

## Tussock Grassland Conservation Park Proposed in Otago

New Zealand's first tussock grassland conservation park is being put together in Otago by the Department of Conservation. The park is being formed in large part from lands surrendered to the Crown on the Lammerlaw and Lammermoor Ranges, inland from Dunedin.

To be named Te Papanui, this is also the first conservation park to be formed by DoC since its establishment in 1987. Altogether some 17,000 hectares of high country will be included.

Te Papanui is technically mountain-top country, but it is quite unlike the steep slopes of the Southern Alps. Instead these mountain ranges are extensive, flat-topped areas, worn down by erosion into an upland plateau. Tussock grasslands sweep over the subdued landforms; and there is little exposed rock, unlike the tor-topped ranges further inland. Among the tussocks, fingering water seepages, peat bogs and tarns act as a giant sponge, absorbing the southwesterly rains that dominate the climate.

Run-off from this moorland-like tableland is therefore slow and regular. Stormwater has little energy, and the drainage pattern is gently and shallowly etched, like the branching pattern of trees.

The source of land for Te Papanui is mixed, but a large part comes from a review of the Crown leases governing Halwyn and Castledent stations. More will come when the review of Rocklands station is complete. All combined, these lands will form a contiguous area covering 17,000 hectares. The park will also include existing reserves such as Deep Stream Conservation Area (1899 hectares), Nardoo Conservation Area (925 hectares) and the Halwyn Conservation Area (1300 hectares).

Forest and Bird has given considerable support for the proposed conservation park. Members have publicly advocated for the formal protection of Otago tussock grasslands for many years.

Recently the Dr Marjorie Barclay Trust, administered by Dunedin Forest and Bird, helped purchase the Halwyn block, comprising 1300 hectares, to be part of the proposed park. The Miss E.L. Hellaby Indigenous Grasslands Research Trust, chaired by Prof. Alan Mark, also contributed to the purchase of the Halwyn block.

The newly acquired land is located north of Lawrence and comprises tall tussock land with a significant shrubland component, including areas of

Hon Sandra Lee, said when announcing the purchase of the Halwyn block by the Nature Heritage Fund.

Viewed as a unit, Te Papanui is a sweeping, undulating plateau. The dense tussockland of *Chionochloa rigida* grows on deep loess soils that accumulated at the end of the last glaciation. In its shelter grow many tiny plants, specially adapted to the harsh environment. In places, stock grazing and fires have had their influence on the vegetation, but the humid climate bestows a resilience to native plants which still form a landscape of outstanding natural character. A sense of remoteness and antiquity is enriched by remnants of bogpine, Hall's totara and papauma *Griselinia*

finding in the gold rush days.

The insect fauna of the Waipori Ecological District, which covers the ranges, is of national importance with 511 species from some 13 orders. Some species are restricted to the ranges or are rare. The local day-flying caddisfly *Tiphobiosis* occurs here, as does the brown form of the large weta species *Hemideina maori*. Colourful day-flying moths, 18 species in total, are a feature of the herbfields and snowbanks.

Common lizards and skinks occur throughout the ecological district with jewelled geckos found in the catchment of the Lammerlaw Stream.

The area is of crucial importance for its water yield. It supplies approximately 70 percent of Dunedin's water. It is



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Tussock grassland of the Lammermoor Ranges, typical of the Otago high-country to be incorporated in the proposed Te Papanui conservation park. At left, a new species of moth *Orocrambus geminus* was described from the snow tussock in 1991.

bogpine at high altitudes, sedge-rush wetlands and sphagnum bogs.

'Tussock grasslands are an essential element of New Zealand's landscape ecology and culture, but historically are poorly represented in the parks and reserves system,' the Minister of Conservation,

*littoralis*, which recall a more woody vegetation in the past.

An evocative feature is one of the rare rock outcrops, the 'Ship at Anchor', which has a moat of water around three quarters of its circumference. It is a point of reference for the surrounding countryside and has historic values as a marker for route-

also the source of the Taieri, New Zealand's fourth longest river, which flows for much of its length through areas where water is in short supply.

The Otago Conservation Management Strategy, which provides for the development of the park, implies the area will be managed for its remote