The World's most beleaguered biome: Temperate grasslands and their conservation status. 21.4.05. Talk report, *Allison Knight*

After the Annual General Meeting this year **Emeritus Professor Alan Mark** rolled out a magic carpet of grasslands around the globe. Unfortunately our reporter has disappeared and my memory can scarcely do justice to all those magnificent images and knowledgeable descriptions of the worlds rolling plains, prairies, steppes, savannah, tundra, veldt and many more evocative places. The grand finale was, of course, our own beautiful but still beleaguered tussock grasslands.

Fungal Foray to Knight's Bush *Chuck and Carol Landis*

On Saturday May 7, a Botanical Society party visited the Tuapeka West property of John and Allison Knight to investigate the autumn fungi. We began in pine forest at 300m overlooking the Clutha Valley and gradually worked our way down into the river gorge entering a large stand of native bush. Fungi were very abundant throughout, with each habitat having a distinctive mycoflora.

This was my first foray into fungi and we found the diversity of colours, textures and species quite amazing. It was great having David Orlovich and other mycologically-inclined members sharing their knowledge and enthusiasm. Lloyd Esler's forest floor nibbles kept us "on our toes" and his welcome new (and quirky) phytogeomorphic term "mushrump" caught on quickly. (A mushrump is the mound created where a fungus is about to break the surface.)

The mature *Pinus radiata* plantation was dominated by the beautiful but ominous fly agaric *Amanita muscaria*, and several boletes, particularly *Suillus luteus*, the slippery jack mushroom, and *Chalciporus piperatus*, the peppery bolete. These are exotic fungi (i.e. in appearance and origin), the fly agaric known for attracting and killing flies, if sprinkled with sugar, the slippery jack is especially common in the jack pine forests of eastern United States, which may explain part of its common name. Also Common were the milk caps, *Lactarius* (milky sap mushroom), *Tricholoma* and *Laccaria* species. It is likely that many of these too are exotic to New Zealand.

The upper edge of the native forest is dominated by mature second-growth kanuka. This passes downhill into older and more varied forest dominated by beech and podocarps. *Russula*, along with *Mycena* (delicate fluted lampshades) were common, especially in areas of kanuka. Also in the kanuka forest we found the bird nest fungus, *Cyathus novaezelandiae*, on fallen twigs. In the older beech-podocarp forest the saprobic species living on old and dead beech wood were fascinating - in particular a beautiful icicle fungus, *Hericium coralloides* (*clathroides*), on a standing dead trunk was a real eyecatcher, while the mycelium of the "Verdigris Stud Fungus", *Chlorociboria aeruginosa* (*Chlorosplenium aeruginosum*), had created the appearance of rotten tanalized wood. *Hypholoma brunneum*, and some excellent examples of woody bracket fungi were also evident.

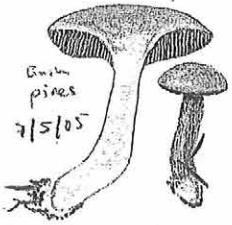
Other notables include the delicate young honey mushroom, *Armillariella*, with its granular but slimy caps; *Daldinia childiae* (*concentrica*), the charcoal fungus also

known as King Alfred's cakes, is a truffle relative; and the starfish stinkhorn, *Aseroe rubra*. *Tricholoma*, *Cortinarius*, and *Laccaria* species were common and the distinctive red pouch fungus, *Weraroa erythrocephala* was also present. The greatest diversity appeared to occur in a portion of the forest rich in podocarp trees--kahikatea, totara, matai.

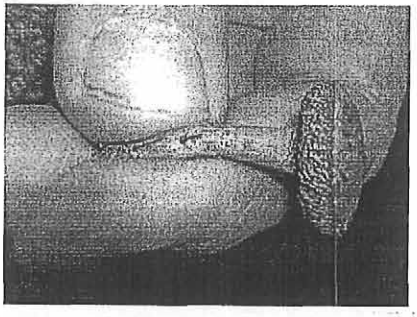
Looking through Miller's "Mushrooms of North America" and other books, I've been struck by how much the NZ fungal flora resembles the northern hemisphere flora (in profound contrast with the NZ flowering plants). In part, this must reflect the ease with which spores are dispersed as aerosols, but it also reminds us how easily fungi may be introduced (e.g. on roots, boots, camping equipment, etc). Given the absence of a good fossil record for fungi, and the difficulties that early NZ botanists must have had with identification and preservation of fungal specimens, it is rather sobering to realize that we may never have a full understanding of New Zealand's pre-human endemic fungal flora.

As the trip finished, a gentle rain began to fall. This made the access track very slick, particularly in some precipitous areas. We considered waiting until the surface dried off, but the thought of 11 people spending the night in a tiny (tho' very appealing) hut with only mushrooms and muesli bars for food spurred us to get out the ropes, shovel, and chains. Many thanks to the Knights for hosting us and to Allison for assistance in obtaining references and checking my notes.

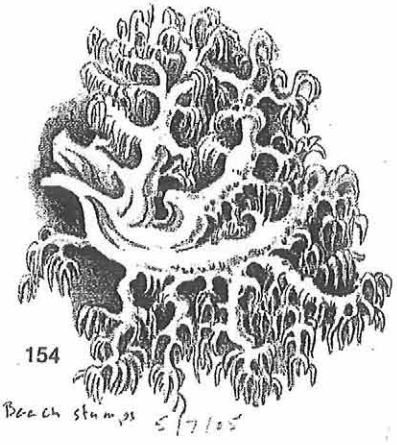
Participants: Bill & Diana Wilson, Gerry and Richard Martin, Toni & Pamela Atkinson, Jean Bretherton, David Orlovich, Lloyd Esler (Invercargill), Allison & John Knight, Carol & Chuck Landis.



R. *Hericium coralloides,* Icicle fungus (edible).from M Taylor, *Mushrooms & Toadstools*. Reed, 1981.



L. Peppery bolete, *Chalciporus piperatus* under *Pinus radiata.* Photo D Orlovich



More images of fungi from the foray (and even the tiny hut) are on the BSO website