

pumice ash showers which were thought to have eliminated these snails from the volcanic plateau.

Introduced animals

A variety of introduced animals have found their way to or been liberated in the forest park since the latter part of last century. Red deer, sika deer, and sheep, together with the numerous wild fires in Maori and European times, have considerably modified the vegetation.

By the 1930s the deer population had increased so greatly that control operations were carried out to reduce the depletion of vegetation and trampling of soil.

Deer numbers are now at a level in most of the park where control can be achieved by recreational hunters. A Recreational Hunting Area has been gazetted over 24 000 hectares of the northern part of the park so hunters can follow their sport without interference from commercial operators.

Recreational hunting will remain the only form of control in this area unless deer numbers increase to a level where unacceptable damage is caused to the vegetation.

The Sika (Japanese) deer herd, which also inhabits the neighbouring Kaweka Forest Park, is the only herd of this species in the southern hemisphere. Sika are keenly sought after by hunters for their recognised trophy heads and skins.

Red deer are found throughout the park in low to moderate numbers. In the main areas of high Sika population though, red deer are scarce, due apparently to the aggression and close feeding patterns of the Sika deer.

Wild pigs are only found in low numbers around the park margins. Their numbers remain fairly static, kept in check by local hunters. Rabbits reached pest proportions in the open tussock country about 1920 and control was carried out, but now they are only found in isolated pockets and present no threat to forest or neighbouring farms. Hares are common throughout the open country from valley floors to highest ridges.

Possums are found throughout the park. Numbers are generally low in the extensive beech forests which contain a limited range of tree and shrub species palatable to possums. Higher populations exist in the mixed beech/podocarp forest along the western perimeter and where the beech forest has been modified by logging in the north-east.

Wild horses have been present in the area around the headwaters of the Moawhango River for more than a century. Now numbering less than 200, the horses are the remnant of a herd which once grazed an extensive area of the volcanic plateau. They show characteristics similar to wild horses of Britain and Europe which are thought to be an adaptive response to the environment in which they have lived for so long.

The herd is recognised as unique and of

such significant scientific interest as to be worthy of preservation. Unfortunately it has been threatened with extinction recently from indiscriminate slaughter and capture. The Kaimanawa wild horses are now protected under the Wildlife Act 1953 which provides severe penalties for offenders caught shooting, capturing, or disturbing them.

Ecological areas

Ecological areas are set aside to preserve representative ecological communities and rare or unique natural features. They may include landscape features, plant or animal life.

These areas are made available for scientific study of natural processes and environmental changes as well as providing genetic pools for indigenous plants and animals.

Five ecological zones identified within the Kaimanawa Forest Park management plan were selected to give a balanced representation of the major forest associations within the park.

They were, however, not of such unique character as to justify forest sanctuary status.

The proposed ecological areas within the park are as follows:

1. Tiraki Ecological Area (2000 hectares)
 The proposed Tiraki reserve comprises almost pure red and silver beech forest from 600m to 1150m a.s.l., characteristic of the north-east zone of the park. Podocarps and hardwoods other than kamahi are extremely rare. Mountain and black beech appear very occasionally on exceptionally dry sites.

2. Ecology Stream Ecological Area (3800 hectares)
 The forests in the central and southern zone of the park westward from the Ngaruroro catchment to the Umukarikari range are entirely mountain beech from 800m to 1350m a.s.l. The proposed Ecology Stream reserve is representative of this zone and includes the whole catchment of this stream within the park boundary, plus some minor tributary catchments of the Rangitikei River, extending above treeline to the ridge crest at Makorako (1727m) the highest point in the park.

3. Waipakihi River Ecological Area (1200 hectares)
 The proposed Waipakihi reserve represents the regionally unique mixed beech forest pattern of the lower Waipakihi catchment. It contains silver beech/mountain beech and adjacent red, silver, and mountain beech forest in the catchments of two minor tributaries of the Waipakihi River flanking the Umukarikari range.

It is especially significant for silver beech, since this species does not recur for considerable distances east or south.

4. Waiotaka Ecological Area (C. 5000 hectares)
 In contrast to the other three proposed

scientific reserves, which highlight differing patterns of almost pure beech forest types, the proposed Waiotaka Ecological Area comprises a large segment of the podocarp-hardwood and podocarp-hardwood-beech forest characteristics of the north-west sector of the Park.

The core of this proposed reserve is in the Waiotaka Valley, where there is an altitudinal sequence from lower forest margin regenerating podocarp-hardwood forest, through large areas of valley-side rimu-miro-matai forest with local admixtures of red beech, to higher belts of red beech — Hall's totara-kamahi or red-mountain beech, up to a zone of pure mountain beech at the head of the valley.

It is proposed to extend the reserve beyond the tree-line in the south to cover montaine shrubland, herbfields and wetlands on the open country at the north end of the Umukarikari Range. Pink pine, which is extremely rare in the Kaimanawa region, occurs at the tree line here.

On the north, the proposed Ecological Area extends across the lower Waimarino Catchment, to encompass mixed podocarp and podocarp-red beech stands on the pumice breccia flanking the greywacke foothills, and part of the regionally unique pure red beech forest of the Upper Waiotaka.

This northern extension also includes toatoa and tanekaha, the first-named on the line of its national southern limit and the second on the line of its North Island southern limit. Especially abundant native birds in the Waimarino Valley include kaka and parakeets.

Recreation

The Kaimanawa Ranges have been popular for hunting, tramping, and their very good fishing rivers, for years. A good choice of routes is available, both loop tracks and complete crossings of the park.

Sudden changes of weather and extreme conditions often occur and can be traps for the unwary or the ill-prepared.

Kaimanawa Forest Park also has a lot to offer family groups and casual visitors and this type of recreational use is expected to increase.

Access roads from the Desert Road built for the Tongariro Power Development Scheme will be maintained and available for public use. As restoration work is finished and the construction forces move out more picnic and camp sites and short bush walks will be developed on the fringes of the park at these road ends.

Another attraction for the casual visitor is the 18km forest drive along Clements Road. This is reached via Taharua Road from the Napier-Taupo highway. This pleasant drive through attractive beech forest offers picnic and camp sites as well as access to the park interior.

Production

An area of 2700 hectares in the northern part of the park is recognised as having