (about 1mm per day) and if they survive being caught and released they may be 50cm long and close to 2kg in weight by the end of summer. This age class will also provide the bulk of the spawners entering the rivers next winter.

It is vital then that any undersized fish are handled and released with great care to enhance their chances of survival after capture. Play the fish for the least possible amount of time to reduce stress and try to keep the fish in the water (inside your landing net), while unhooking it. Avoid damaging the gills and the protective slime coating on the skin. Small hooks (size 8 or less) are less likely to penetrate the eye of the fish and are easier to detach.

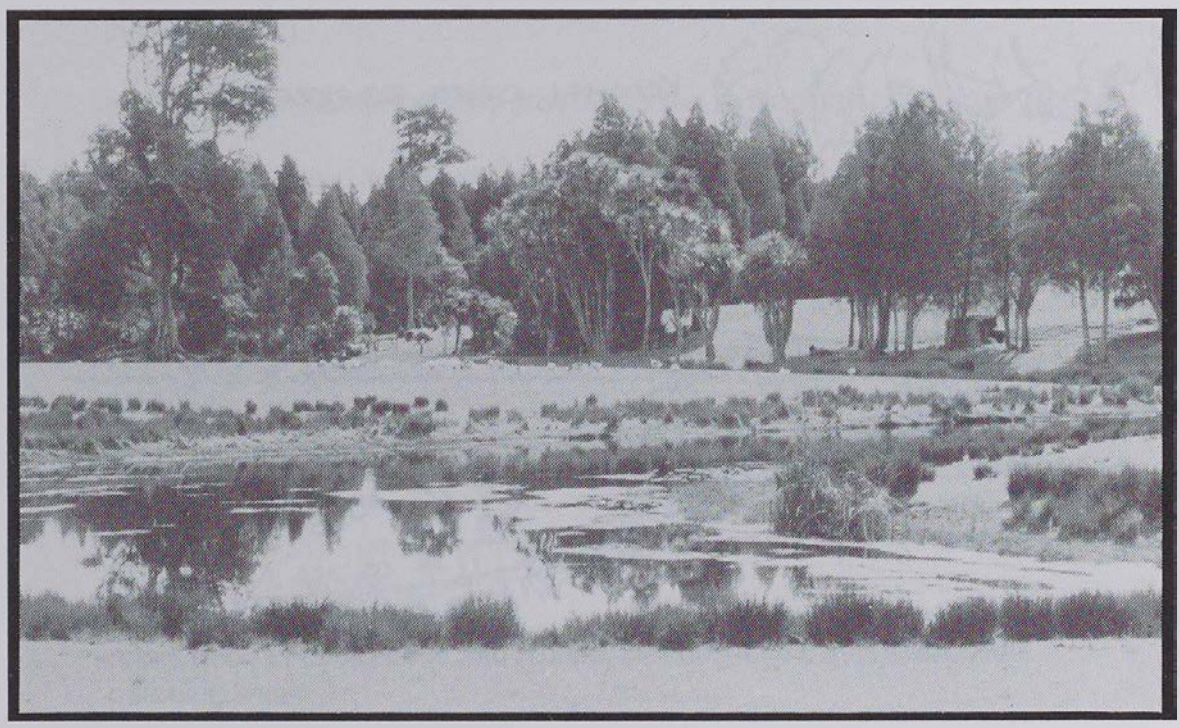
A final tip - if you must remove the fish from the water to unhook it, try holding it upside down (back downwards) in the palm of your hand. This often has a calming effect on the fish and allows easier removal of the hook. ■

6. WETLAND PLANTING DESIGN

The last in a series of articles on creating your own wetland - Herwi Scheltus, landscape Architect, Department of Conservation, Turangi

For a wetland to hold and produce large numbers of game birds it must have either within itself or close by, a sufficient source of high quality food and shelter.

Any new wetland area can be considerably improved as a feeding and nesting area by careful effective management. The main factor that we are able to control in habitat management is the vegetation. The vegetation pattern and therefore the fauna of a new wetland is determined by the species we choose. It is therefore paramount that we choose species carefully, with due regard to their requirements and purpose. Planting should not be indiscriminant but should be planned to establish a varied pattern of vegetation in and around the water to give cover, food and shelter.



A newly created wetland ready to fence and plant

This article will look at the different plant communities associated with wetland and will concentrate on giving a list of species suitable for the terrestial tree and shrub planting. It will also provide guidance on dos and don'ts of planting design.

Apart from being visually attractive, waterside plants and the vegetation actually living in the water are as important to the game bird as the water itself. Vegetation provides food and shelter and indirectly influences the water's biological and chemical structure. The roots of plants help stabilise the substrate so that it is suitable for habitation by small animals and, by structurally fixing it, reduce wave action and turbulence.

Plants which are useful to game birds can be divided into several groups/zones.

a Plants which are totally submerged and which have only their flowers and perhaps a few leaves about the water surface, e.g. Ranunculus sp.

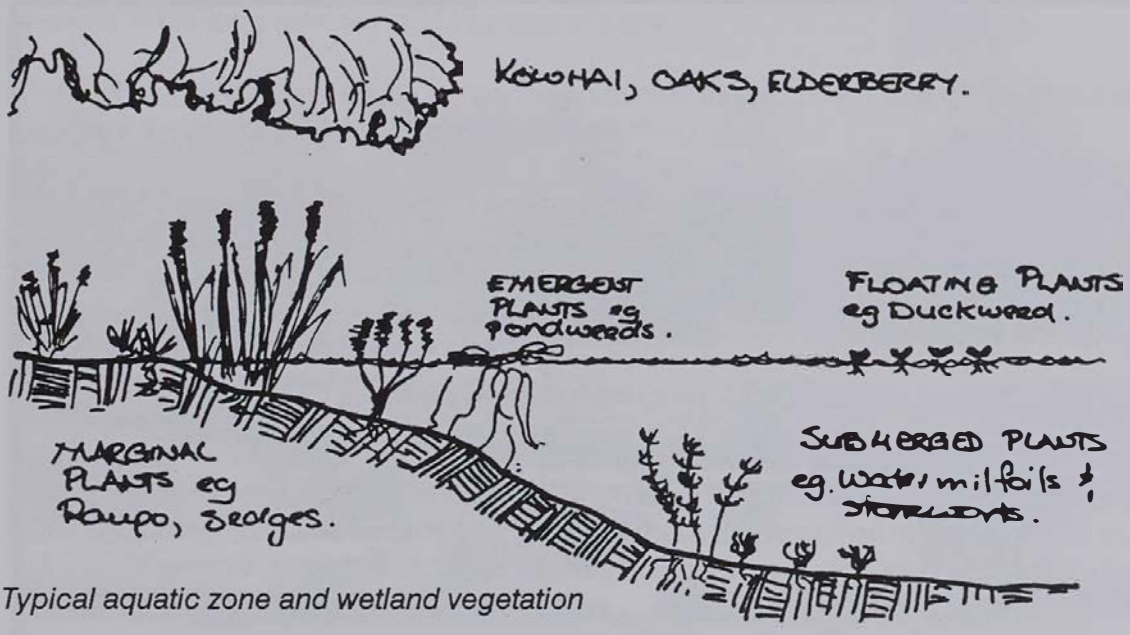
b Free floating plants, e.g. duckweeds.

c Emergent plants which have leaves floating on the surface, e.g. bullrush.

d Emergent (marginal) plants which have erect leaves held above the water surface, e.g. raupo, Carex sp.

e Marsh and bog plants - flax, rushes, buttercup and willowweed.

f Trees and shrubs giving shelter and food, e.g. oaks, cherry, osage orange, elderberry, kowhai.



