

# The Remarkables National Park

*'... areas of New Zealand that contain scenery of such distinctive quality, ecological systems, or natural features so beautiful, unique, or scientifically important that their preservation is in the national interest ...'*

*New Zealand National Parks Act 1980*

# The Remarkables National Park

Behind Queenstown lies a land rich in cultural history and in biodiversity. It's a land that offers diverse recreational activities in all seasons. It's one of the most distinctive landscapes in New Zealand. This is the land of The Remarkables, the Tapuae-o-Uenuku/Hector Mountains, the Garvie Mountains and the Kopuwai/Old Man Range.

The scenery, the ecological systems and the natural features of this area are indeed *beautiful, unique and scientifically important*, to a degree that makes them worthy of national park protection.

At present, only a patchwork of public conservation land protects this region of iconic peaks and wilderness landscapes. To protect its special and widely acknowledged values, it needs to come under unified national park management.

## The national park vision

A national park will protect the high conservation, recreation and historic values of this Otago/Southland mountain landscape.

### Its core components will be:

- > The Remarkables
- > the Tapuae-o-Uenuku/Hector Mountains
- > the Garvie Mountains
- > the Old Woman Range
- > the Kopuwai/Old Man Range
- > the upper Waikaia Valley

The historic element of this proposal celebrates the area's discovery and long habitation by Māori, as well as a rich heritage of gold mining and high country farming.

## New Zealand's national park network

In the 130-year history of New Zealand's national parks, nearly all our iconic high mountain landscapes have received formal recognition and protection in perpetuity for their intrinsic worth to the people of New Zealand.

The mountains of Tongariro were the first to be recognised in 1887, beginning our commitment to the National Park concept. In 1900 we protected Mt Taranaki to limit widespread land clearance. Both of these early parks needed separate Acts of Parliament to create them.

The high mountains of Westland and Aoraki/Mt Cook, as well as Fiordland, were set aside soon afterwards. Various governments delayed formal protection until the unified National Parks Act was passed in 1952. The mountains of Earnslaw and Aspiring came under this umbrella in 1964 with the creation of Mt Aspiring National Park.

Although The Remarkables are the backdrop to Queenstown, the centrepiece of New Zealand tourism, they are alone among New Zealand's iconic mountain areas in lacking national park status.

The eastern South Island, where the rain shadow of the Southern Alps creates unique biodiversity and landscape, has no protected lands of national park status. Areas of this dry grassland set aside as public conservation land have generally been overlooked and much has only minimal protection as 'stewardship land'. The Remarkables National Park will remedy this significant gap.

Cover: On the summit of Double Cone, The Remarkables. Photo: Guillaume Charton



# Why a national park?

This proposal is not new. In 1977 Alan (now Sir Alan) Mark made a similar proposal to the National Parks Authority. A further recommendation was made for The Remarkables and Kopuwai/Old Man Range to become a national reserve in 1982;<sup>1</sup> and in 1990 Alan Mark, promoted the idea again following the gathering of further information about the area during the Protected Natural Area (PNA) surveys.<sup>2</sup>

The 1990 proposal envisioned a Central Otago Conservation Park covering 146,000 hectares and encompassing the Kopuwai/Old Man, Remarkables, Umbrella and Nokomai Ecological Districts. At that time the park would have overlain 34 high country pastoral runs. Since then many of these have been through tenure review and much of the higher country of the 1990s proposal has been retired from grazing.

Such is the area's recognised value that it was the first high country area to be proposed as a conservation park. Since 2001, ten high country conservation parks have been created across the South Island. Returning to where this movement started, with land tenure changes and a greater appreciation of the beauty and uniqueness of these ranges, a Remarkables National Park would be the culmination and pinnacle of this protective process.

A major driver for this proposal is the recognition that tussock grassland ecosystems have been seriously under-represented among our protected natural areas – especially in the spectacular Otago/Southland highlands.<sup>3</sup>

Double Cone from Wye Creek tarns. Photo: Guillaume Charton









# How does current land status affect this proposal?

The lands in the proposed national park have various classifications, from Crown administered high country to public conservation land.

The NZ Conservation Authority is responsible for investigating any new national park proposal under Section 8 of the National Parks Act. Any such investigation may consider only areas that are held by the Crown as public conservation land. Such areas within the proposal are detailed below.

Any leasehold high country land in this proposal would most likely need to complete tenure review before becoming part of a national park. Tenure review is an entirely voluntary process for the holder of the lease.

