

been modified by fire and grazing so that today only about 600,000 hectares remains in snow tussock cover.

Southland red tussock grasslands have almost entirely given way to exotic pastures. Less than 10 hectares of red tussock is reserved on the entire Southland plain. Fortunately, near Te Anau the proposed 3,100 hectare Gorge Hill red tussock reserve provides a last chance to preserve a small part of Southland's pre-European landscape.

Tussocklands under threat:

Places like the Mackenzie Basin, Lindis Pass, the Remarkables, the Shotover and Kawarau Gorges have long been celebrated by New Zealand's poets, painters and photographers. Their wide open spaces and stark solitude never fail to impress even the most jaded visitor.

Our tussocklands have always been seemingly unchanging elements in the New Zealand landscape. So much so, that earlier generations took for granted the tussocklands continued co-existence with extensive pastoralism.

However, dramatic changes in the high country landscape are now taking place. Extensive sheep farming is giving way to more intensive agriculture with pressures for freeholding of public pastoral lands. Massive hydro-electric developments are underway or already completed. There are pressures for irrigation development, exotic forestry, tourist villages and ski fields.

Each new activity may be in itself be relatively insignificant, but collectively they represent a major assault on our surviving tussocklands.

Where are our tussockland reserves?

Efforts so far to protect tussocklands have been pathetic. Perhaps this reflects the widespread belief that extensive pastoralism did not threaten natural values. The runholder has been de facto caretaker of our tussockland heritage while the state has concentrated on managing forested national parks and reserves. There has also been a distinct lack of appreciation of the natural values of non-forested natural ecosystems. How else can we explain the incredible situation where in 1980 only 9 hectares of the former 1 million hectares of short tussock grassland in Otago was protected in scenic reserves?

We have been obsessed with reserving mountains and forests while the best (and often the last) remaining examples of lowland and montane tussock grasslands and their special plants and animals have been disappearing. Today's challenge is to identify where these grasslands remain

and what stops them from being reserved.

Although most of our surviving tussocklands are on Crown-owned land, much of this land is under leasehold tenure with a right of perpetual renewal. Therefore the public interest in these Crown Lands can only be safeguarded by conditions that the Department of Lands and Survey (acting for the Land Settlement Board) can negotiate with the lessee.

In fact, pastoral lease provides considerable scope for the protection of natural and recreational values. However, rarely have such opportunities been taken — primarily because pastoral lease administration has focused almost entirely on farming.

Pastoral leases and the Land Settlement Board:

Ten percent of New Zealand is Crown land administered as pastoral lease. All of it is South Island high country, including tussock grasslands, peaks, glaciers, rivers, lakes and even significant native forests.

The Land Settlement Board (LSB), established under the 1948 Land Act, acts on the Crown's behalf. By its very name, the Board recalls an earlier era of pioneering and simpler land use objectives. Virtually everyone involved with the high country considers the LSB to be an anachronism — the settlement phase in New Zealand's marginal lands is largely past, and the Board (despite some sincere attempts to improve its policies) has failed to win the confidence of recreational, nature conservation and

scientific interests. It overwhelmingly reflects the political, departmental and farming interests represented on it. However, no recent Government has been prepared to reconstitute the LSB into a more balanced "Crown Land Commission".

Obstacles to tussockland reserves:

To date it has proven extremely difficult to secure reserves in tussock grasslands. In addition to the legal obstacles outlined above, there are a number of institutional impediments:

- the considerable political power of the small group of influential high country runholders.
- the agricultural research establishment committed to increasing the pastoral productivity of the high



Central Otago's block mountains have acted like islands. Each mountain range has its own special insects such as the Rock and Pillar weta, *Hemideina maori* found beneath rocks on the summit of the range.

Photo: John Child.

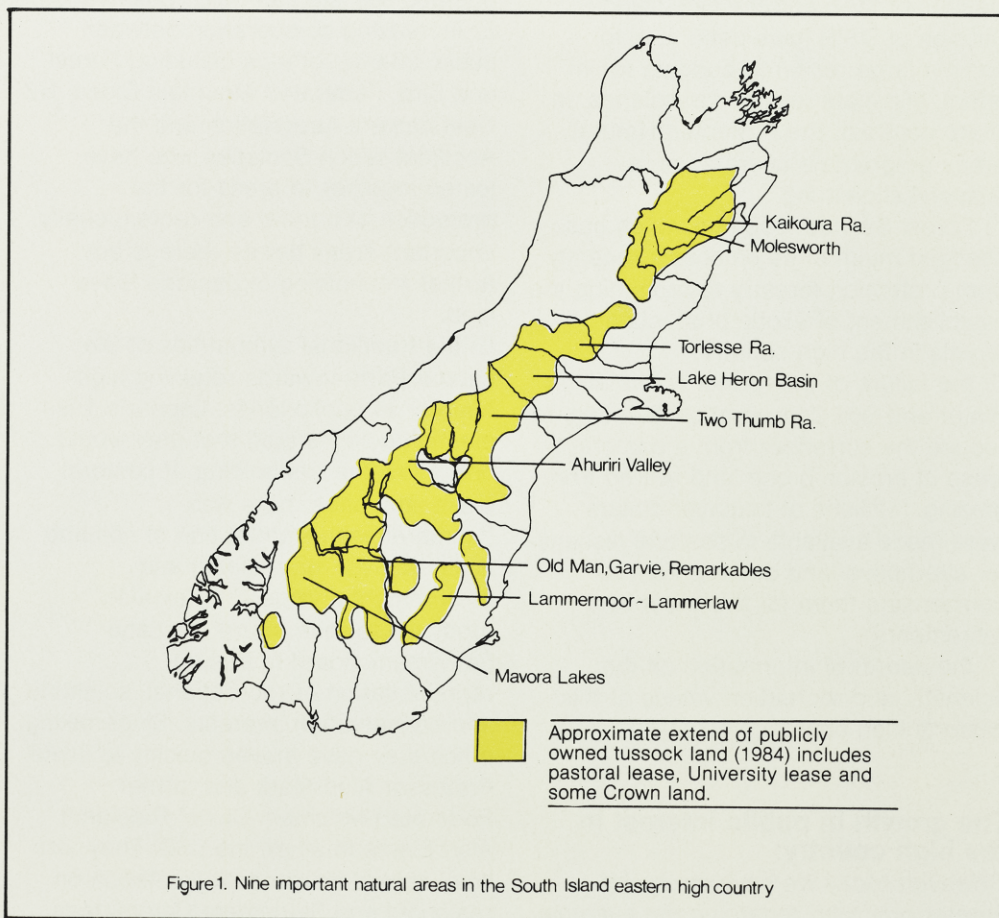


Figure 1. Nine important natural areas in the South Island eastern high country