Typical aquatic zone and wetland vegetation

Plants in groups a-e will establish themselves in new habitats very easily. Planting in most cases is unnecessary because these species generally appear fairly quickly in new wetlands. This is largely due to pieces of plants and seeds being carried on the bodies of incoming game birds. It must also be pointed out that many noxious and problem aquatic plants such as oxygen weeds, water hyacinth, cape pondweed, eel grass, hydrilla and hornwort may be introduced by the same method.

The following guidance is given in relation to terrestial based vegetation in the (f) group.

Circumstances differ with every wetland. If we appreciate wild animals in their natural landscape, there is always the nagging feeling that a pond that looks natural will benefit the ducks and attract them more strongly than one that doesn't. The answer therefore lies with the planner. The improvement of natural looking vegetation is an integral part of the

arrangement of any wetland, however large or small. In planting the essence is to create a varied vegetation. This doesn't mean that it would be best to plant one species over the whole area, nor plant hundreds of species - there needs to be a middle ground so that we may achieve a coherence and unity in planting, as well as some variety.

Some dos and don'ts:

DO - make the entire area stockproof before you begin to plant;

- use plants which provide flowers, fruit, nuts, acorns and foliage for birds;

- provide overhead protection from predators;

- retain the flight path of the game birds before you plant; note the way the birds fly in;

- arrange the plants so that they provide shelter to feeding and nesting grounds;

- leave roosting and loafing areas facing north;

- leave elevated banks free from tall vegetation and provide easy access to open water;

- breeding sites - provide adequate groundcover to conceal nests from predators;

- use native species and those characteristic of the area;

- species diversity - generally the more diverse the vegetation the more species it will support;

- retain dead or dying trees, old fences, etc. because they are excellent perching sites;

- create as many sheltered sites as possible - this increases the number of birds the area will support;

- waterside vegetation is extremely useful for putting bends in straight shorelines. Where straight shorelines are a feature there is likely to be little shelter from the weather or predators. If, on the other hand, some of the prolific plant species are encouraged to grow along the shoreline in clumps pushing out into deeper water, natural bays and spurs are created. A similar effect can be obtained using alders or weeping willow trees overhanging or actually growing in shallow water;

- on completely bare sites, a mixture of perrenial rye grass and white clover is adequate initially to hold bare soils in place.

Back from the water's edge we can use tutu, kowhai, alder or willow which overhang the water to form a natural arch. If emergent aquatic plants are planted one metre out then on the inshore of them will be a strip of open water covered from above by branches as well as being protected from the open water and a great place for young ducklings to feed.

- prepare well in advance for planting. This should include the control of any weeds present. Growth of newly planted trees and shrubs can be greatly increased by reducing competition from weeds especially grasses. A successful herbicide mixture is Roundup, Pulse and Versatil - this will control all grasses, flat weeds and legumes. You need to spray at least two weeks before you plant. As the best time for planting is in autumn we need to spray when the weeds are actively growing. For other herbicides and safety precautions refer to the Agricultural Chemical Manual.

DON'T

- use extremely tall dense planting adjacent to water because of the extensive shading and death of the marginal and floating plants;

- use plants which have heavy leaf fall (e.g. poplars) adjacent to water. Leaves tend to smother bottom dwelling invertebtates, alter pH and also change nutrient status of the water;

- use pampas or toe toe because they provide excellent habitat for predators such as rats;

- use crack willows or pussy willows. These tend to excessively invade the marginal strips and may end up choking downstream waterways.

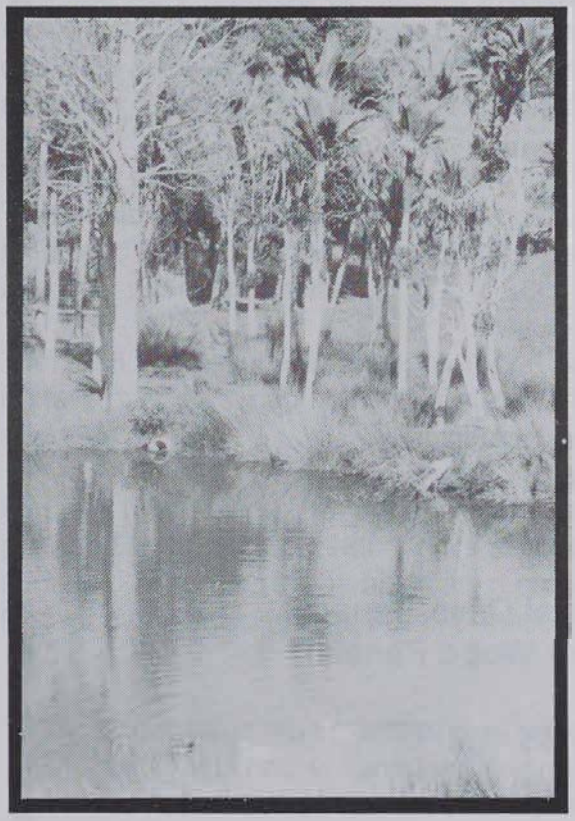
The following table lists exotic trees and shrubs which can provide cover, shelter and food. These may be available from your Department of Conservation Nursery at Taupo. For a comprehensive list of native plants consult the publication "NZ Plants in Design WETLANDS", available from Department of Conservation offices.