## Major areas of public conservation land in the proposal

### Remarkables Conservation Area

The 1998-2008 Otago CMS identified as a priority ecosystem 22,439 hectares of stewardship land, including the most spectacular part of Tapuae-o-Uenuku/Hector Mountains and the western face of The Remarkables.<sup>4</sup> This 2000 metre face is one of the most recognisable and iconic landscapes in New Zealand, forming the scenic backdrop to Queenstown. It is thought to be a fault scarp that has been modified and eroded by the Wakatipu glacier.

The eastern side of the Tapuae-o-Uenuku/Hector Mountains, sloping into the Nevis Valley, is notable for tarn-filled basins valued for their flora and fauna, for summer walking and camping and for winter ski-mountaineering.

In 1997 the Department of Lands and Survey investigated The Remarkables for protection as a national reserve after the Mt Cook Group applied to develop the ski-field. Lands and Survey recommended that 20,000 hectares become a scenic reserve embracing most of the alpine zone of the Hector Mountains and Remarkables. The Wye Creek area has similarly been proposed as a scenic reserve. However, successive governments have failed to act on the proposals.

### Waikaia Conservation Area

The Southland CMS gives this 11,712 hectare remnant of eastern red beech forest, once common on either side of the Clutha River, high conservation priority. It has also been proposed as a 'mainland island' because of its diverse forest wildlife.

In the 1870s millers established two sawmills in the Waikaia Forest, including a steam-powered mill at Piano Flat. Despite its low productivity and poor timber quality, the NZ Forest Service proposed limited logging of the forest until the late 1970s.

In 1886-87 a road, now called the Waikaia Bush Road, was pushed through the forest to link with a gold miners' route to Potters and over the Kopuwai/Old Man Range to the Clutha Valley north of Roxburgh.

The popular Piano Flat public camping area is notable for an historic children's playground that has recently been restored. Adjoining it is a formal Nohoanga camping site recognised in the Ngai Tahu Claims Settlement Act 1998. Piano Flat itself is held as a 44 hectare recreation reserve that is well maintained by DOC.

Beech Forest, Waikaia Conservation Area. Photo: Grant Dixon



## Rastus Burn Recreation Reserve

This recreation reserve of 669 hectares, gazetted in 1980 under the Reserves Act 1977, occupies the headwaters of the Rastus Burn beneath the northern aspect of Double Cone (2324 m). Its boundary extends to but does not include Lake Alta. The Reserve was created to allow the Mount Cook Group to develop The Remarkables ski-field. Southern Alpine Recreation Ltd holds easements and licences to operate the ski-field. The reserve is popular for summer walking and for year-round climbing on Double Cone.

## Old Woman Range Conservation Area

The Otago CMS<sup>5</sup> identifies as a priority ecosystem these 3,493 hectares of stewardship land covering much of the Old Woman Range. Formerly part of the Cairnmuir and Craigroy leases, the area is part of the spectacular Central Otago domed plateau at an altitude of about 1600 metres. Spectacular schist tors dot the flanks of the range. Duffers Saddle where the tops merge into the Carrick Range, has impressive tors. Throughout winter the plateau is under snow, which melts in spring to reveal an expansive tundra-like landscape unlike any other in New Zealand.



The Obelisk or Kopuwai, Kopuwai Conservation Area. Photo: Rob Brown

## Kopuwai Conservation Area

This area of 8,049 hectares covers much of the crest and upper slopes of the Kopuwai/Old Man Range including land that was formerly within the Earnsclough high country lease. The Otago CMS identifies this as a priority ecosystem. It adjoins and is an extension of the domed plateau of the Old Woman Range.

The most significant tor on the range, the Obelisk or Old Man Rock, is known by Ngai Tahu as Kopuwai and the area around the tor is formally recognised as the Kopuwai Historic Reserve. It is vested in Ngai Tahu and listed as a wāhi taonga in the 1998 Ngai Tahu Claims Settlement Act 1998.

## Remarkables Ski-field access road

This 22 hectare Government Purpose Reserve is a public access road held under the Reserves Act 1977.



Celmisia haastii, Wye Creek. Photo: John Barkla

# Current status of high country grazing leases administered by Land Information New Zealand (LINZ)

Many of the properties that formerly used these mountain lands for summer grazing as Crown pastoral leases— Ben Nevis, Glen Nevis, Wentworth, Mt Rosa, Kawarau, Happy Valley, Craigroy, Cairnmuir, Gem Lake, Carrick and Earnscliffe Stations—have completed the tenure review process. Continued grazing of nearly all of the higher areas had become uneconomic, so progression from Crown pastoral lease to a split between economic farmland and public conservation land was logical.

