

Abstracts from Annual Student Symposium, 11 Oct 2002

Department of Botany, University of Otago

Ratites revisited: plant defenses and mega-herbivores in New Zealand.

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In collaboration with several colleagues from mammal infested regions of the world I have been attempting to understand the interaction of woody plants and large avian herbivores in New Zealand. In this talk I will describe the challenges of doing research on the ecology of extinct species, and the progress we have made over the last few years using empirical, experimental, and modelling approaches. The results of our studies have changed my perspective on the type of changes that probably occurred in New Zealand vegetation following human settlement, and on the disturbance regimes we can utilise to conserve a representative range of indigenous plant biodiversity.

Simulated vertebrate grazing and invertebrate diversity in alpine snow tussock

Steve Rate

New Zealand has no native ungulates, but tussocklands are commonly grazed, including many in protected natural areas. However, there has been limited local research on the effects of vertebrate grazing (simulated or real) on invertebrate populations.

This study aims to answer the following questions: 1. Does clipping snow tussock (to simulate grazing) affect invertebrate populations? 2. Do different levels of clipping have different effects? 3. Are these effects consistent with altitude?

Two patches of snow tussock were selected at different altitudes in the Rock and Pillar Reserve, Otago, New Zealand. Randomly selected tussocks were severely clipped, moderately clipped, or not clipped (controls). Invertebrates were sampled by taking a core of each tussock's base, once before treatment and twice post-treatment.

Preliminary results indicate that the invertebrate communities differed between the sites and sampling periods but that there were no differences between treatments 3 or 12 weeks after clipping. Trophic level analysis and sampling at 9 months post-treatment may reveal patterns not yet evident.

Walking with Western Australian Wildflowers.

Adrienne S. Markey

This pedestrian talk will "walk" the listener through the spectacular floral landscapes that have made Western Australia internationally renowned as the "Wildflower State". The southwest of Western Australia (WA) is one of the top biodiversity "hotspots" on the planet, having in excess of 7500 species of angiosperms and climatic extremes that