



Fig 7

A unique tarp ecosystem set on an ancient terrace adjacent to the Awapatu Stream. The terrace and tarp function as a flood fan for the tributary Kaimaikuku Stream. Fluctuating water supply to the tarp produces seasonal inundation of the littoral zone, providing optimal habitat for the nationally endangered grass *Amphibromus fluitans* and the rare composite in the North Island *Gnaphalium ensifer*. (Photograph 7 May 90)



Fig 8

Concentrated horse use of the tarp margin pugs the littoral zone, fracturing the prostrate turf habitat of *Gnaphalium ensifer* and the mud substrate of *Amphibromus fluitans*. (Photograph 7 May 94)



Fig 9

A four-year old enclosure plot erected on a mesotrophic wetland of the Awapatu basin, showing visibly obvious vegetation response to horse exclusion. *Schoenus pauciflorus* has rapidly increased in stature along with an early surge of exotic grasses such as Yorkshire fog and sweet vernal, but with no concomitant loss of indigenous biodiversity. (Photographed 7 May 94)

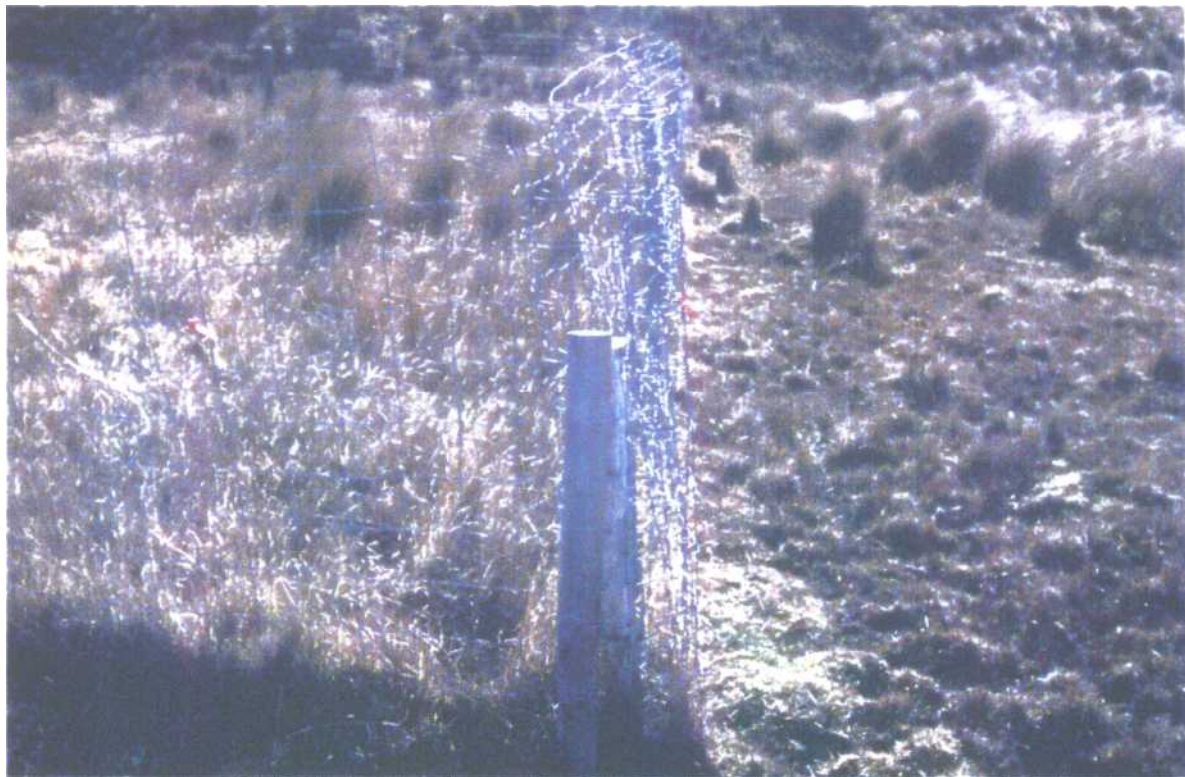


Fig 10

A conspicuous increase in stature of wetland vegetation with a four year release of horse grazing pressure. Red tussocks have survived grazing because they are less preferred than dominant *Schoenus pauciflorus* on low-fertility or oligotrophic sections of the wetland. (Photographed 7 May 94)



Fig 11

Some plateau tussock grasslands are preferred horse habitat. A red tussock/ hard tussock grassland enclosure at Motumatai with closely cropped hard tussock marking a degradational loss of red tussock. (Photograph 2 May 94)



Fig 12

Red tussock in the same enclosure (Fig 11) is well on the way to regaining its former stature and cover dominance in the competitive interplay with hard tussock, and inter-tussock species in a 14-year absence of horse grazing.



Fig 13

Hedged hard tussock and low-density mature red tussock contrast with taller juvenile and mature red tussock and hard tussock after 10 years of horse exclusion in a Motumatai plateau enclosure plot. (Photographed 11 Nov 89)



Fig 14

A further four years of horse exclusion has reduced the stature and density of hard tussock in the foreground and apparent stature and vigour of red tussock in the background (cf. Fig 13). Red tussock has increased further in stature inside the enclosure. (Photograph 2 May 94)



Fig 15
Decomposing bases of re tussock and an exotic grass sward signal intensive horse use of this Motumatai damp stream channel, a preferred horse habitat. (Photograph 3 May 90)



Fig 16
Broad Valley floors with damp depressions sustain heavy use by horses, eliminating tussocks, as here in the Awapatu basin. (Photograph 5 May 94)



Fig 17
Heavy horse use of red tussock grassland bordering beech forest not only induces an exotic grass turf in the inter-tussock spaces, but also progressively eliminates the tussocks themselves through cropping, wrenching, and trampling.



Fig 18
The degradational end-point of intensive horse use of many meso-eutrophic wetlands in the Awapatu basin. Exotic species such as *Juncus articulatus* and Yorkshire fog now dominate a system that is hydrologically, geomorphically, and floristically grossly modified.