Four Crown pastoral leases contain areas identified in both tenure review and protected natural areas assessments that would form important links between areas of conservation land. Nothing in the National Parks Act excludes Crown pastoral leases from being incorporated into a national park with farming as part of their management. Although such an arrangement would be new to this country it is accepted overseas, for example in the United Kingdom, Italy and Nepal.

**Glenaray Station** is New Zealand's largest high country station, made up of the Glenaray and Whitecomb pastoral leases totaling more than 60,000 hectares. The headwaters of the Waikaia River on this property have been largely retired from grazing, and most farming activity is now concentrated in the homestead area and in the lower country of the Gow Burn catchment.

The station has several highly scenic lakes within glacial cirques on the spectacular eastern flank of the Garvie Mountains. The Crown holds about 103 hectares including the beds of Lake Gow, Lake Scott and Blue Lake under the Scenic Reserves Act 1977. A marginal strip allows foot access up tributaries of the Waikaia River to the outlet of Blue Lake.

Glenaray Station has several huts, many of which are of historic status and worthy of protection in the proposed park. Glenaray Station is currently in the tenure review process. The owners have been careful stewards, so the natural values of the Garvie Mountains and Waikaia headwaters are largely intact.

**Nokomai Station** is a large, historic high country station covering the Nokomai Valley, the eastern headwaters of the Nevis catchment, the western side of the Garvie Mountains and the headwaters of the Mataura River, an area of some 38,000 hectares. The Nokomai Valley has a long history of gold mining, and in the past few years the station has diversified into tourism. In its 150 year history it has had only two owners. The present owners have farmed it since the 1960s.

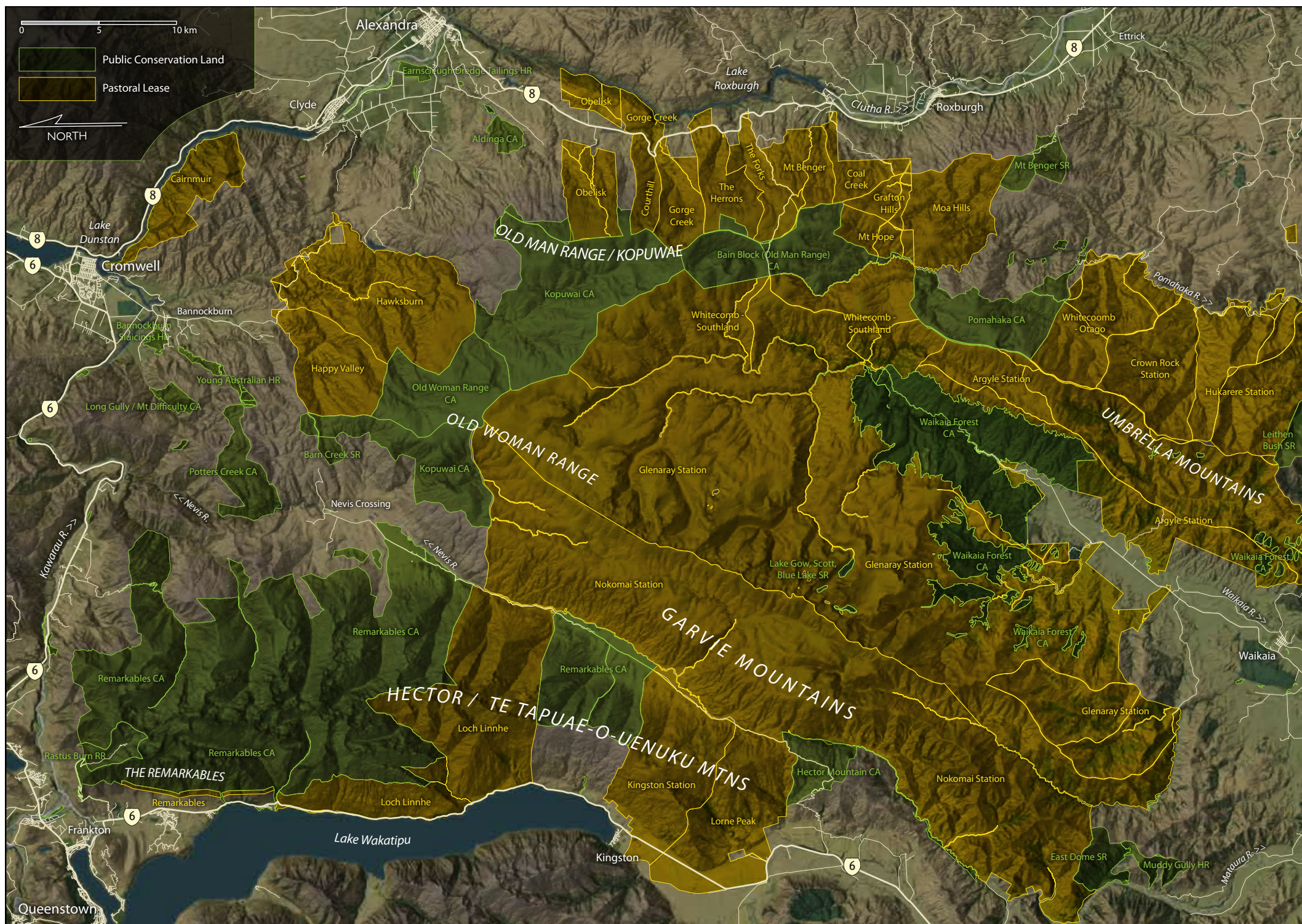
**Obelisk Station** lies on the eastern slope of the Kopuwai/Old Man Range above Fruitlands. The preliminary tenure review proposal for this 2,774 hectare station identifies 1,225 hectares, mostly on the upper slopes, as a potential conservation area. This area should qualify for addition to the national park, which it would adjoin.