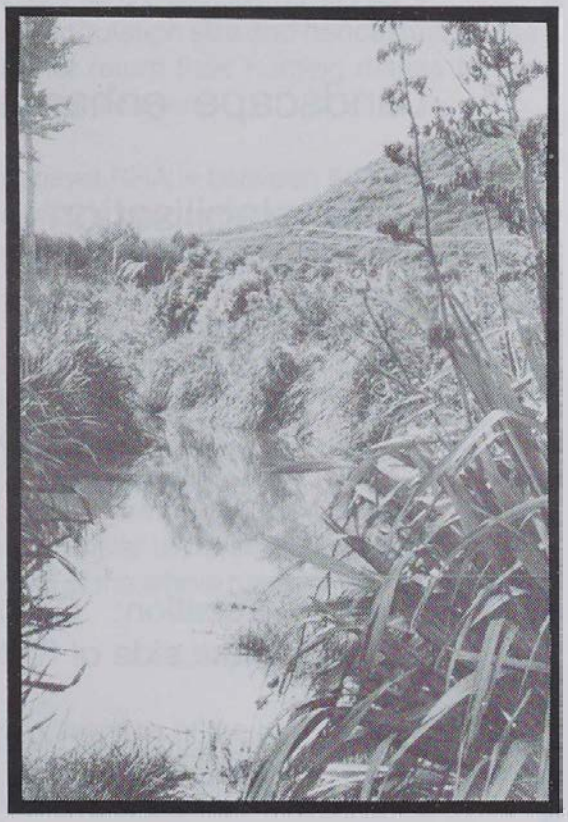
SHRUBS AND TREES FOR SHELTER, COVER AND FOOD

				USES	
Name	Description	Soil Conditions	Shade Conditions for adequate growth	Possible food value	Cover/Shelter provided
Spirea	Low shrub: suckering deciduous	Good in wet, acid habitat for stabilising poor soil	Shade tolerant	Good	
Box	Shrub or small tree: evergreen	Most soils, thrives on limestone	Partial shade tolerant		Good
Dogwood	Shrub: deciduous	Most soils, including limetones	Partial shade tolerant	Berries	With coppicing good cover
Hazel	Shrub/tree: deciduous	Wide tolerance	Shade tolerant		With coppicing good cover
Escallonia	Bush/shrub: evergreen	Salt tolerant-only good inland in southern conditions			Good
Mahonias	Low shrub: evergreen	Wide tolerance	Shade tolerant		Common game cover
Rhododendron	Large shrub (variable): evergreen	Lime-free acid soils	Partial shade		Game cover
Snowberry	Suckering thicket shrub: deciduous	Wide tolerance - woodland fringes	Shade tolerant	Berries	Good game cover
Laurel	Shrub (up to 20ft.): evergreen	Hardy and tolerant of dry soils	Partial shade	Berries	Good game cover
Cotoneasters	Variable shrub or creeping woody plants: evergreen or deciduous	Wide tolerance	Partial shade	Berries	Fair
Rowan	Tree (up to 40 ft): deciduous	Hardy - hills, good drainage, open	Prefer sun	Berries	Poor
Hawthorn	Variable tree: deciduous	Hardy and reliable, well-drained soil	Partial shade tolerant	Berries	Good
Pines	Tall conifer	Hardy - prefer acidic conditions	Partial shade tolerant		Windbreak only Scots Pine Lodgepole Pine Austrian Pine Sitka Spruce Noble Fir

				USES	
Name	Description	Soil Conditions	Shade Conditions for adequate growth	Possible food value	Cover/Shelter provided
Larches	Tall conifer: deciduous	Hardy and fast-growing, thriving on fertile soils with good sunlight	Partial shade tolerant		Windbreak (except near sea)
Spruces	Tall conifer: evergreen	Colder regions - mountains and hillsides - not dry acid soil	Shade tolerant		Windbreak Sitka spruce (NOT Norway spruce)
Cypresses	Tall or hedge conifers: evergreen	Wide tolerance	Shade tolerant		
Leyland Cypresses	Tall or hedge conifers: evergreen	Wide tolerance	Partial		Screening and windbreaks - excellent
Junipers	Low straggling shrub: evergreen	Succeeds on almost any soil	Sun	Berries popular with birds	Good ground cover
Alders	Tree (20-30 ft): deciduous	Waterside and damp soils	Partial	Seeds popular with w/fowl	Good cover and shelter
Birches	Tree (20-50 ft): deciduous	Hardy on all soils and wind-resistant - B.pendula: dry poor soil. B.puberceus: wet heaths and peats	Casts only light shade thus allowing planting of ground	Seeds popular with w/fowl	Good cover
Hornbeam	Tree (up to 50 ft): deciduous	Wide tolerance	Shade		Can be used as hedging shrub
Beeches	Tall tree: deciduous	Hardy on limestone - needs shelter when young	Shade tolerant, casts heavy shade		Good tree for shelter belts screens and hedging
Ash	Medium - tall tree: deciduous	Fertile soils - tolerant of wind and lime rich soils but not light sandy soils	Partial shade, casts light shade		Shelter on exposed limestone uplands
Oaks	Medium to tall tree: deciduous	Tolerant of most soils	Partial shade tolerant	Acorns popular with mallard	
Elm	Tall shapely tree	Fertile soils	Good		Windbreak
Snowy Mespilus	Shrub/small tree (5-8 ft): deciduous	Wide tolerance	Partial shade	Berries	Fair

Holm Oak	Tree (up to 50 ft): evergreen	All, including chalk. Tolerates salt wind	Partial shade	Acorns	Good
Blackthorn	Shrub: deciduous	Wide tolerance	Shade	Berries	Shelter
Geulder Rose	Shrub/bush: deciduous	Wide tolerance (incl. lime)	Light shade only	Berries	
Holly	Shrub/small tree: evergreen	Wide tolerance (incl. lime)	Shade	Berries	Shelter
Wild Cherry	Medium size tree: deciduous	Wide tolerance	Partial shade	For small birds	
Sweet Chestnut	Tall tree: deciduous	Wide tolerance	Partial shade	Seeds	Shelter if coppiced
Elder	Small tree/bush: deciduous	Wide tolerance (incl. lime)	Shade	Berries	
Horse Chestnut	Tree: deciduous	Wide tolerance	Sun		
Lime	Tree: deciduous	Wide tolerance	Partial shade		Esp. when lopped
Knotweed	Bush	Wide tolerance	Partial shade		
Taga	Tree: 7m	Wide tolerance	Full sun	Foliage/ seeds	Shelter





Successful vegetation establishment using native plants

7. KAIMANAWA RHA JAW ANALYSIS PROGRAMME

Since gazettal of the Kaimanawa Recreational Hunting Area (RHA) in September 1982, hunters have provided an increasing number of deer jaw bones from its sika deer and red deer herds each year. To date some 1000 jaws have been collected and a usable sample of over 800 records has been obtained. This and other information obtained from hunting diaries and vegetation monitoring, is helping managers in their understanding of the deer population in the area, and the intense hunting pressure it receives. In addition, it helps us understand, and hence manage, the impacts of deer populations on their forest environment, in a cost effective manner.

One of the major uses of jaw analysis data from a large and (hopefully) representative sample is in determining age structures of the harvest from year to year and between different seasons. This information can be used to assess vulnerability of deer of different ages and sexes at different times of the year, and to determine the impacts of hunting on the herd. Over a period of time, an ageing population is an indication of over-harvest. Similarly, if the population has more younger animals, annual cropping must be less than the annual increase in population suggesting population expansion. A stable age structure indicates that hunting pressure is resulting in an annual harvest approximately equal to the annual fawn crop.

The Kaimanawa RHA data from 1985-1989 suggests that the deer population is relatively stable. The annual harvest therefore must be similar to the annual fawn crop.

If all kills were reported by hunters then the size of this fawn crop could be accurately assessed. From the fawn crop, a close estimate of population size and hence deer density could be achieved. Many hunters however, do not return their hunting diaries for one reason or another, allowing only 'best estimates' by managers.

The 'best estimate' of annual harvest in the Kaimanawa RHA is between 600-700 animals. This would put the population, based on a figure of 32% productivity (57% of two year old hinds and 93% of hinds three years and older breeding), at between 1800-2200 animals or one deer per 12-15 hectares.

The 1988 vegetation assessment report for the Kaimanawa RHA suggests this deer density may be acceptable in Kaimanawa beech forests in terms of the 'present' forest structure.

