



Above: Droplets of water collect on this slim snow tussock (*Chionochloa macra*) in a dense cool fog. Research carried out on the Otago Block mountains has shown just how important intact tussock grasslands are for collecting water in this way. Photo: Mike Harding.

Left: This magnificent wetland and the surrounding slim snow tussock grassland on the southern Old Man Range are now protected as the 4500-ha Bain Block reserve, based on PNA survey recommendations. Photo: Alan Mark.

tract to the Department of Survey and Land Information, with the Department of Conservation retaining oversight for conservation and recreation values.

Under the Land Act, consents are required for developments such as roading, cultivation, tree planting, burning, wetland drainage or commercial recreation. These activities are privileges, and are not allowed as of right. But over time, these restraints have been increasingly ignored or challenged by runholders. The Act also requires land to be "properly farmed" in a "diligent and husbandlike manner" (s.99). Contemporary concepts of species diversity, representativeness, and ecological sustainability are not contained in the 1948 Land Act - a major constraint in tackling the current land degradation crisis.

Crown revenue from the leases, about \$670,000 in 1990, is less than the cost of administration. The Land Act and its administration has become increasingly ineffective and a review of the Act is long overdue.

Some attempts have been made to ratio-

nalise pastoral lease land. Widespread concern for soil erosion and water quality in the 1940s led to the Soil Conservation and Rivers Control Act 1941, and later a government policy of retiring steep, erosion-prone land from grazing. Under this Act many lessees negotiated Conservation Run Plans which subsidised the development of lower altitude parts of the run in exchange for the retirement of the upper slopes from grazing.

Millions of taxpayers' dollars poured into these 'conservation' plans which, in many instances, were little more than subsidised development programmes. Land unsuitable for grazing, such as high open tops, steep scree and rock slopes, and sensitive alpine cushion bogs and herbfields, was retired from grazing, while lower altitude land, some of which also had high conservation values, was 'improved' with subdivision fencing, shelterbelts, irrigation, cultivation, oversowing and topdressing. Moreover, in a number of cases the retired land was not surrendered back to the Crown as required and the runholder retained occupation rights.

The major nature conservation underway at present is the Protected Natural Areas (PNA) Programme. This programme identifies priority areas for protection covering the full range of plant and animal communities in each ecological district. A number of ecological districts in the high country have been surveyed and the formal protection of the identified areas is receiving greater attention. But, despite the Department of Conservation's hard work, progress is frustratingly slow, and few worthwhile representative reserves have been protected.

DoC recently protected two large areas in Central Otago. One is the Bain Block of 4,500 ha on the southern Old Man Range with a representative altitudinal sequence from 1600m to 760m. The other is 1,400 ha of high altitude *Chionochloa macra* grassland with associated wetlands on the northern Dunstan Mountains. But many negotiations are on the basis of continued grazing, despite increasing evidence of the detrimental effects of current land management practices on natural values.