

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application pursuant to Section 201 for a Water Conservation Order on the Hurunui River.

**STATEMENT OF SUPPLEMENTARY EVIDENCE OF DONALD JOHN JELLYMAN ON
BEHALF OF NORTH CANTERBURY FISH AND GAME COUNCIL
Dated 9 day of April 2009**

1. I prepared a first statement of evidence dated 6 March 2009, in respect of Fish and Game's application for a Water Conservation Order on the Hurunui. I confirm the detail of my experience and qualifications set out therein.
2. In this statement of evidence I set out my comments in response to questions from Dr. Gerry Closs in relation to trophy trout and headwater rivers and the distribution of koaro

Trophy trout and headwater rivers

3. The assigning of rivers as either "trophy" or "headwater" rivers was somewhat more complicated than I indicated in response to Dr Closs's question. There were 2 elements to this. Firstly, for the National Headwater Trout Survey (NHTS), fishery managers were asked to indicate important characteristics (from a list provided) for both "all season" and "early season" rivers. One of these characteristics was a "trophy" fish river, defined as the opportunity to catch a trout of > 4.5 kg (10 lbs). While both the North and South Branches were listed as "headwater fisheries" (with the North Branch listed as "early season" and the South Branch as an "all season" fishery), neither was listed as a "trophy" fishery – only 1/3 of all headwater rivers were listed as "trophy" rivers.
4. Secondly, a comparison was made between 2 surveys - the more extensive National Angling Surveys (NAS) of Teirney et al (1982) etc and the NHTS (Jellyman and Graynoth 1994). The idea was to determine how comparable results of both surveys were to, hopefully, add greater authenticity to the outcomes of the NHTS. The methods used are described in detail in Jellyman and Graynoth (1994).
5. In brief, we selected a number of attributes from the NAS (to describe either a "trophy" trout fishery, or a "headwater" fishery), and extracted lists of rivers that conformed to these criteria. We then compared these with the lists of "all season" or "early season" rivers from the NHTS.
6. All Season Rivers: The NHTS identified 20 North Island "all season" rivers, of which 17 could be classified (using the attributes selected from the NAS) as "trophy" trout rivers, and 12 as "headwater" rivers. We considered this as good agreement between the 2 surveys. Figures for the 74 South Island "all season" rivers were 53 classified as "trophy" rivers, and 38 as "headwater" rivers. A number of rivers qualified under both categories, so 13 of the 20 North Island "all season" rivers were listed as providing

both "trophy" and "headwater" fisheries, while 37 of the 74 South Island "all season" rivers were listed as both, including the Hurunui South Branch.

7. Early Season Rivers: Using the attributes selected from the NAS, none of the 3 North Island rivers identified in the NHTS qualified as "trophy" or "headwater" rivers. However, 20 of the 40 South Island rivers qualified as "trophy" rivers, and 11 as "headwater" rivers - 9 qualified as both, including the North Branch of the Hurunui River.

8. Conclusion: Although the classifications in both surveys were subjective, they were done by either experienced anglers or fishery managers (Fish and Game or Department of Conservation staff), and the good degree of similarity between the assessments gave reasonable grounds for accepting the validity of the classifications. While the fishery managers were conservative in assigning headwater rivers as "trophy" fish rivers (only 49 of the list of 127 rivers) and did not include either the North or South Branches, the overlay of NAS results gave a different result and indicated that both the North and South Branches qualified as "trophy" *and* "headwater" fisheries. While the merits of the methods could be further debated, both surveys reinforced the conclusion that the North and South Branches of the Hurunui constitute very important headwater trout fisheries.

Distribution of koaro

9. As I suggested, I can now confirm that diadromous koaro have been recorded from the South Branch of the Hurunui River. Koaro have been recorded from 24 sites in the Hurunui catchment (between 53 and 142 km inland), of which 4 sites are in the South Branch, and 8 in the North Branch above lake Sumner.

D Jellyman

9 April 2009

References:

Jellyman, D. J.; Graynoth, E. 1994: Headwater trout fisheries in New Zealand. New Zealand Freshwater Fisheries Report 12, National Institute of Water and Atmospheric Research, Christchurch, 87 p.

Teirney, L. D., Unwin, M. J., Rowe, D. K., McDowall, R. M. & Graynoth, E. (1982). Submission on the draft inventory of wild and scenic rivers of national importance. Christchurch: New Zealand Ministry of Agriculture and Fisheries.