Meeting & Trip Reports

Trip report, 9 April 2004 *Monica Peters & Norman Mason*

Obelisk Station field symposium discussing the impact of pastoral management on indigenous tussock grasslands.

A convoy of 4WD vehicles left Dunedin early on Saturday 9 for a planned meeting on the Old Range. The turn out was impressive, with around 100 people brought together from across Otago, Southland and even Canterbury. How did this meeting between farmers, scientists from a range of institutions, Forest and Bird representatives, Botanical Society and Federated Farmers members, DOC, the odd geologist, MP, journalist (apologies to any group or individual omitted) come about? A challenge was issued via the ODT to Prof Mark to prove that burning and grazing had any deleterious effects on native grass species, particularly snow tussock (*Chionochloa*) species.

Prof Mark responded by calling for a meeting of the various interested parties and "stakeholder" groups in high country farming systems, to be hosted at Obelisk Station on the Old Man Range (Roxburgh). One of the main themes of the meeting was how best to manage high country land and predictably, an extensive range of opinions were expressed over the course of the day. The meeting was an opportunity for questions – and challenges - to be directly addressed.

What makes this location for such a meeting of diverse perspectives unique, is its history both as a high country sheep station and as a long-term research site. The exclosure plots were established by Prof. Mark in the early 1960's to examine the growth and flowering of snow tussocks collected from different altitudes along the altitudinal gradient provided on Obelisk Station. Since then a range of studies by Prof. Mark and various students have examined, amongst other things, the effect of burning on growth and the distribution of nutrients in different parts of the tussocks. During the meeting, Prof. Mark explained that burning resulted in a flush of growth, with this growth being high in nutrients and very palatable to grazing animals. Fire also initiated abundant flowering in tussocks for the growing season following burning. However, after this initial burst of flowering, tussocks were incapable of any considerable flower production for up to fifteen years. Prof. Mark further explained that, in the absence of grazing, the nutrient concentrations and carbohydrate reserves of tussocks recovered within one or two growing seasons of burning. However, he cautioned that when burning is closely followed by grazing, the loss of the nutrient rich post-burn growth seriously depleted the tussocks' reserves.

One of the points raised during the meeting was that research should be more closely aligned to meeting farmers' information needs. While studies such as those outlined above elucidate ecological processes, some comments made suggested research of this nature may not be "applied" enough in the farming sense. While research may show statistically significant results, what does a change in the species composition of say, invertebrate communities, actually mean to the farmer? Prof. Mark reminded the meeting that farmers were welcome to make a submission to the Miss E.L. Hellaby Indigenous Grasslands Research Trust, for funding of research they saw as important. Apparently, none had to date.

This may be in part due to a lack of familiarity with the scientific process on the part of non-scientists, which then leads to questioning the meaningfulness of experiments. Some of the farmers expressed that their observational and practical experience on the land has enabled them to select the best methods for managing their land. The grave management-related errors of the past are widely acknowledged by farmers – and appear to have been duly learned from. Terms to describe current management practices included "sustainable" and "holistic". As one farmer commented, "Scientists and farmers basically have the same goals...". It is true that farmers in the high country have learned some hard lessons over the 150 years of pastoral management. According to one part-time consultant who advises farmers on tenure-review issues, many farmers recognise the current plague of mouse-eared hawkweed (*Hieracium pilosella*) that is currently gripping many areas in Central Otago, as a sign of a highly degraded ecosystem and not the result of invasion by a super weed.

A consensus is growing amongst farmers that management practices must be carefully considered if the high country is to remain productive in the future. This has seen a large reduction in the frequency of burning and the extent of areas burned, and modification of how burning and grazing are combined (pers. comm. C. Scott). It seems, then, that there is a broader level agreement between different high-country stakeholders, though there is always the concern that the meanings ascribed to such widely used terms such as sustainability, are elastic and shift according to context and the interest of the individual. One wonders how sustainable an agricultural system is, if it is dependent on non-renewable phosphate reserves. This is surely a problem that faces all farming in New Zealand, not just the high country.