Figure 1 (overleaf) shows the age structure of the sika sample (77 stags and 67 hinds) provided by hunters in 1989. This age structure is similar to those of the 1987 and 1988 samples. Assuming the samples are representative of the whole harvest, we can draw the following conclusions from this information:

1 That more stags are harvested than hinds (the sex ratios of the harvest sample during the last 4 years has remained relatively stable at around 1.2 stags:1.0 hind, i.e. for every five hinds harvested there are six stags harvested). There are three possible explanations for this:

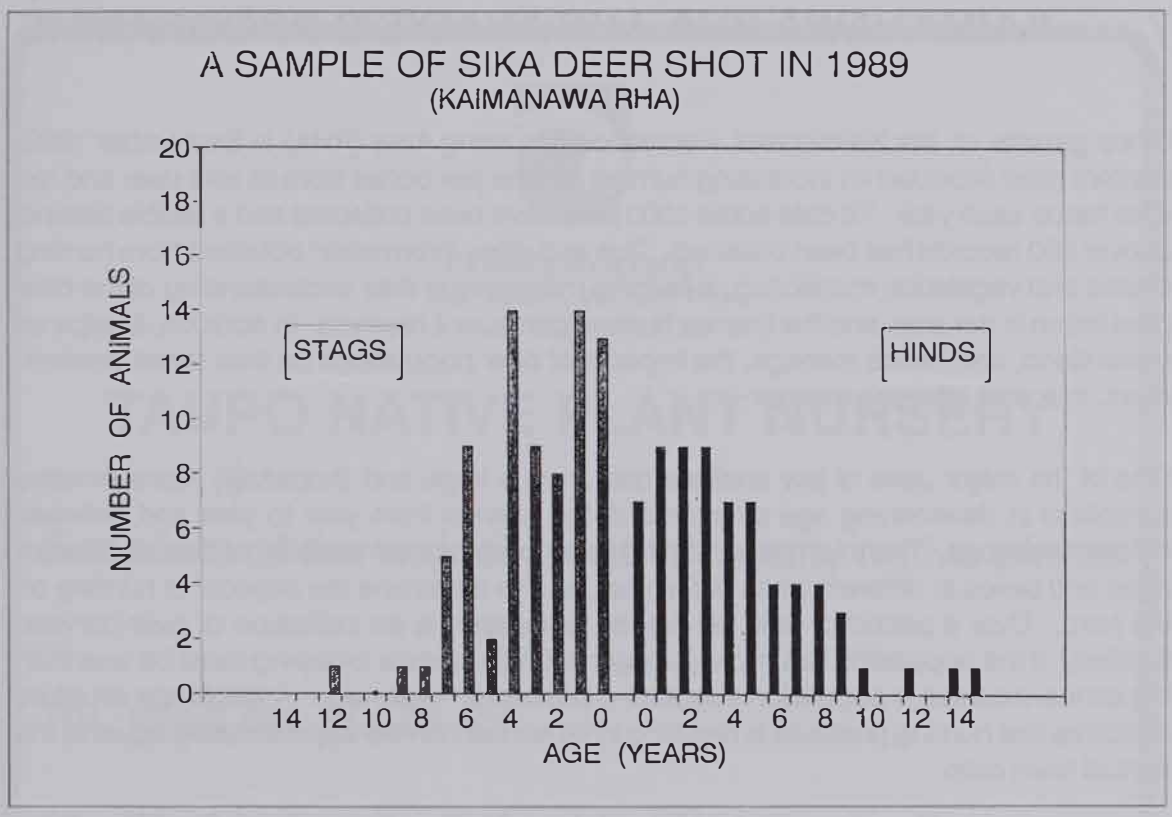


Figure 1

a More stag fawns are born than hind fawns. (Much of the literature on the subject however, suggests a 1:1 sex ratio at birth);

b hunters target stags more than hinds. (There is a tendency for some hunters not to shoot hinds);

c stags, particularly young stags, are more vulnerable to harvest. (See figures 2 and 3 and following discussion).

2 Hinds are longer lived than stags (the oldest hind in the total sample in fact is 248 months (20+ years!) while the oldest stag is 186 months (15 years).

3 There is a predominance of young animals, particularly stags, in the sample. Few stags survive into trophy age classes (6-8 years). Although stags from this herd regularly produce 8 point heads in their third year of antler production, most never reach their full potential.

Figures 2 and 3 show how the harvest sample changes in structure at different times of the year. During April, young adult stags (2-5 years) make up the majority (53%) of the harvest sample. Young sub-adult or juvenile stags (0-2 years) are a much smaller component (12%) of this sample but are a significant part (35%) of the December sample. Conversely, while adult stags are in velvet, they are harvested to a much lesser extent. This could be related to hunter aversion to shooting velveties, or more likely, that velveties are hard to locate in December.