**Loch Linnhe Station** stretches from Wye Creek down the southern Tapuae-o-Uenuku/Hector Mountains and into the headwaters of the Nevis River. Much of its 11,000 hectares is steep hill country bordering The Remarkables Conservation Area. Most of the higher country has been voluntarily retired and is managed by DOC, but the remainder is not currently in tenure review.

*The Remarkables, with a crest from 7000 feet to 7600 feet high, rise steeply from the shore of Lake Wakatipu by a series of stupendous declivities, forming a spectacle that for absorbing grandeur is unrivalled in New Zealand.*

*Professor James Park, 1908*







# General Policy for National Parks

DOC's General Policy for National Parks must guide the formation of a management plan for the proposed park.

National park status would not preclude careful farming for the management of specified areas where grazing may help to maintain the tussock grassland. Section 51 of the National Parks Act provides for continued grazing or farming on land within a national park, subject to Section 10.2 of the General Policy. Light grazing by sheep on tussock grasslands below 1,000 metres can be effective for controlling weeds.

In the past, degradation of tussock grasslands below 1000 metres has resulted from managed burning and overstocking, sometimes in combination with pests such as rabbits and hares. Grazing has been reduced, but invasion by woody weeds (especially wilding conifers) is a major problem in some areas, particularly the Wakatipu face of the Tapuae-o-Uenuku/Hector Mountains.

Pastoral grazing above 1,000 metres is generally thought to be unsustainable, and much land above this altitude has been retired in recent years. Wild deer, while important for hunting, must be carefully managed to ensure the environmental impact of their grazing is minimised, this is successfully achieved in existing national parks.

The General Policy allows existing recreational activities such as horse riding and 4WD access to continue with an integrated management plan.

Map: Roger Smith, Geographx Ltd



Wye Creek, Remarkables Conservation Area. Photo: Guillaume Charton



# Conservation Values

## Geology and landforms

A prodigiously slow transformation has produced the remarkable landforms of today from their raw materials, sand and silt eroded off the ancient continent of Gondwana. Buried in an oceanic trench and subjected to immense heat and pressure for 200 million years, they emerged as schist, the basement metamorphic rock of Central Otago. The deeper the sediments were buried the more they changed, so the rock varies in grade from grey, easily split semi-schist to hard quartz-veined schist.

Uplift began about 100 million years ago. The rocks were then worn down over many more millions of years to form the Otago peneplain, a flattish surface covering most of what is now Central Otago. It is the oldest landform in New Zealand. In contrast, the Southern Alps and the Alpine Fault are a mere 25 million years old.

