botanical significance and as the last significant example of the natural grasslands that once stretched from Rotorua in the north to the northern Ruahine Range in the south. Only 10% of the 660,000 hectares of natural grassland present in 1840 remains today.

Maori fires removed the original forest cover of the upland plateaux of the Moawhango area. Relict pockets of beech (mainly mountain beech with some red and silver) and kaikawaka survive on south facing sites and in damp valleys. In areas burnt in early European times, shrublands of manuka and monoa prevail at lower altitudes and, at higher altitudes, the shrub species *Dracophyllum recurvum, Brachyglottis bidwillii,* and *Hebe tetragona*. Extensive tussock grasslands comprising red and hard tussock cover areas burnt more recently. In the floors of the basins in this undulating terrain are hard tussock grasslands. These basin floor sites have probably never supported forest since the last glaciation and are centres of outstanding conservation value because they were the sites from where the tussocks dispersed when fire deforested the region.

Valley floor wetlands such as this tarn in the Awatapu valley are the habitat of a number of rare or special native plants. Such vulnerable habitats are severely damaged by horse trampling and grazing. Photo: Geoff Rogers, FRI

The Department of Conservation discussion document on the horses notes that:

> "The wild horse range encompasses a unique range of basin floors, wetland and flush zone habitats and contains many outstanding botanical and ecological features. The high fertility flushes fed by ground water seeping from the underlying marine sediments, the extensive blanket bogs capping rounded greywacke ridges and the extensive basin bogs support many of the at least 32 plant species, with important biogeographic limits, present."

A quagmired wetland.

Trampling and grazing by the burgeoning horse population is seriously degrading these natural plant communities. The heavy grazing of the hard tussock grassland in the basins is gradually eliminating the hard tussock and favouring the spread of weeds such as Hieracium and exotic grasses. The DoC report summarises Dr Rogers' conclusions of the environmental impact of horses as follows:

> "The northern Moawhango is the only example of undulating ridge and basin topography in the North Island. The region supports by far the highest concentration of biogeographically significant plants in New Zealand. Five species are suffering damage by horses that, in the long term, threatens their survival. Because of intensive grazing pressure, many tussock communities about water courses have been severely modified or eliminated. Furthermore, many mires, seepages, and other riparian microhabitats are being severely damaged by trampling and grazing. The spread of weeds, mainly *Hieracium*, heather and exotic grasses is enhanced by all facets of horse disturbance including grazing, trampling and the creation of dung heaps. Unique flush zones also suffer gross modification by trampling and grazing."

Dr Rogers points to the intermontane basin floor of the Argo Valley as an area where horse and stock grazing has eliminated the hard tussock. Basins to the north will suffer a similar fate if horse grazing continues.

The natural wildlife values of the tussock grasslands are unknown and are not mentioned in the DoC discussion document. Evidence from elsewhere suggests that the tussock grasslands and shrublands will be just as important for invertebrate conservation as they are for botanical conservation. They are likely to contain the best remaining populations of insects associated with scrubland and tussock grassland vegetation that characterised wide areas of the North Island during cold, glacial periods in the past. Native birds present include pipit, paradise duck, banded dotterel, blue duck and the New Zealand falcon, a declining species.

In summary, the Moawhango Ecological District has botanical, scientific and landscape values of outstanding national significance warranting their total protection. Many of these features are unique to the area. The values are such that the Moawhango grasslands would be a worthy addition to the Tongariro World Heritage Area, which presently covers only the Tongariro National Park, or to the Kaimanawa Conservation Park.

were decapitated, their headwaters disappearing into tunnels of the Tongariro Power Scheme. Native forest logging in the adjacent Tongariro State Forest, where my father worked as a bushman, was coming to an end as the forests ran out of timber. Subsidised farm development swept aside the natural vegetation and exotic forestry spread from the eastern shores of Lake Taupo into the Rotoaira basin.

If sentiment dictated, the horses would be given a special value as part of the heritage of the volcanic plateau. Yet, the horses do not belong with the blue duck, kaka, totara or tussock, but with the heather, contorta pine, broom, deer and the Caterpillar tractor – alien elements modifying and degrading the natural ecosystems.

The exploits of the horse catchers generated colourful yarns, with the facts becoming distorted over the years and turning into legends. The October issue of North and South magazine recently featured a piece of crusading journalism on behalf of the horses in which legends have become myths. My father is credited in the article with having transformed two of the brumbies, turning one into a Tokyo Olympic showjumper and the other into a Horse of the Year title winner. Two of the horses he broke-in did achieve such fame but they had rather mundane origins, with the Olympian being bought out of the Taumarunui saleyards rather than starting life as a mountain-dwelling brumby.

Yet, forgetting the myths, there is no doubt horse catching was an exciting existence. The most celebrated incidents were the chases for a seemingly uncatchable cream stallion. The young horse somehow dodged nooses, tranquilliser darts and blockades until my father bought a powerful staying hack and ran the feral horse to a standstill. A New Zealand western, the 1981 film 'Wild Horses', was loosely based on the chases for the young cream horse (I just don't recall the fights or the women of the movie).

True to its domestic origins, the horse was broken-in in a couple of days after its capture to become a likable, but self-willed pony named Smart Pants. He became my hunting horse and for several years carried deer out from Tongariro forest. Returning with him to the tussock once, I was struck by his skill in gently tugging on the flower stalks of the mountain daisies till they parted from the presumably less palatable basal leaves. Here lies the problem. Horses, wonderful animals that they are, have no place in the last remaining tussock grasslands of the North Island with their suite of vulnerable herbs and native grasses.

Kevin Smith