

NEW ZEALAND FRESHWATER FISHERIES MISCELLANEOUS REPORT NO.86

MOHAKA RIVER DRIFT DIVING

Report on the results
of the 24th and 25th January 1991 survey.

by

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Servicing freshwater fisheries and aquaculture

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MOHAKA RIVER DRIFT DIVING

BACKGROUND

Drift dive surveys have been conducted by MAF Fisheries in the Mohaka river on a number of occasions and in various locations since 1985, but these surveys have all been confined to the area of river upstream of the SH 5 bridge. A summary of these results appears in Table 1. Highest densities of trout occur in the headwater area of the Mohaka and appear to decrease downstream to SH 5. Because of this I was of the opinion that this trend probably continued downstream of SH 5. Whatever the case, the density of trout in the lower area of the river became of interest to a number of organisations involved with the Draft National Water Conservation Order on this river. The aim of this survey was to count the numbers of trout present in the Mohaka river from downstream of the SH 5 bridge to the Te Hoe river confluence.

METHOD

The river was visited on the 24th and 25th of January 1991.

Trout were counted by a team of divers swimming with the current and spread across the width of the river. For a full description of the method refer to: Trout Abundance in New Zealand Rivers: an assessment by drift diving, Teirney and Jowett 1990, NZ Freshwater Fisheries Report No.118.

Six of our most experienced drift divers were used for this survey: Rowan Strickland,

Ian Jowett, Jody Richardson, Greg Kelly, Charles Mitchell, and Brendan Hicks.

The sections of the Mohaka river chosen for diving were:

1. From the Glenfalls Reserve to the Waipunga confluence.
2. The Waipunga confluence to the Mangakara stream.
3. A 2km section immediately upstream of the Te Hoe confluence.

These sections are representative of the reach from SH 5 to the Te Hoe and provide good vehicle access to the start and finish points.

RESULTS

In most years the water visibility in the Mohaka below SH5 only becomes suitable for diving after prolonged fine weather in summer. This summer a fine spell of almost 8 weeks preceded the survey presenting the optimum conditions likely for this summer. Even so visibility was still marginal (5.4m horizontal secchi disc) and 2.1m less than had been experienced upstream of SH 5 in 1988. Rain at the time of the survey affected visibility so that by the second day visibility had reduced to 2m and was decreasing. Unfortunately this brought a stop to any further dives, resulting in only the first of the sections being dived. The results of this dive are summarised below:

Mohaka river, Glenfalls Reserve to Waipunga confluence.

Grid references

Upstream start V19 227228

Downstream finish V19 289267

Section length 6500m

Time start 1345hrs

Time finish 1620hrs

Underwater visibility 5.4m (secchi)

Number of fish observed:

Spp.	Brown trout				Rainbow trout				
	Size	Fry	Small	Medium	Large	Fry	Small	Medium	Large
No.	0	53	77	109	0	61	124	60	

DISCUSSION

While we were unable to dive any lower than the Waipunga confluence, I doubt that trout numbers will vary much to at least the Te Hoe confluence. There are several reasons for this:

1. Through the six and a half kilometres which we were able to count there was very little change in trout densities.

2. The nature of the river is very similar all the way from SH5 to at least the Te Hoe, although there are more faster sections in the lower half of this reach.

A list of the four sections drift dived in the Mohaka river since 1985, including this survey, are given in downstream order in Table 1. Trout densities for each section have been averaged where more than one count has been made, and densities are calculated by combining medium and large trout of both species (i.e. all fish longer than 20cm).

Table 1. - Trout densities in the Mohaka river

The Mohaka river at:

Poronui

U19 933313 to U19 955307 60 trout per kilometre

The football field

N113 793877 to N113 805865 115 trout per kilometre

SH 5

N114 050756 to N114 056752 53 trout per kilometre

Waipunga (1991 survey)

V19 227228 to V19 289267 57 trout per kilometre

The first two locations listed are in the headwaters and show the large densities of trout present in that area. The second two locations listed are in the middle reaches and show a drop in trout density, but a consistent density, and one which is probably representative of most of the middle reaches. While there is a decrease in trout density from the upper to the middle reaches, the densities found in the middle reaches are still similar to those of other important angling rivers. Refer to Teirney and Jowett (1990) for this comparison. Therefore it is unlikely that any significant decrease in trout density occurs downstream of Glenfalls until the gorge area above Willow Flat, where there is an obvious decrease in the quality of habitat for trout. The Mohaka below Willow Flat never clears enough to effectively drift dive. The only way to check trout density in this area would be to carry out an extensive netting survey.