After a long period of quiescence, faulting and folding caused by the pressure of converging tectonic plates slowly raised the original peneplain. Seams and fractures developed in the schist rock as it rose to form block mountains. Wind and water have since eroded the softer and more friable rock to leave harder parts of the schist forming the magnificent tors that characterise the Central Otago landscape. Among the tallest is the Obelisk on the crest of the Kopuwai/Old Man Range. Other distinctive erosional features are the area's deeply incised river and stream gorges. Waterways draining into down-faulted depressions in the peneplain filled them with alluvium that contains gold washed from the quartz veins in the schist.

## The Remarkables and Tapuae-o-Uenuku/Hector Mountains

The western aspect of The Remarkables is one of the most iconic and most photographed mountain views in New Zealand. It is as recognisable as Mitre Peak, Mt Taranaki, Aoraki/Mt Cook or the volcanoes of Tongariro National Park. Lake Wakatipu lies in a glacially eroded valley at the foot of The Remarkables. The glacier that formed it was about 1,800 metres thick, and the lake itself occupies the trench

left by the retreating ice. The dramatic western face of The Remarkables is thought to result both from this glaciation and from vertical displacement on a fault. The Nevis-Cardrona Fault to the east was also instrumental in uplifting The Remarkables/Tapuae-o-Uenuku mountains.

The Rastus Burn and Wye Creek catchments have gentler terrain, but this too shows the signs of glaciation. Lake Alta in the Rastus Burn occupies a cirque below Double Cone, while both branches of Wye Creek have similar glacial features.

## Kopuwai/Old Man and Old Woman Ranges

The Kopuwai/Old Man and Old Woman Ranges are notable for large schist tors, which are most spectacular near the Obelisk on the crest of the Kopuwai/Old Man Range. Tors on much of the Old Woman Range are smaller, but they increase in size around Duffers Saddle and on the Carrick Range. This surreal landscape is unlike anything else in New Zealand. The crest of the Old Woman Range, nearly 1,700 metres above sea level, offers panoramic views over a rolling landscape to the Garvie and Tapuae-o-Uenuku/Hector Mountains. To the east the land falls dramatically to the Clutha River. Weather, vegetation and geology combine to give the landscape of the Kopuwai/Old Man Range a tundra-like aspect.

## Garvie Mountains

The Waikaia headwaters in the south-eastern Garvie Mountains have dramatic glacial landforms: U-shaped valleys, roches moutonnées, moraine ridges, stone drains and impressive cirques with spectacular headwall bluffs. Although relatively small, these features are impressive in the context of the surrounding tussock country. The many lakes and tarns that occupy cirques and nivation hollows help to make this part of the Garvies landscape one of the most outstanding in the region.

## Waikaia Valley

The east and west branches of the Waikaia River tumble steeply among fallen schist boulders in deep canyons cut into the south-eastern Garvie Mountains. Tributaries such as Gorge Creek are incised as much as 500 metres below the peneplain surface.



## Nevis Valley

The Nevis Valley separates the Old Woman and Garvie Ranges from the Tapuae-o-Uenuku/Hector Mountains, and the Nevis River drains the entire catchment into the Kawarau River. The Nevis-Cardrona fault line on the west side of this valley marks the western limit of the surviving Central Otago peneplain. Beyond, uplift and erosion have removed all trace of the peneplain; The Remarkables are the first of the jagged ranges that extend westward to the Main Divide.

About five million years ago the Nevis Valley drained south to the Maitai catchment. Uplift of the Garvie and Tapuae-o-Uenuku/Hector Mountains cut off this exit and a tributary of the Kawarau River cut a gorge southward to the Nevis, capturing its water. This is one of New Zealand's premier examples of river capture. Today we are left with an elevated basin about 700 metres above sea level and largely isolated from the surrounding landscape. The steep gorge draining the Nevis basin is typical of deeply incised gorges in the Central Otago schist country. Similar gorges drain the western Garvie plateau at Roaring Lion and Coal Creek, as well as upper parts of the Waikaia catchment.

Ground sluicing and dredging have modified the floor of the Nevis basin, which traps gold washed down from the surrounding mountains. The landscape has recovered somewhat since gold recovery ceased in the early 20<sup>th</sup> century. A water conservation order (Kawarau Order 1997) protects the outstanding fresh water and recreation values of the Nevis River tributary of the Kawarau River.

Scarlet mistletoe *Peraxilla colensoi*, Waikaia Conservation Area. Photo: John Barkla



## Flora and Fauna

The flora of the proposed national park is extraordinarily diverse. An early investigation into the Garvie Mountains alone yielded no fewer than 360 species spread over 151 genera.<sup>6</sup> The proposed park area is botanically the most outstanding of Central Otago's many mountain ranges.

