## SUBMISSION ON A RESOURCE CONSENT APPLICATION
## SECTIONS 93(2) & 96 OF THE RESOURCE MANAGEMENT ACT 1991

BULLER

To: Buller District Council
C/- West Coast Regional Council
PO Box 66
Greymouth

Copy to: Meridian Energy Limited
PO Box 2454
Christchurch

**APPLICANT:** MERIDIAN ENERGY LTD

**Closing date for submissions is Wednesday, 23 April 2008**

**Submitter Details**

Name: The West Coast Whitebaiters Association (Inc)
*(full name)*

Address: C- P.O Box 42 Hari Hari West Coast
*(full postal address)*

Correspondence to be sent to the following name and address: *(if different to above)*

Phone No: 03 768 0090 or 03 753 3181

Fax No: _____

Email: _____

I/we **support** the application numbers ticketed on the back of this form ☐ *(tick one)*
I/we **oppose** the application numbers ticketed on the back of this form ☑

My/our submission is that: That we oppose the Meridian Energy ltd proposal for a Dam on the Mokihinui River.
*(state in summary the nature of your submission. Clearly indicate whether you support or oppose the specific proposal, or wish to have amendments made, giving reasons)*

RECEIVED
21 APR 2008
THE WEST COAST REGIONAL COUNCIL

I/we seek the following decision from the Local Authority: Refuse the Resource Consent.
*(give precise details)*

Use the tick boxes to indicate the resource consent application(s) your submission concerns.
Write a clear tick in the appropriate box(es).

I/we make my/our submission concerning **all** the consent applications listed below ☐
My/our submission **only** concerns the consent applications ticked below ☑

I/we **wish to be heard** in support of my/our submission. ☑
I/we **DO NOT wish to be heard** and hereby make my/our submission in writing only. ☐

James Beale (Chairperson) 21/4/2008
*(signature(s) of person making submission)* *(Date)*

*(If this is a joint submission by 2 or more individuals, each individual's signature is required)*

I/we **have** served a copy of my/our submission on Meridian Energy Ltd as per Section 96(4) of the RMA ☑

Consent list:

☑ RC07/180-A Land use activities associated with Dam, Staging Area & Associated Infrastructure
☐ RC07/180-B Land use activities associated with the Inundation Area
☐ RC07/180-C Land use activities associated with the Walking track
☐ RC07/180-D Land use activities associated with the Dam Access Road & Power Supply
☐ RC07/180-E Land use activities associated with Transmission Poles/Lines, Substation & Access Tracks
☐ RC07/180-F Land use activities associated with the Boat ramp/jetty
☐ RC07/180-G Land use activities associated with the Log Boom
☐ RC07/180-H Land use activities associated with the Use and Storage of Hazardous Substances

**SUBMISSION OF THE WEST COAST WHITEBAITERS ASSOCIATION TO MOKIHINUI RIVER PROPOSED HYDRO POWER SCHEME**

West Coast Whitebaiters Association consulted with the public through a meeting in Seddonville at the Seddonville Hotel on the 16-04-2008 which was attended by concerned whitebaiters. It was unanimously agreed to put in this submission of objection.

**OVERVIEW OF THE WHITEBAIT FISHERY**

The West Coast whitebait fishery has it's own set of regulations under a Act of Parliament.
The Whitebait Fishing (West Coast) Regulations 1994
The Whitebait Fishing (West Coast) Regulations1994, Amendment no2.

This act gives the West Coast a shorter season than the rest of New Zealand.
This is to help protect several endangered whitebait species that travel up large mountain-fed rivers to their preferred habitat. The Mokihinui River is one of these rivers.
Some whitebaiters' fish on registered stands which are administered by the West Coast Regional Council. The stand-holder holds a resource consent and pays an annual fee to the Regional Council. There are 657 registered stands Coast-wide.
Some stand-holders purchase their stand as a commercial proposition, to catch and sell whitebait. Others purchase a stand for recreational use to ensure themselves a whitebaiting spot simply for leisure.
The monetary value of a stand is determined by the ordination to the front stand on the river. The placement of the front stand is set by the West Coast Regional Council (WCRC) and cannot be moved forward.
Stands change hands for $15 000 to over $150 000.
Pot-netters are whitebaiters who do not fish on registered stands instead they whitebait at the river-mouth using set nets or scoop nets.
Casual whitebaiters are entitled to fish downstream of the registered stands.

