

Abstracts from Annual Student Symposium, 11 Oct 2002

Department of Botany, University of Otago

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

William G. Lee, Landcare Research, Private Bag 1930, Dunedin, New Zealand

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.

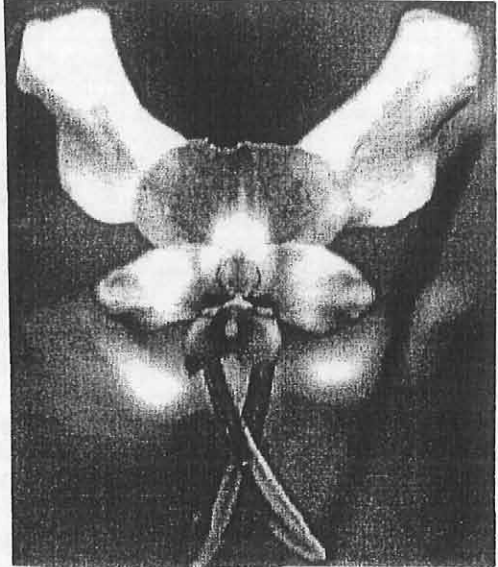
Adrienne S. Markey

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

- the *kwongan* or mediterranean-type sandplain heaths that rival the Cape *fynbos* in diversity and ecological intricacy,
- tall wet-temperate rainforests of karri and tingle that retain Gondwanan relics and contain some of the tallest and strangest trees in the world,
- coastal vegetation perched on Devonian limestone reefs stranded atop 100 m high cliffs and on coral atolls precariously placed 2 m above sea level,
- ephemeral everlastings in mulga scrub,
- precambrian granite outcrops,
- oases of ferns and palms in canyons surrounded by a sea of arid-zone spinifex and iconic ghost gums.

*Fig. Donkey orchid,
Diuris longifolia.*
- Adrienne Markey

*NB: There's another chance
to see these wonders
when Adrienne talks to
BSO on Wed 2 April.*



The citizens' voice in conservation: applying ecological science in a statutory policy-advice environment
Kath Dickinson

The New Zealand Conservation Authority and conservation boards are statutory bodies set up under the Conservation Act. These bodies provide advice on conservation areas, policy, activities and responsibilities of the Department of Conservation. Their responsibilities include land management, wildlife and plant protection, national parks and reserves, recreational and tourism facilities, pest and weed management, walkways, marine reserves and historic and culturally important sites. In the case of the fourteen conservation boards around the country, their advice is given to the conservator of the Department of Conservation conservancy in which they are based. In the case of the Conservation Authority, its role is a national one and it gives advice to the Director-General of Conservation and the Minister of Conservation.

The Boards and the Authority are the citizens' voice for conservation in New Zealand under statute and as such they have an important role to play in setting conservation policy in New Zealand. A conservation board consists of a group of 9 -11 individuals,