

**BEFORE THE MINISTER FOR THE ENVIRONMENT SPECIAL TRIBUNAL**

**IN THE MATTER** of the Resource Management Act 1991

**AND**

**IN THE MATTER** of an application to amend the Water Conservation (Kawarau River) Order 1997 under section 216 of the Act

**BY** **NEW ZEALAND FISH & GAME COUNCIL AND OTAGO FISH & GAME COUNCIL**

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**EVIDENCE OF FLORA AND FAUNA BY BRIAN PATRICK  
AND JOHN DOUGLAS**

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And to  
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**Water Conservation Order – Nevis River – Evidence of Flora and Fauna**

- 1 The Special Tribunal has directed the parties it has determined to have sought an extension to the Water Conservation Order for those to provide a list of species to be outstanding and preserving of protection. This evidence is to be filed with the tribunal and served on the other parties by 5 October 2009
- 2 Brian Patrick and John Douglas are now re-presenting existing evidence with some minor up-dates – Refer to Appendix A attached. A recent field visit (Saturday 20<sup>th</sup> September 2009) to above The Crossing has added some additional species to the list.
- 3 The valley floor and low terraces of the Lower Nevis contain a semi-natural ecosystems that are formed by the Nevis River and its tributaries eg., Schoolhouse Creek.
- 4 The ecosystem of low grazing, mostly native plant species that have adopted to periodic flooding and essentially of dryland species supporting an important range of native birds, lizards and insects. All these native plants in this ecosystem are important to support these fauna values.
- 5 Some of these plants and insects are local, rare or threatened species and these have been asterisked in the list – Appendix A attached.
- 6 The list contains only species that we have seen on the Lower Nevis Valley floor relevant to this Water Conservation Order.

## APPENDIX A

**FLORA AND FAUNA LIST: LOWER NEVIS VALLEY FLOOR /  
SCHOOLHOUSE FLAT TERRACE FACE - LOWER NEVIS VALLEY**

Compiled by Brian Patrick & John Douglas.

This list comprises of only natives species recorded as above and relevant to the Water Conservation Order.

Species that have been asterisked are local, rare or threatened.

*Acaena caesiglauca* - a small bluish-leaved bidibid.

*A. microphyllum* - a very small leafed bidibid. In along the face of the sluiced river terrace.

*Aciphylla aurea* – golden speargrass found along the face of the sluiced river terrace slopes and on the old tailings

*Blechnum penna-marina* subs *alpina* - hard fern - a small common fern

*Carex breviculmis* – dryland grassland sedge

*Carex coriacea* - common wetland sedge

\* *Carex kaloides* – locally common in drylands here – uncommon species nationally

\* *Carex muelleri* - a nationally rare sedge, though here locally common in patches in valley-floor. This is the best population of the species in the world

*Colobanthus strictus* - small rosettes in dryland rocky areas of valley-floor

*Coprosma petriei* - a cushion coprosma forming large hard patches

*Discaria toumatou* - matagouri (Irish thorn) found along amongst the tailings the face of the sluiced river terrace.

*Elymus apricus* - a tall native tussock grass

*Festuca novae-zelandiae* - hard fodder tussock. Common in patches throughout the flats.

\* *Galium* new species - found only here and on the Pisa Flats. Sweet smelling with a small white flower often found growing within cushions of *Raoulia australis*

*Geranium sessiliflorum* - a cranesbill found throughout - green and bronze form

*Leucopogon fraseri* - a small prickly heath found in large patches across the flats.

\* *Leptinella* new species - rare tiny button daisy along on the river terrace found only here and on the Pisa Flats.

*Luzula rhadina* - a common reddish tinge woodrush

*Muehlenbeckia axillaris* – pohehue – large patches of this sub-shrub in rocky areas

*Melicytus alpinus* - porcupine shrub – this is a new undescribed species

*Olearia odorata* - scented tree daisy shrubs found along the face of sluiced river terrace

*Pimelea oreophila* – dryland subshrubs are locally common in valley-floor

*Poa* aff *colensoi* - bluegrass is locally common

*P. cita* – silver tussock

*P. maniototo* - small desert grass

*Raoulia apicenigra* - a loose mate cushion plant. (Flower buds are black at first.)

*R. australis* - a dense greenish cushion plant yellow daisy.

*R. beauverdii* - a loose mate cushion plant daisy.

*R. parkii* - a loose mat cushion plant daisy. Locally common

*R. subsericea* - a pale greenish cushion plant daisy. Common in small patches above the river terrace.

*Rhytidosperma buchananii* – dryland cushion grass – uncommon here

*Scleranthus uniflorus* – orange-coloured cushion plant – uncommon here

*Stellaria gracilentia* - small chickweed. which is common in places in valley-floor

## **FAUNA : RIVER FLATS / SCHOOLHOUSE TERRACE FACE - LOWER NEVIS VALLEY**

### **Lepidoptera (Moths & Butterflies)**

*Arctesthes catapyrrhas* - small diurnal moth.

*Lycaena boldenarum* - boulder copper butterfly.

\* *Orocrambus sophistes* - rare. - Tiger moth The female moth is flightless.

*Zizina oxleyi* - southern blue butterfly.

### **Coleoptera ( Beetles)**

\* *Mecodema chiltoni* - a large carabid (ground beetle) and now rare here.

*Megadromus sandageri* - a large black carabid.

**Lizards** - both skinks and gecko are common on the tailings

**Birds** feeding and / or breeding observed on the valley floor;

\* Black-billed gull

\* Black-fronted tern

\* Branded dotterel

Paradise shelduck

South Island pied oystercatcher