**THE CHARACTER ISTICS OF THE MOKIHINUI WHITEBAIT FISHERY**

The 3 great Whitebaiting rivers in the Buller region are the Karamea, Mokihinui and Buller, with the Mokikinui being the most significant with 69 registered stands. This is just over 10% of the registered stands on the West Coast.

The catch rate in mid-October 2007 for the casual whitebaiters was approx.50-70Kg per week.
There was a total of between 20-200 whitebaiters (stands and casual) fishing on any given day during the whitebait season.
The total catch on the Mokihinui River for 2007 was estimated to be 8-10 tonnes with an approx. value of $640,000 to $800,000 ( @$80/Kg).

[1]Describe the characteristics of the river (refer to introduction and 1.1 of Niwa booklet.) The variety of conditions in the river provides a suitable environments for all species of whitebait with their differing spawning and habitat needs.

Inanga (*Galaxias maculates)* spawn at the freshwater-saltwater wedge.
In 2007 Henk Stengs from DOC Greymouth Office surveyed all known Inanga spawning sites on the West Coast. DOC acknowledges there is no significant Inanga spawning on the Mokihinui River.NIWA map of native fish distribution on the Mokihinui River [2] shows only 1 site.

Koaro (*Galaxias brevipinnis*) 'prefer fast flowing rocky bottomed streams with forest cover.' [3] They spawn 'amongst marginal gravels and litter during elevated stream flows' [8] The NIWA map [4] shows numerous sites most of which are near or above the proposed dam site. (see DOC Whitebait information and fishing regulations brochure –attached)

Giant Kokopu (*G.argenteus*) [5] and Short jawed Kokopu(*G.postvectis*) [4] are rarely caught by whitebaiters and the NIWA records place them below the dam site.

[6]Table 13 shows 89% of the whitebait caught on the Mokihinui River were Koaro and 7.5% were Inanga.

**THE MERIDIAN PROPOSAL**

The West Coast Whitebaiters Association agree with Meridian Energy Ltd that the Mokihinui River is a very important as it is one of three major whitebaiting rivers in Buller.
Building the dam will lead to the extinction of all species of whitebait that need to travel upstream of the dam to reach their inland habitat and spawning area therefore lead to a major reduction in whitebait fisheries. Because the proposed lake will be 14km long this will result in a reduction of potential spawning area of 28km.
3.3.6 records Koaro as the predominant whitebait species being 82.7%-92.4%of the samples collected in 2006. [6]

This report also states
[7]"In contrast both banded Kokopu and Koaro are noted for their climbing ability and inland penetration. So that a dam will have a significant effect on these species by preventing their upstream passage."
Meridian have suggested they might be required to assisted the whitebait by lifting them up above the dam as a means of mitigation.
We do not feel this is practical. Firstly due to predators such as trout and eels in the lake which will decrease the population of whitebait.
Secondly the Koaro will also have to travel an additional 14km before reaching suitable spawning areas. Thirdly if any Koaro manage to spawn successfully through Meridian's suggested means of mitigation the 5-7mm long lavae will still have to contend with 14 km of clear, still waters in the lake, which are unnatural conditions for this species.

In addition any that do survive, upon on their downstream journey to reach the sea they will encounter the dam. The greatest volume of water and the lavae it contains will head through the turbines and be destroyed. Therefore this fishery will be eliminated.

As Koaro spawn where the rivers are elevated (in flood) and hatch when reinundated and then washed out to sea. (Attached sheet RM McDowall)

We also acknowledge that Koaro are widespread in a number of rivers on the West Coast and therefore not endangered.

Meridian imply that there is no known spawning in the Mokihiui River and suggest that the whitebait entering the Mokihiui river have come from spawning sites in other rivers. How can you come to this conclusion when approximately eight tonnes of Koaro were caught last season in the Mokihiuui river?
What were they doing in this river? They were heading upstream to spawn. It is known that there is no spawning of Inaga in the Mokihiui (as stated by DOC)
If as Merdian say that the Mokihuni whitebait are recruited from other spawning rivers, why is it that there are so few Inaga caught. Especially considering that within a 5-10km radius of the Mokihuni there are some rivers with very good recorded Inaga spawning sites?
One can only come to the conclusion that this river is a very good spawning area for the Koaro and a very poor one for the Inaga.