ACT MP and high country farmer Gerry Eckhoff asked why DOC was so interested in pastoral leasehold land if lessees had treated it so poorly. Dr. Janice Lord of the Botany Department, University of Otago, pointed out that there were no undisturbed areas of snow tussock left, and degraded as they are relative to their likely natural condition, examples of snow tussock grassland such as those found on Obelisk Station represent the best of what we have left. Said MP also claimed that DOC was trying to lock away the entire high country from agricultural management. Several attendees of the meeting pointed out that the aim was to reserve a representative portion of our native high country vegetation types, and not bring the entire high country under conservation management.

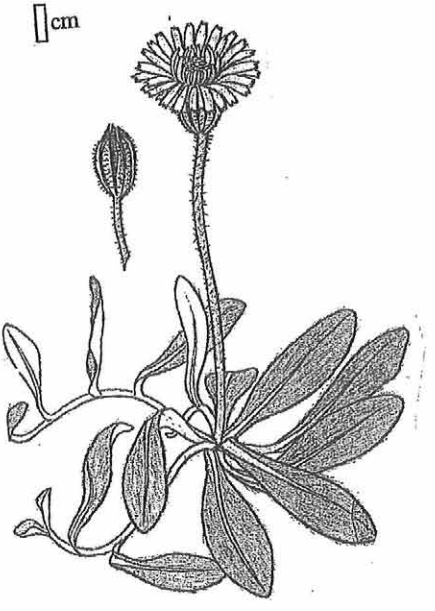
A further issue was that retiring high country land from farming would lead to a greater intensification of lower lying lands – adding to the problems outlined in the recent PCE "Growing for Good" report*. The high country also adds flexibility to management, providing additional grazing in dry years, as lower-lying areas tend to be harder hit by events such as drought. The view generally held by farmers is that *Hieracium lepidulum* is controlled through grazing in the summer (to remove flower heads) and the addition of fertilizer. Wilding pines are similarly controlled, with additional manual effort (sawing, grubbing and pulling) often required. Observations were made by several farmers that some areas under DOC's control are poorly managed

* The report "Growing for good: Intensive farming, sustainability and New Zealand's environment" (2004) is available from www.pce.govt.nz

and infested with weeds such as wilding pines and Douglas firs (most farmers of course also include the native shrub matagouri – *Discaria toumatou* – in their list of weed species), and *Hieracium lepidulum*, which then spread onto neighbouring farmland. Prof. Mark cited areas on the Criffel range and Mt. Pisa as instances where pastoral management seems to have resulted in an explosion of *H. lepidulum*. It's a shame that Ian Radford as the resident *H. lepidulum* expert wasn't present to share his knowledge on the subject. Conversing with some 5th generation farmers from the Ida Valley, criticism was raised about the lack of information provided to the farmers by DOC in relation to the High Country Tenure Review. Though DOC representatives were present at the meeting, their capacity was as observers. It is common knowledge that many farmers feel DOC takes a dictatorial position in the tenure-review process. Whether or not this is the case, I think I speak for many when I say that DOC would do itself a big favour by considering public relations in dealing with such contentious issues.

The question that rounded up the day was "Shall we have another meeting like this?" That's one point that *all* parties unanimously agreed on. Formal as well as informal discussions are the key to keeping this complex debate in a fluid form. Strong opinions on both ends of the spectrum are important and can be seen to function as "anchor points" in the debate, with most people probably occupying a range in between though leaning to either "anchor". As one pragmatic farmer put it, "...both sides have to make compromises" and this can only be achieved through keeping quality information moving between all parties. Having a meeting on site where questions raised can be directly answered as well as experiments physically shown helps to break down barriers as well as cement the experience in people's minds. Answering questions directly also prevents the information from being distorted through its translation into other media for dissemination [see the *ODT* article (11/4/05) reporting on the meeting for an example of such distortion].

How best to manage the South Island's high country? With so much history embedded in high country farming, it is likely to remain a feature of these areas. Questions centring on high country farm practice and management are vital and will continue to engender lively debate. I choose the word "lively" because I want to highlight the largely positive nature of the day, and like others present, look forward to the next meeting.



Hieracium pilosella
Mouse-ear hawkweed
Hugh D Wilson
Wild Plants of Mt Cook
National Park, 1996