Predation has much reduced the native fauna, especially bird life, in most of the area. However, sustained pest control (as in the Waikaia and the Wye Creek catchments) has allowed numbers to bounce back. The proposed national park is also home to several rare plant species that are found only here or in the Central Otago mountains generally.

### Snowbank vegetation, fellfields and cushionfields

These distinctive high-alpine vegetation types give the higher tops of the Otago block mountains a low, windswept tundra-like appearance. The commonest species on the most exposed sites is the prostrate shrub, cushion inaka (*Dracophyllum muscoides*). Up to 20 cushion and mat species may also be present, usually including *Raoulia hectorii* and *Hectorella caespitosa*. On sheltered sites a herbfield of short alpine daisies such as *Celmisia viscosa*, *C. brevifolia* and *C. ramulosa* usually dominates, together with blue tussock (*Poa colensoi*).

The Central Otago mountain crests usually carry snow for up to six months, but snow may lie for most of the year in depressions and cirques. These are the habitats of snowbank species, most notably the daisy *Celmisia haastii*, the early-flowering *Caltha obtusa* and several small sedges. Locally, in the upper Wye basin, the small snowbed tussock (*Chionochloa oreophila*) reaches its eastern limit.

Fellfields of stable boulders occupy extensive areas on The Remarkables and Tapuae-o-Uenuku/Hector Mountains and also on the highest tops of the Garvie Mountains. These are the homes of cushion speargrass (*Aciphylla simplex*) and trailing Veronica shrubs (*V. epacridea*, *V. buchananii*), together with the handsome alpine buttercup *Ranunculus buchananii* at its eastern limit.

In the high alpine landscape periglacial activity—severe cold, frequent freeze-thaw cycles, frost heave and prolonged snow cover—forms soil hummocks, soil stripes and solifluction terraces and lobes, most of which are still active. Each supports a distinctive plant community.



## Tussock grasslands

High country tussock grasslands dominate the landscape. They vary in quality; some having suffered badly from overgrazing, burning, and hawkweed (*Hieracium* spp.) invasion, while others are among the most spectacular in the country.

At their best, the tussock grasslands are a mix of copper or red tussock (*Chionochloa rubra*) in localised wetland depressions, with extensive areas of snow tussock grassland on the uplands. These are a mix of narrow-leaved snow tussock (*Chionochloa rigida*), merging (variably with aspect) into slim snow tussock (*C. macra*) at 1,200-1,300 metres.

Above 1,000 metres the snow tussock species dominate exclusively, but in areas of severe degradation shorter blue tussock *Poa colensoi* tends to predominate, often with unpalatable species such as golden speargrass (*Aciphylla aurea*) and large mountain daisy (*Celmisia semicordata*).



## Eastern beech forest

The Waikaia Valley provides the best example of the mixed beech forest that once covered much of central and eastern Otago. It comprises mainly silver beech (*Lophozonia menziesii*) and red beech (*Fuscospora fusca*), with mountain beech (*F. cliffortioides*) dominant at bushline.

The 11,000 hectare Waikaia Forest is one of only three remaining south-eastern outliers of a forest type that was once extensive in Central Otago. The Blue Mountains have similar remnants, while the Catlins have only silver beech; but the Waikaia Valley contains additional species not found in the other areas.

This forest is high among the Department of Conservation's priorities for protection. Its bird and invertebrate populations are relatively high and diverse thanks to sustained pest control over the last 15 years.

## String bogs and patterned mires

An upland area on the southern Garvie Mountains includes some of the most extensive and striking string mire landscapes in New Zealand. String mires form where elongated growing rims ('strings') of peat trap pools on gentle slopes. Peat growth is most active in the strings and in islands within the pools, which grow upward as the pools deepen, forming striking vegetation patterns. String mires are found mostly in periglacial landscapes where snow cover melts in early summer, providing additional nutrients. Dominant plants are commonly the comb sedge (*Oreobolus pectinatus*), species of *Sphagnum* moss and various small herbs and sedges (*Carex* spp.) String mires at the heads of the Roaring Lion and Dome Burn, on Nokomai Station<sup>7</sup>, are of international significance and have been documented in detail.

## Long-tailed bats

One of only two land mammal species in New Zealand, the critically endangered long-tailed bat (*Chalinolobus tuberculatus*) is present in the Waikaia Forest. It is slightly smaller than the short-tailed bat, weighing 8-11 grams. It lives on insects and is thought to have a territory up to 100 square kilometres. This population is of national importance for the future of the species.