Request that the resource consent be refused on the grounds that you cannot mitigate or do anything to off set the effect of the dam on the spawning sites for the Koaro whitebait and severely reduced catch of whitebait in the Mokihinui river.
This will result in the eventual loss of value of the whitebait stands, houses, lifestyle and income. We owe it to future generations of whitebaiters to maintain the status quo.

REFERENCES

1. Introduction and 1.1
Bonnet M, Jellyman D, Graynoth E, Kelly G, Henderson R. (2007) Niwa Client Report CHC2007-060- Native Freshwater Fish and Fisheries Report.

2. Page 59
Bonnet M, Jellyman D, Graynoth E, Kelly G, Henderson R. (2007) Niwa Client Report CHC2007-060- Native Freshwater Fish and Fisheries Report.

3. Department of Conservation- Whitebait information and fishing regulations for the West Coast of the South Island only.

4.. Page 58
Bonnet M, Jellyman D, Graynoth E, Kelly G, Henderson R. (2007) Niwa Client Report CHC2007-060- Native Freshwater Fish and Fisheries Report.

5. Page 57
Bonnet M, Jellyman D, Graynoth E, Kelly G, Henderson R. (2007) Niwa Client Report CHC2007-060- Native Freshwater Fish and Fisheries Report.

6. Table 13
Bonnet M, Jellyman D, Graynoth E, Kelly G, Henderson R. (2007) Niwa Client Report CHC2007-060- Native Freshwater Fish and Fisheries Report.

7 Executive Summary. Page iv .
Bonnet M, Jellyman D, Graynoth E, Kelly G, Henderson R. (2007) Niwa Client Report CHC2007-060- Native Freshwater Fish and Fisheries Report.

8. McDowall R.M (1990): New Zealand Freshwater Fishes – A natural history and guide. Heinemann Reed, Auckland.

of rivers, streams, lakes and wetlands that are home to a modest but really fascinating and varied freshwater fish fauna. For many years this fauna was known to only a small group of specialists and devotees but, over the past few decades, an increasing number of naturalists, conservationists and anglers have begun to discover the attractions and fascination of these fishes.

*The Reed Field Guide to New Zealand Freshwater Fishes* is a complete and easy-to-read reference to the fishes throughout New Zealand and her outlying islands, such as the Chathams. Each entry contains colour photographs, a line drawing and a distribution map and information on size, colour, features particular to the type of fish, distribution, habitat and diet.

Dr R.M. McDowall is a scientist with the National Institute of Water and Atmospheric Research (NIWA). He is the author of ten books, and has published over 360 scientific papers and popular articles on freshwater fishes.