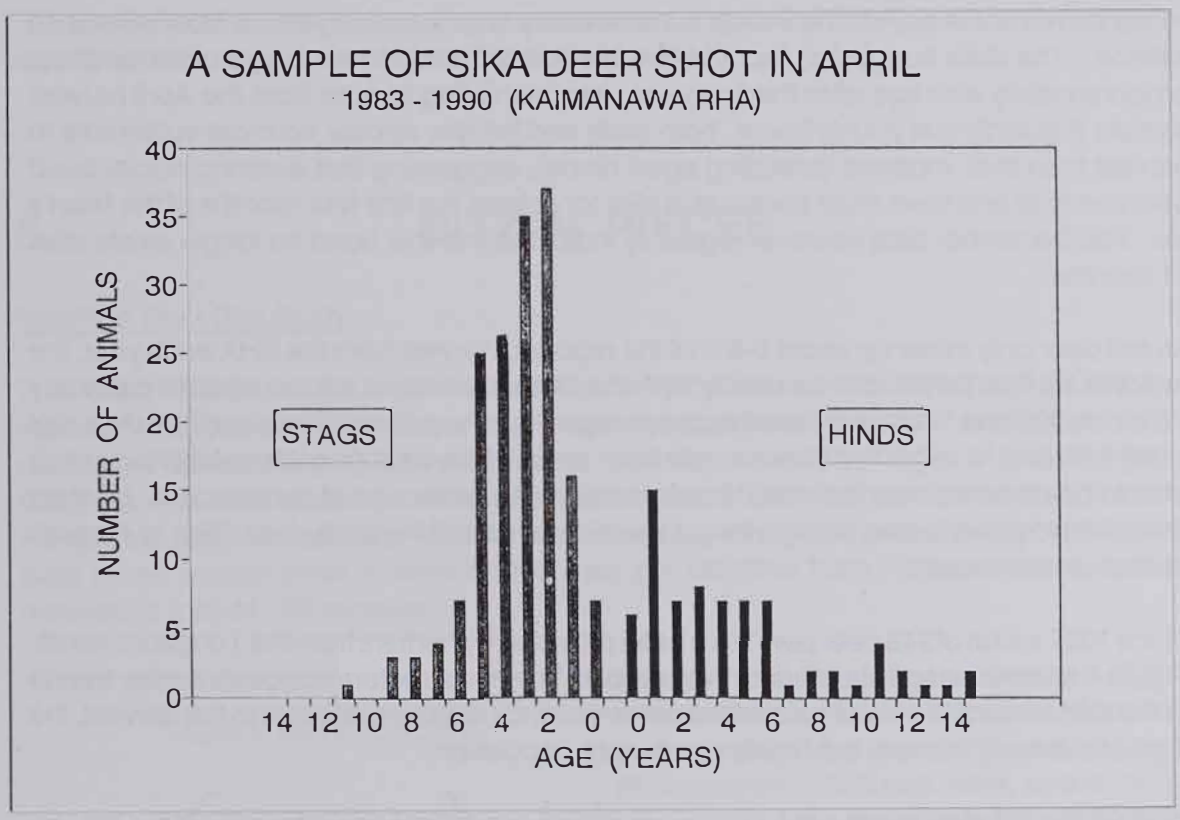
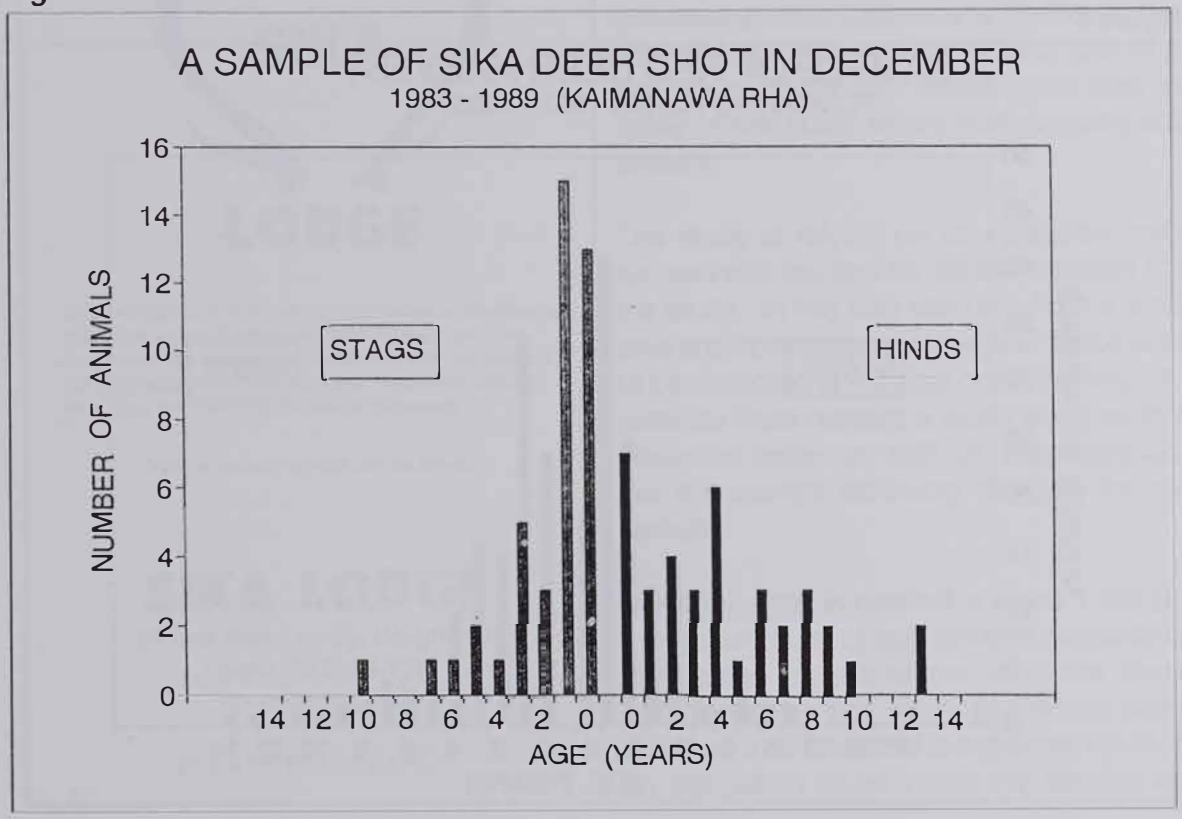


Figure 2

Figure 3



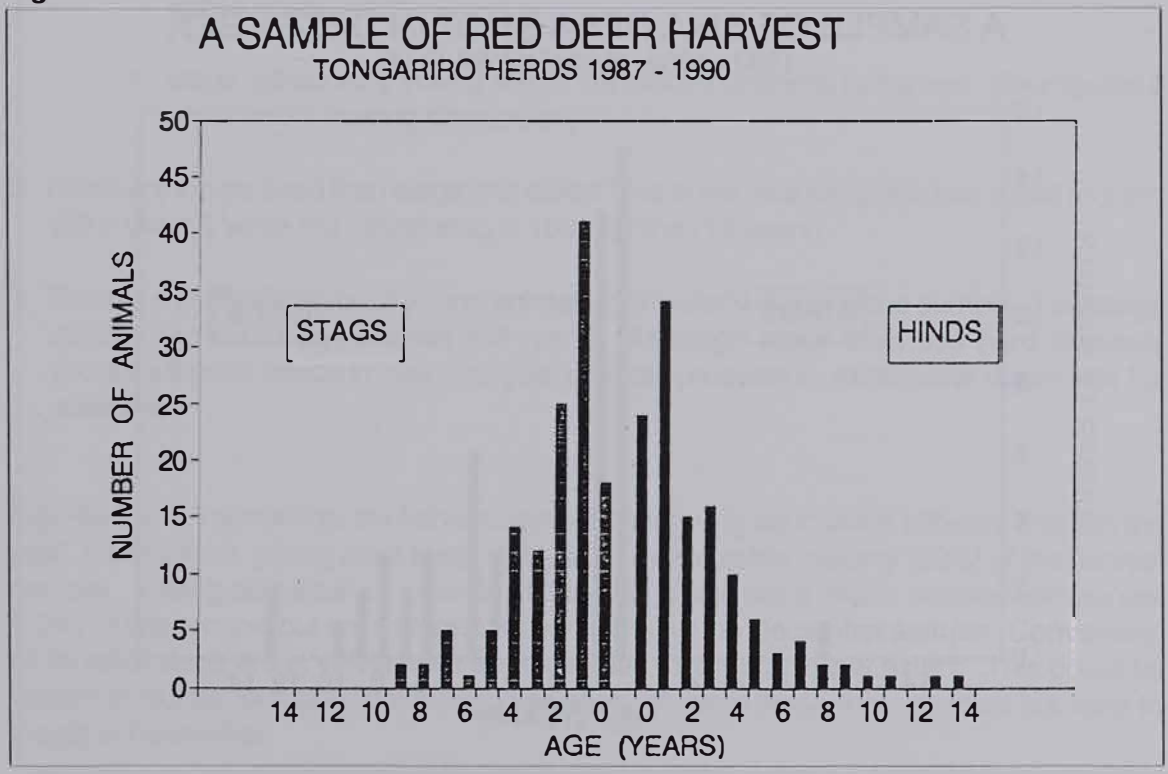
Hinds do not show any strong trends in vulnerability after their first year, or from season to season. The data suggest in fact that the number of hinds in each age class declines proportionately with age after the first year. It is interesting to note from the April harvest sample (figure 2) that young fawns, both male and female, appear no more vulnerable to harvest than their mothers (breeding aged hinds), suggesting that a strong social bond between hind and fawn must continue in sika for at least the first four months of the fawn's life. The December data however (figure 3) indicates that this bond no longer exists after 11 months!