Tussock grasslands, Garvie Mountains. Photo: Grant Dixon

## Native fish

The most significant native fish is the Nevis galaxiid (*Galaxias nevis*). New Zealand has 13 galaxiid species that (unlike other whitebait species) do not migrate. *Galaxias nevis*, the country's rarest native fish, is thought to have evolved from *G. gollumoides* (named after Gollum in *Lord of the Rings*), which occurs elsewhere in Southland. Capture of the Nevis River headwaters severely restricted the range of *G. gollumoides* there, and it evolved into a distinct species.<sup>8</sup> *G. nevis* lives mostly where trout are absent and grows to between 100mm and 170mm long.

## Bird life

Bird life has declined dramatically throughout these mountain lands except where there is sustained pest control.

Kea (*Nestor notabilis*) were once regularly seen in the Hector Mountains but as elsewhere, predation on nesting females has severely reduced their numbers.

New Zealand falcon (*Falco novaeseelandiae*) are present throughout the area and are often seen around the tops in summer near schist tors and broken mountain country. Harriers (*Circus approximans*) are widespread here and in the surrounding lowlands.

The remnant Waikaia Forest area has had regular pest control in recent years to protect its wide variety of remaining species. The forest is home to a healthy population of South Island robin (*Petroica australis*) as well as New Zealand pigeons and yellow-crowned parakeets. In 2014 the rare mohua (*Mohoua ochrocephala*) was rediscovered here.

Southern black-backed gulls (*Larus dominicanus*) breed near the lakes of the southern Garvie Mountains and in the Tapuae-o-Uenuku/Hector Mountains and are seen more widely. Oystercatchers (*Haematopus finschi*) and dotterels (*Charadrius bicinctus*) are often seen on the Kopuwai/Old Man and Old Woman Ranges in summer. Tomtits, brown creepers and rifleman have been recorded in forest remnants such as in the lower reaches of Wye Creek.



Galaxias nevis. Photo: Rod Morris



Native falcon. Photo: Rod Morris



## Geckos

Nocturnal alpine geckos have been recorded in the area and are the subject of ongoing study.

## Introduced species

Red deer are present in low numbers throughout the area. While the population has long been valued for recreational hunting, increased numbers in the southern Garvies and Waikaia Forest are now causing significant damage to alpine plant communities. A management programme is needed.

Chamois are present in the Tapuae-o-Uenuku/Hector Mountains in low numbers and hares are often seen throughout the area.

## Invertebrates

A multitude of invertebrate species is associated with nearly every vegetation type in the proposed park. The Waikaia Forest is home to extremely rare invertebrates that were once common in Central Otago and northern Southland. Peripatus or 'velvet worm' is an ancient form often described as a 'missing link' because of its combination of worm and arthropod characteristics. Two rare species were first discovered in the Waikaia Forest: *Peripatoides* (grey/blue with 15 pairs of legs) and *Ooperipatellus* (orange/brown with 13 pairs).

Another rare species in the Waikaia Forest is the large brown Piano Flat spider (*Pianoa isolata*), the 'tuatara' of the spider world. Rather than building a web, it hunts at night. High country insects are typically large and diurnal; and many are flightless.<sup>9</sup> Four species of giant weevil are present, including the large flightless fern weevil *Megacolobus garviensis* in the Waikaia Forest. This rare species is extremely vulnerable to rat predation. Several species of speargrass weevil (*Lyperobius*) inhabit the tussock grasslands.

Diurnal moths are relatively common in the shrubland and alpine zone. One of the most spectacular is *Meterana meyricki*, which feeds on the leaves of native daphnes (*Pimelea*). As a defense mechanism, this moth absorbs toxins from the daphne into its system and advertises this to potential predators with its distinctive colour.

In the highest alpine zones in autumn, flightless females of the large alpine hepialid moth emerge from subterranean tunnels to breed and lay eggs, making them vulnerable to predation. While we tend to focus on predation of native birds, it's worth remembering that some flightless insects are also affected and benefit from pest control.

Also present are several flightless alpine chafer beetles of the species *Prodontria*. Isolated by geographical events, *P. capito*, *P. patricki* and *P. pinguis* are all restricted to the Central Otago mountains.