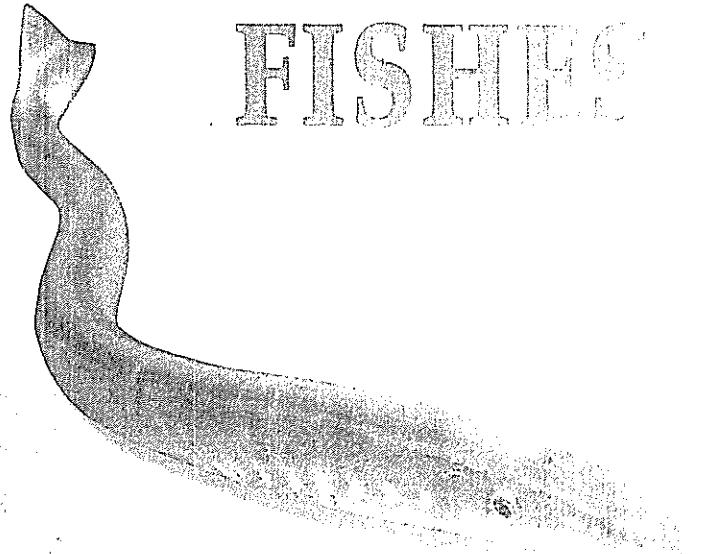
REED

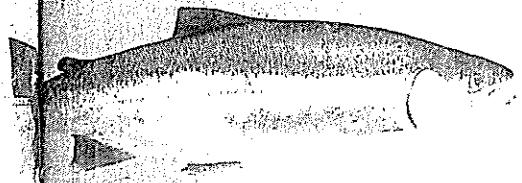
ISBN 0-7900-0725-8



THE REED FIELD GUIDE TO
NEW ZEALAND FRESHWATER FISHES
R.M. McDowall
REED

NEW ZE
FRESHWATE
FISHES





R.M. McDowall

## Koaro — GALAXIIDAE

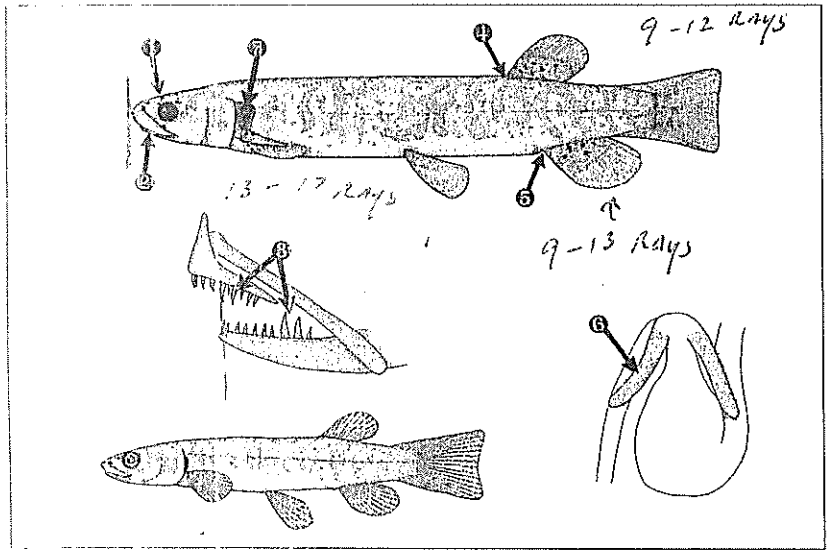
*Galaxias brevipinnis* — Native

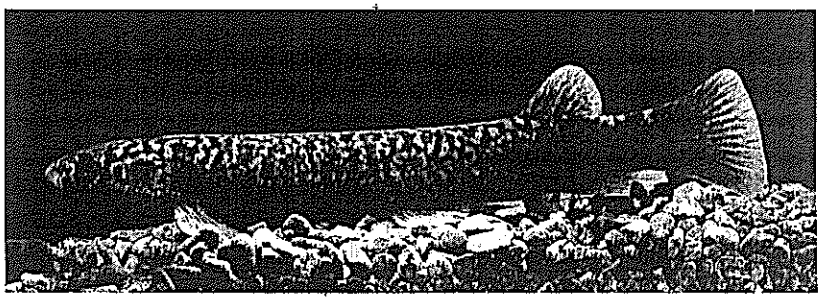
Elongate and rather tubular, especially when small; ***head broad, and flattened*** ❶, eyes small; large mouth reaches back below eyes; lower ***jaw distinctly shorter than upper and tucks inside it when mouth is closed*** ❷; ***strong canine teeth laterally in jaws*** ❸. Fins thick and fleshy; dorsal and anal fins short-based, ***dorsal fin origin*** ❹ distinctly forward of ***anal origin*** ❺; caudal fin emarginate to truncate, on a long, slender caudal peduncle. ***Pectoral and pelvic fins large, face downwards, corrugated below. Two long pyloric caeca on stomach*** ❻.

**COLOUR:** Dull greenish to olive-brown, back and sides covered with profuse irregular greenish-brown blotches and stripes, ***sometimes as v-shaped bands across sides; a black blotch behind head and above pectoral fin bases*** ❼; fins generally dark; in bright sunlight head and body have beautiful golden iridescence.