As red deer only make up about 5-8% of the reported harvest from the RHA each year, the red deer sample (which comes mainly from the Cascade area) is still too small to make any valid conclusions. With increased publicity regarding the present Sika deer/Red deer diet study however, a larger red deer sample from areas to the west (e.g.Waipakihi/Rangitikei) should be obtained over the next 18 months allowing better use of current data. Hunters are asked to provide jaws along with gut samples as part of the study (see "Bitz 'n' Pieces" section of this issue).

Since 1987 a total of 248 deer jaws have been provided by hunters from the Tongariro herds. Figure 4 shows the age structure of this sample. The age structure suggests similar trends to the Kaimanawa RHA sika herd with a predominance of young animals in the harvest, the sign of a heavily hunted, but highly productive population.

Without the support of you, the hunter, we could not collect this information for the jaw programme. We gratefully acknowledge your continuing support, despite often lengthy delays in getting the data relating to your specific jaws back to you. We hope that your support will continue into the diet study currently being undertaken by the Ministry of Forestry.

Figure 4



This and other research is improving our understanding of deer ecology and will ultimately lead to better management of your hunting resources. ■

8. BITZ 'N' PIECES

Sika/Red Deer Diet Study

The Forest Research Institute, Christchurch, in conjunction with the Department of Conservation's Turangi and Napier offices, is undertaking a comparative study of sika and red deer diets in the Kaimanawa and Kaweka Ranges. In order to describe the diet of sika on a seasonal basis, at least 50 sika gut samples per season from both the Kaimanawa and Kaweka Ranges are required, a total of 400 samples. For a broad comparison of sika and red deer diets on an annual basis at least 50 red deer gut samples from the two areas are also required, a total of 100 samples.

Interest in this field follows a previous study on seasonal distribution patterns and habitat preferences of sika in part of the Kaimanawa RHA between 1986 and 1989, and a long-term study of the changes in the proportion of sika and red deer in the Kaweka Range between 1958 and 1988. It is thought that information about diet will help to answer some of the questions arising from these previous studies, such as why do sika favour particular habitats and not others, and why are sika continuing to displace red deer in many of the areas where both species are present.

The study is relying on co-operation from recreational hunters to obtain samples for the study. In this way samples from a wide area and from all times of the year will be able to be collected at minimal cost. Without assistance from hunters a study such as this would be extremely difficult, especially under the current shrinking budgets for research!

Basically, what is needed is about 1 litre (2-3 large handfuls) of gut contents, some brief information on the animal, and the lower right jawbone. The whole procedure takes less than 5 minutes and is explained in full on an instruction sheet inside the sample kit.

Sample kits are available at huts, jaw boxes, from the aircraft ferry companies advertising in this issue, the 'Fly and Gun Shop' Taupo, or the Turangi and Napier DOC offices.

The collection phase of the project is planned for 1990/92. Laboratory analyses will proceed as samples are collected and the results will be written up in late 1992/early 1993. However, to keep recreational hunters up to date with progress in the study, brief articles in publications such as "Target Taupo" and "New Zealand Wildlife" are anticipated.

This project is viewed as another step in increasing communication between the Forest Research Institute, the Department of Conservation and recreational hunters.

Good luck with your hunting and we look forward to receiving gut samples from your kills!

If you have any queries or require more information, please contact:

Wayne Fraser	OR	Cam Speedy
Forest Research Institute		Department of Conservation
PO Box 31 011		Private Bag
CHRISTCHURCH		TURANGI

Aerial Wild Animal Recovery

Hunters are reminded that aerial wild animal recovery operations are permitted on the following areas of DOC estate within the Tongariro/Taupo Conservancy:

1 Rangitaiki Forest Conservation Area (formerly SF-70)
2 Taupo Lakeshore Reserves

Operations also occur on the following areas of privately owned land:

1 Rotoaira Forest - southwest of Turangi

2 Needles Block - lower eastern bank of the Waipakihi River catchment

3 Parts of the central Kaimanawa Mountains - outside the forest park

4 Parts of the Ahimanawa Ranges - between the Mohaka River and the Napier/Taupo highway.

Aerial wild animal recovery is not permitted within Tongariro National Park, Erua Forest, Tongariro Forest, Pukepoto Forest or Kaimanawa Forest Park.

If you see a helicopter you suspect is hunting illegally this spring, report it immediately. If the remoteness of the area does not allow immediate reporting, details of time, date, location, machine description, identification letters and registration, should be passed on to the Turangi office of the Department of Conservation as soon as possible. As with all information regarding illegal activity, it is only of use if it is passed on quickly.

Have a Thought.....

Having got permission off Arthur at Air Charter in Taupo to cross their land, I decided on a detour on my walk from Boyd to Cascade Hut. Leaving Waiatupuritia Saddle I ventured out to the southwest and then down the long ridge that takes you straight to Cascade.

As I neared physical collapse approaching the high point, two sika hinds sprang to their feet and ran up the ridge pausing 60m away to laugh at the sweating DOC officer below them. Unfortunately for them I was armed and don't like being laughed at so a quick shot with the .303 had one of them laughing no more.

Great stuff; off with the back steaks and hind legs and onwards. I saw three more deer in quick succession. What a day, fine weather, heaps of deer and beautiful surroundings.

Just as I started down the ridge to the hut I noticed a rather uniform looking log hidden under a stump. Closer inspection revealed it to be a bloody beer bottle and a rusty old tin. The perfect day ruined again.

Every time I think I'm in some seldom visited place or I've shot a deer and am quietly walking out happy with the success, I stumble over some wrapper, cigarette paper, tin or find a dazzle marked track. Why can't people simply put the wrapper/can/whatever back in the pack or pocket?! They had to take off their pack or open their pocket to get it out, why is it so hard to put it back?

Back on the Cascade Ridge I put the bottle and tin in my pack and carried on, muttering to myself about inconsiderate litter-mongers.

Have a thought for those that follow. Cellophane wrappers won't rot away and hiding them under a log is no alternative. Most plastics and plastic polymers take between 80-430 years to rot, often longer. Glass, tins, etc., also remain for decades. Let's keep having great days in the hills and stop spoiling the bush for the next guy who visits some remote hill top or valley.

Bruce Janes, Conservation Officer, Turangi

Tongariro Forest News

Goat Control - This year the Department is putting considerable resources into goat culling operations with the objective of reducing the overall population and in particular knocking back the herds which are building up around the perimeter of the forest. These animals on the periphery are thought to be breeding up from farm escapees.

The Taumarunui Rod and Rifle Club have contributed considerable time and energy to goat control with an organised shoot on 1 and 2 September, bagging approximately 150 goats. Members are continuing goat culling in areas with reasonable foot access where herds are known to exist. The Department is funding aerial goat culling operations using a Hughes 300 helicopter. Aerial operations are concentrating on the areas with difficult foot access. Departmental employees will also be carrying out ground based culling during the spring and early summer.

Roads/Tracks - Limited maintenance is planned for Pukehinau Road and the first few kilometres of Dominion Road during November. The Taumarunui Rod and Rifle club members have recently undertaken clearing work on tracks near the Owhango end of the forest, and more work is planned. Users of 4WD vehicles in this area are asked to take care. Many of the tracks are only kept open as a result of plenty of hard work by local people. If you damage track surfaces, bridges, etc., please fix them up behind you.

