

The overall impression is that Jamie is dealing with a massive amount of both minute and massive data elements. Yet, we should expect a novel picture to emerge from his thesis of the pre-human vegetation habitats of birds, albeit compromised by the birds' selective use and the differential preservation of those plants. He tantalised us with emerging evidence for a raft of regionally- and nationally-extinct birds of forest, treeland, and scrub vegetation.

Flora of Macraes and potential skink/plant interactions in a changing environment. 22 Feb 2006

Allison Knight

Mike Thorsen, DOC, has helped identify a surprising 328 native and 72 exotic plant species in Macraes Reserve, which sits on the edge of the Central Otago dry country. Twenty eight nationally threatened or at risk species hang on in this mosaic of pasture, tussock grassland, shrubby gullies and ephemeral wetlands. Lichen-covered schist tors are one of the last hide-outs of two impressive and nearly extinct skinks, the huge giant skink and the large black and yellow Otago skink. These have hung on despite Maori burnings, the extinction of large browsing birds, pakeha farming, and introduction of many predators.

These days a predator-proof fence keeps out all ground predators and all browsers except rabbits. But is the resultant increase in tall tussock, kanuka and broadleaf helping the nearly extinct skinks and the rare and endangered plants? This could change the pattern of plants, availability of berries and insects, shade the tors and reduce the amount of sun available for thermoregulation and change the ease of travel between tors for the skinks.

Shading of rare and endangered plants could also be a problem, as the ephemeral wetlands in the fenced area are already being invaded by weeds such as the tall sedge, *Carex ovalis*. The tiny mouseling, *Myosurus minimus*, a rare spring annual, is already doing better in areas which are still grazed, such as the Crater. Under shady overhangs grow the rare native grass, *Simplicia laxa*, the threatened forget-me-not, *Myosotis tenericaulis* and the prickly shield fern, *Polystichum vestitum*. There was a suggestion that some of these plants had found refuge in these dry shady places as their habitat on the dry shady forest floor disappeared. Graeme Loh suggested that a decrease in frost with recent climate change, not just the removal of browsers, could have contributed to the emergence of frost-tender trees such as broadleaf.

One wonders whether excluding the browsers along with the predators is the optimum strategy for protecting the skinks or the threatened plants. Would it be possible to erect a simple stock fence across some of the predator proof area, to allow some controlled browsing, particularly of the ephemeral wetlands. This might protect some of these threatened species from being shaded out and give them another chance.