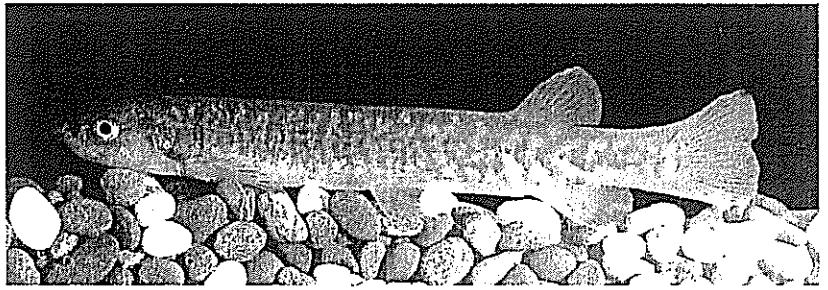
**SPECIES CAUSING CONFUSION:** Distinguishing koaro from Canterbury galaxias, flathead galaxias and Eldon's galaxias is very difficult ***in eastern/northern South Island;*** also roundhead galaxias.

**SIZE:** Commonly to 160–180 mm, longest known 288 mm.



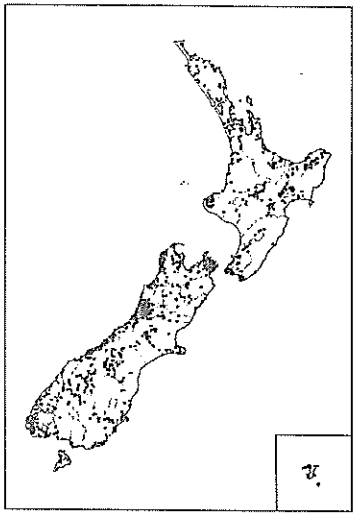



Koaro, *Galaxias brevipinnis*: adult.



Koaro, *Galaxias brevipinnis*: from a high country lake.

Koaro, *Galaxias brevipinnis*: whitebait.



**DISTRIBUTION:** Very widespread, from sea level long distances inland (to 990 m and 400 km); present in most areas though less often in east; landlocked populations in many inland, submontane lakes to high elevation. A very strong climber, getting up past seemingly impassable falls; present on Chatham, Auckland and Campbell islands and many of the small coastal islands; also known in south-eastern Australia and Tasmania.

**HABITS:** Favours clear, swiftly flowing, boulder-cobble streams of small to moderate size that flow through forest, though also in tussock streams that drain into high elevation lakes; solitary, largely cryptic and nocturnal.

**LIFE HISTORY:** Spawns in autumn/winter, several to many thousand eggs (c. 2.0 mm) laid amongst marginal gravels and litter during elevated stream flows; eggs hatch in three to four weeks when eggs are reinundated; larvae, 7–8 mm, go to sea, feed and grow there for seventeen to twenty weeks, and return in early spring (September–October) as whitebait (c. 45–50 mm); long-lived, perhaps fifteen-plus years.

**DIET:** Diet very varied, usually including diverse aquatic insects such as midge (chironomid), mayfly and caddisfly larvae; sometimes many terrestrial invertebrates such as spiders, beetles and cockroaches; consumes crustaceans in lakes.

**FISHERY VALUE:** Whitebait juvenile, particularly, was highly valued by Maori living near inland lakes, especially around Rotorua and Taupo; second most important species in whitebait fishery though less favoured as it tends to become opaque and rather slimy in storage.

**STATUS:** Remains widespread, though has declined greatly in lakes where trout have been introduced, especially in the central North Island.



## Canterbury galaxias GALAXIIDAE

*Galaxias vulgaris* Native

Elongate and rather tubular, especially when small; head broad, and flattened, *snout rather blunt* ❶; eyes small; mouth large, reaching back well below eyes; lower *jaw a little shorter than upper* ❷; well-developed *canine teeth laterally in jaws* ❸. Fins thick and fleshy; dorsal and anal short-based, *dorsal origin* ❹ distinctly forward of *anal origin* ❺; caudal fin emarginate to truncate, on long, slender caudal peduncle. Pectoral and pelvic fins large, face downwards. *Two long pyloric caeca on stomach* ❻.

**COLOUR:** Colour and pattern very variable, from brownish to grey-olive, back and sides covered with highly variable, profuse, irregular spotting, blotching or banding; sometimes a milky grey-brown with virtually no pattern at all. Belly silvery-olive.

**SPECIES CAUSING CONFUSION:** Distinguishing Canterbury galaxias from koaro, flathead galaxias and Eldon's galaxias is very difficult in eastern South Island, also roundhead galaxias; *attention to distribution often helpful*. Seldom (though sometimes) in tributaries of lakes.

**SIZE:** Commonly to 100–120 mm, longest known 150 mm.