

The wetland maze of the Great Moss Swamp, Lammermoor Ranges, steadily disappearing beneath the filling Loganburn Reservoir. Few people were aware of this environmental catastrophe, part of the Maniototo irrigation scheme.

# LAMMERMOOR-LAMMERLAW

## A TUSSOCKLAND NATIONAL RESERVE IN EASTERN OTAGO?

By Brian Patrick\*

Photo: Quentin Christie, Soil Bureau

The Lammermoor-Lammerlaw ranges lie on the eastern edge of Central Otago and rise gently to just over 1200 metres. They are the source of the Taieri River and contribute to the flow of the Clutha to the south.

The broad, poorly drained summit is a mosaic of extensive tall tussock and numerous fragile cushion bogs. The gully systems harbour diverse shrub communities while the southern slopes have a few relic stands of beech forest that survived both Polynesian and European burning.

The Teviot Swamp and the Great Moss Swamp on the range are important wetlands that have been transformed into lakes, the latter recently to form the Loganburn Reservoir, part of the Maniototo irrigation scheme.

Upgrading of the road to build the Loganburn Dam has assisted agricultural change of the adjoining area, and development is threatening to spread south into the heart of the Lammermoors. The lessee of Rocklands Station, which extends across much of the Lammermoors, has a major development programme underway. He recently applied for a permit to burn the Lammermoors' western slopes. Burning, followed by over-sowing and increased stock will destroy the snow tussock and jeopardise future options for the area.

Immediate action is needed if the Lammermoor-Lammerlaws are to be safeguarded against future destructive development. These cold, wet,

windswept ranges are unsuited for agriculture. If the upper slopes were fenced as a reserve, farmers could concentrate on farming the better country below about 900 metres. The reserve would benefit farmers by maintaining a well vegetated and stable upper catchment. Furthermore, the tall, fine leaves of the natural tussock cover intercept frequent fogs, thus supplying additional water. It is the water from these ranges that provides Dunedin's municipal supplies, hydro-electric power and irrigation water for the dry Maniototo basin.

The ranges are of great scientific interest. On the southern slopes of the Lammerlaws, scientists, spearheaded by Professor Alan Mark, want to preserve an altitudinal sequence of snow tussock in the Nardoo Stream catchment. Their efforts have been frustrated by an unsympathetic Land Settlement Board which has opposed reservation of lower altitude parts of the grassland sequence.

The natural diversity of the ranges is high. Minimal research has already turned up two new moth species that are restricted to these ranges, one an *Orocrambus* species found amongst sedge-filled bogs, the other a *Notoreas* species that flies rapidly in the hot sunshine over its larval food-plant, an undescribed species of *Drapetes*.

The area is at a biogeographic crossroads. Its plants and animals show links with those north to Danseys Pass and the Rock and Pillar range, inland to

the Old Man Range, eastwards to the Maungatua Range and southwards to the Invercargill region.

The Lammermoor-Lammerlaws are also scenically magnificent. Imagine ourselves without access to such areas as these, areas of vast tranquility with no network of roads, tracks and sign-posts? They are ideal for cross-country skiing, but all recreational activities must contend with the area's remoteness and rapid climate changes.

I believe the best status for these ranges would be as a National Reserve. Classification as a National Reserve must be preceded by designation as some other kind of reserve, so elevation to a scenic reserve as soon as possible is needed if we are to conserve this important tract of our natural heritage.



The moth, *Lythria siris*, occurs only on the Lammermoor-Lammerlaws, Old Man and Rock and Pillar Ranges of Otago.

Photo: B Patrick

\*Society member, amateur entomologist