Facilities - Camp sites with toilet facilities are located:- just across the Whakapapa River bridge on Dominion Road and at Pukehinau Road, 11km from SH47; - near Okupata Caves. Both these camps are accessible by 2WD.

Good hunting!

Ian Goodison, Whakapapa

Hunting Permit Requests

Our Turangi Office reception staff have asked that hunters try to avoid phoning in their hunting permit requests. It would make their job easier if you could plan your trips well enough in advance to allow a week or so to write in for a permit. The majority of hunters should be able to renew their permit when they send in their diaries, avoiding a last minute rush. However, if you do need a permit in a hurry, try our fax (074) 67086. With some 50 staff working at the Turangi Office, the phones are busy enough without hunting permit requests! Your co-operation will be appreciated. ■

9. DISCRETIONARY POWER

A Compliance and Enforcement comment from Senior Compliance Officer Sid Puia

In the last issue of Target Taupo I commented on the differences between compliance and enforcement, and who, in general terms is responsible for each component.

The Concise Oxford Dictionary describes "discretion" as "the liberty of deciding as one thinks fit". This places a heavy emphasis on judgement, prudence and choice.

Power is somewhat different, and complex to say the least.

Power is a loaded word. For many people it has negative connotations, and is linked with thoughts of destructive force or authority over others. But there is nothing inherently bad or good about power. .The key issue will always be how it is used.

When members of the public require a licence to fish, or a permit to light a fire, etc., they are accepting that their behaviour will be influenced by the conditions written on the licence or permit. This is "knowing knowledge". Any offence that occurs and is detected by an officer

can be related back to the permit or licence, because the officer assumes that the person involved has this "knowing knowledge".

Measurable values of compliance or non-compliance can be related to the number of times an offence has occurred over a specific period of time. Discretionary power is a very necessary provision when considering measurable compliance and enforcement outputs.

Discretionary acts of officers, as they relate to actual compliance and enforcement of the law, must be controlled in order to protect constitutional rights and ensure fair uniform application of the statutes.

Discretion and its control are extremely complex subjects. Officers are constantly confronted with situations which require them to use discretion in making decisions on whether or not to invoke the law. The power to invoke legal processes by issuing offence notifications carries with it the accompanying discretionary power to be lenient.

The power to be lenient can be an effective weapon to influence behaviour, but it can also result in unequal application of the law.

Control of discretion is not easy. But it is essential if freedom is to be preserved and conservation laws are to be applied in a uniform and fair way.

Te Ao hurihuri
No reira
Kia Ora tatou katoa ■

10. KIDS' POND EVER POPULAR

The children's fish-out pond at the Tongariro National Trout Centre is attracting increasing numbers of youngsters to the special fishing days, held once each month from May to September.

The numbers on three of the five days held this year topped previous best totals for the past eight years, while two were a little lower than previous best, but higher than average. The total for the year of 1780 is 10% higher than the 1989 total, which in turn was up 23% on the next highest figure.

Visitors from throughout New Zealand come to Turangi for their winter sports and family groups take a day out from their skiing holidays to let younger members try their hand at angling for a trout. This year two American visitors were among the many who caught their first rainbow trout in the fish-out pond.

The fishing days are organised and run by members of the Tongariro and Lake Taupo Anglers Club (TALTAC) led for the past eight years by Pat and Doreen Nicholas. TALTAC provide the angling equipment while Pat and his team of volunteers provide tuition and poolside instruction and assistance. Doreen and her team of volunteers sell licences,

manage queues and issue certificates. A few DOC staff also assist with all facets, helping to spell aching backs and sore knees, and to keep the queues moving.

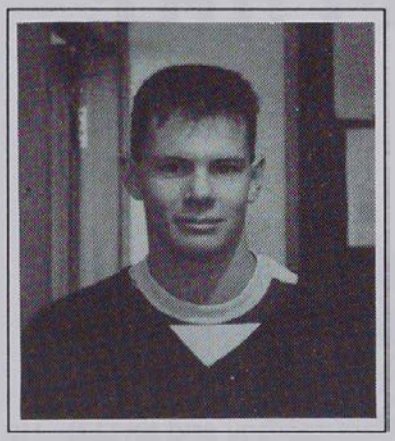
The trout are reared for two years at the Centre and although they are smaller (average 450g) than wild trout caught elsewhere in the district, they provide a lively tussle once hooked as the excitement of their captors clearly testifies. There are a few larger trout too, caught in the Tongariro River nearby and slipped in by a kind hearted angler as an extra incentive. When one of these is caught the general buzz around the pond rises a couple of octaves.

Each fisher catches a trout to take home and is given a certificate recording its length and weight. After the last kids' day the remaining trout are shipped out - sold to Regional Fish and Game Councils to stock ponds from New Plymouth to Wellington for children's fishing promotions. A truck load were even sent to Blenheim this year for a small hydro lake nearby. The joy they bring to younger folk and the boost they give to the sport puts their value away beyond the extra cost of rearing them and helps to keep trout hatcheries viable in these straitened times.

Fishing days for 1991 at the Tongariro National Trout Centre are 12 May, 16 June, 14 July, 25 August and 22 September. ■

A happy young angler with one of the large fish from the kids' fish-out pond

11. MANAGER PROFILE



ROB PITKETHLEY
Fisheries Consultant

Rob Pitkethley is one of the latest additions to the Department of Conservation fisheries team, having been employed on contract to co-ordinate the trout harvest survey underway this season. He is also responsible for analysing the data from this and other surveys, and to generally advise in a scientific consultant role.

Rob has come to DOC from the University of Waikato, having completed a first class Masters Degree majoring in fisheries biology. As part of this qualification, Rob spent 13 months on an intensive investigation into juvenile trout populations in the Waihukahuka (Hatchery) and Mangamawhitiwhiti streams which flow into the Tongariro River.

Rob spent his pre-university years in Gisborne and has continued to stay active in windsurfing and keeler boat racing, having sailed in many coastal races and offshore to Noumea. Being based so far from the coast hasn't phased Rob at all, as he has quickly turned his hand to fly fishing and is also learning to hunt deer with the assistance of the many keen hunters who masquerade as DOC staff (or vice versa as he's still waiting to see one).

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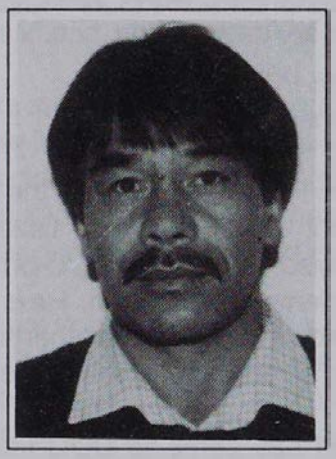
BRUCE JANES
Conservation Officer, Turangi

Bruce Janes is based in Turangi and is part of the team responsible for the 52,000ha area of the Kaimanawa Forest Park remaining outside of the RHA, and for the Lake Rotopounamu area of Tongariro National Park.

Bruce began work with the NZ Forest Service in 1979 as a labourer and worked through the four year N.Z.C.F. course before taking up a position at Kaweka Forest Park. From there he went to Lincoln College and completed a Diploma in Parks and Recreation Management before returning to the Kaimanawas in 1986/87 as a general wage worker.

Bruce's interests are hunting, body building, kayaking, alpine climbing and scuba diving. He is actively involved with the Mountain Safety Council as a mountaincraft instructor, land and face rescue teams and the local dive club.

SID PUIA
Senior Compliance Officer



Sid Puia is a graduate of Auckland University with a BA in Anthropology and an LLB. He attended Singapore Technical Institute gaining a Diploma in Management and Leadership. He also had a partial qualification for a Diploma in Public Relations and Foreign Studies.

Sid has undertaken extensive service overseas with the Armed Forces, with active service in Malaya, Borneo, South Vietnam and as a Monitoring Force member in Rhodesia, now Zimbabwe. He spent 11 years as a member of the NZ Special Air Service. Sid joined the Public Service in 1984 with the NZ Wildlife Service as an Investigations Officer. He has been with the Department of Conservation since 1987 as a member of the Species Protection Unit, leading the unit from 1988 till its formal disestablishment on 20 April 1990.

Sid lists his sporting and hobby interests as parachuting, hunting, fishing, squash, tennis, running, rugby, basketball, boxing, Maori and classical music with a slight bias towards Guns 'n Roses. He has a coaching ticket for squash, tennis, rugby and basketball.

Sid has taken up the appointment of Senior Compliance Officer with a view to promoting and enhancing a new approach to managing, advising and undertaking a new philosophy to law compliance and enforcement within the Conservancy. He is a New Zealand Maori of full blood and belongs to the Te Aitanga-A-Mahaki tribe of Turanganui-A-Kiwa. His affiliations are Rongowhakaata, Ngai Tamanuhiri, Ngati-Kahunguhungu, Te Whanau-A-Apanui, Tuhoe and Te Arawa.

Enga iwi, enga reo, enga mana Tena koutou, tena koutou, tena koutou katoa Me a tatou mate tuatini o te wa Ko te reo tenei o Te Aitanga A Mahaki O nga waka Horouta, Takitimu, Nukutere.

Apiti hona tatai hono Te hunga mate ki te hunga mate Apiti hono tatai hono, te hunga ora ki te hunga ora

Na reira Kia ora na tatou katoa

■

Editor's Comment:This profile appeared in the last issue of "Target " but was the victim of a significant type-setting error and so is included again in its complete form.

12. "TARGET TAUPO" READER QUESTIONNAIRE

As a reader of "Target Taupo" you are invited to formally have an input into the type of information you would like to read about in the newsletter. By answering the few questions below you will also give us a clearer picture of how we can best circulate the newsletter to ensure all who are, or might be interested, can get hold of it. Your contributions and comments are appreciated.

1 How did you get to read "Target Taupo"?

a Subscriber
b Through your club
c Purchased from sports shop
d Other (please specify) .....

2 Is the newsletter useful to you as a hunter/angler or does it have just interest value?

.....

3 What other types of information would you like to see included in the newsletter?

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4 General comments:

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A complimentary copy of each issue will be sent to your club or organisation and further copies are available at a cost of $2.25 each (GST inclusive.) Individuals are also welcome to purchase copies. Please complete the form below and return before 28.02.91.

Copies of earlier issues are available on request.

NAME OF PERSON/CLUB/ORGANISATION_____

_____

POSTAL ADDRESS_____

_____

_____

PHONE NUMBER_____

Please send _____ copies of issue number _____ at cost of $2.25 per copy. Enclosed is the sum of $_____ (cheque/money order)

OR

1 year's subscription (3 issues) beginning issue number _____
Enclosed is $6.75 (cheque/money order).

Copies additional to the complimentary will not be forwarded unless payment is received.

POST TO:

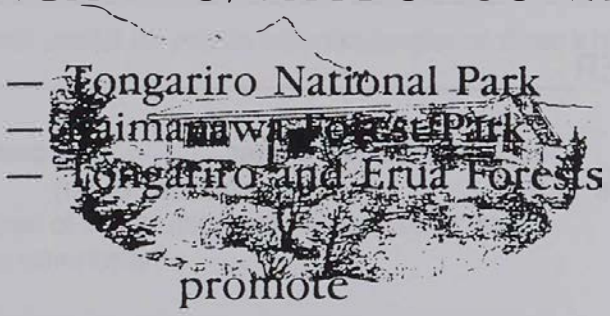
Department of Conservation
Private Bag
TURANGI

Attn: Shirley Weir

PLEASE DON'T RUBBISH YOUR PARK

CONSERVATION

THE TONGARIRO/TAUPO CONSERVANCY



— Tongariro National Park
— Kaimanawa Forest Park
— Tongariro and Erua Forests

promote

PACK IT IN — PACK IT OUT

YOU ARE REQUESTED TO CARRY OUT YOUR RUBBISH IN THE BAGS PROVIDED AT THE HUTS

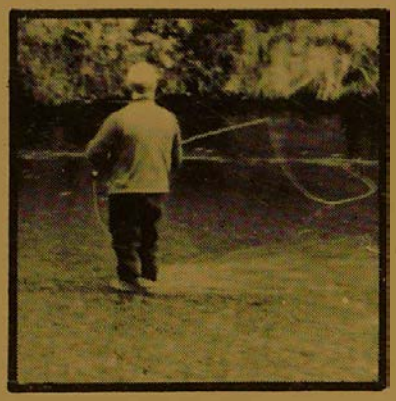
WE RECOMMEND YOU CRUSH YOUR CANS TO DECREASE THE SIZE OF YOUR BAG

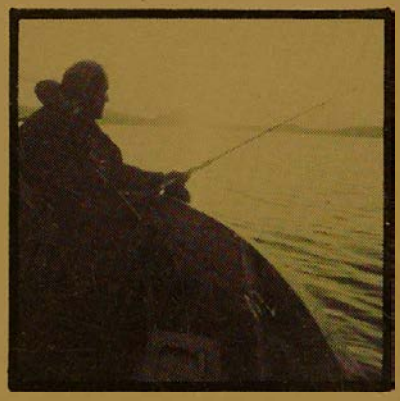
PAPER CAN BE BURNT IN THE FIREPLACE

THE DEPT OF CONSERVATION ADVOCATES CARRYING OUT YOUR OWN RUBBISH TO HELP PRESERVE THE ENVIRONMENT

WE ENCOURAGE VISITORS TO CARRY THEIR OWN COOKING STOVES TO PREVENT DAMAGE TO VEGETATION AND REDUCE FIREWOOD CONSUMPTION

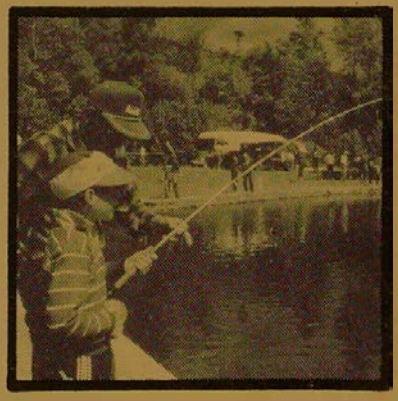
TAUPO





CONSERVATION
TE PAPA ATAWHAI

WORKING
FOR
YOUR
SPORT



A Sporting Paradise