*Peripatoides*. Photo: Rod Morris



# Recreation Values

## Ice and rock climbing

The Remarkables offer the most accessible alpine terrain in New Zealand for rock and ice climbing. The Wye Creek faces of The Remarkables are the most popular winter ice climbing area in the New Zealand mountains, with world class lines. The Expedition Climbers Club runs an annual Ice and Mixed Festival each August. Occasional ascents are made of the higher peaks in the Hector Mountains in both summer and winter.

Alpine rock climbing is popular in summer, and the routes on Double Cone and Single Cone provide a safe introduction to the sport. Local schools use the Wye Creek and Rastus Burn areas for everything from camping to beginner mountaineering. The western and southern aspects of The Remarkables offer steep and exposed terrain while the northern and eastern faces are more appropriate for beginners. Several Queenstown companies have guiding concessions for these climbs. Harder, steeper climbs are to be found on some other faces and on the cliffs in Wye Creek.

## Ski touring and ski mountaineering

Much of the proposed park area is snow-covered in winter, making it a highly valued playground for ski-touring away from commercial fields. The Doolans basin area has ideal terrain with south-east facing slopes that are often in good condition. The easier terrain of the Wye basin takes ski-tourers through a spectacular but safe mountain environment. Further east, the Garvie and Old Woman Ranges are all used by local ski tourers. It has been proposed that most of the Garvie Mountains be protected as a winter remote experience zone.

Before commercial ski fields were developed in Central Otago, local groups started recreational ski-touring in these mountains. In the 1950s the Vincent Ski Club restored a small stone hut above Fruitlands and started skiing on the Kopuwaiti/Old Man Range, while the Southland Ski Club built a sizable ski hut, since restored by DOC, in the southern Hector Mountains above Garston.

Ice climbing in the Wye Creek cirque. Photo: Guillaume Charton





## Walking and tramping

The mountain areas between The Remarkables and the Garvie Mountains contain numerous tramping and walking opportunities that are most often used in the spring through to autumn seasons. One of the most popular and accessible areas is the Lake Alta basin in The Remarkables Conservation Area. This has long been valued by the local community and trips there started as early as the 1890s when parties would climb the Kawarau face and cross into the basin. Access now is much easier with the ski-field road, which is well used. The quality of the natural setting depends on the environmental impacts of the winter ski-field operation being contained and minimised.

Many people opt for an extended walk over the ridge from Lake Alta, away from the ski-field and into the secluded Wye Creek basin with its numerous lakes and tarns. At 1,700 metres, this high alpine basin provides a wilderness ideal for family summer camping and walking in summer and early autumn.

The Tapuae-o-Uenuku/Hector Mountains to the south of The Remarkables also offer interesting tramping and climbing, including challenging trips into the Nevis Valley. Further south, the dramatic landscape of the Garvie Mountains offers easy longer tramping routes via the Titan Rocks or Canton Bridge through Glenarary Station.

Sled travel with huskies on the Old Woman Range. Photo: Erik Bradshaw



There is potential to develop longer multi-day trips between the Nevis and the Garvies using some of the existing mustering huts. With the addition of a couple more huts, a summer tramping and winter ski touring route could be developed.

## Horse riding

The Otago high country tussock grasslands have a long history of horse riding, primarily for farm work but also recreational. There is potential for commercial riding ventures in the proposed park and it is envisaged that the current designated horse riding tracks would continue.

## Trout fishing

The remote Nevis River is celebrated as one of the best and most treasured trout fishing rivers in Central Otago. Fishers also value the Waikaia on the Southland side of this national park proposal. The area's most used fisheries are the Gow Burn, the headwaters of the Mataura and the Dome Burn, all outside the proposed park. Trout also inhabit the lower reaches of Doolans Creek, but access and fishing are difficult.

## Ski-Doos and snowcats

The Otago CMS confines permitted access for Ski-Doos access to the Kopuwai/ Old Woman Conservation Area. A consent was granted in 2015 to Queenstown Snowmobiles Ltd for a Ski-Doo operation in the Nevis Valley for the Craigroy Station area and for conservation land on the Old Woman Range. Skidoos have also been run on the Nokomai Station side of the Garvie Mountains.

Access roads suffer badly in winter from 4WD vehicles towing trailers with skidoos. There has been an attempt to limit such damage by helicoptering commercial clients to permanently stored vehicles, but both activities create noise and conflict directly with recreational ski-touring.

While commercial use of Ski-Doos has been carefully controlled, uncontrolled private use has increased as the vehicles have become more popular. The proposed park area sees some of this, but other areas such as the Pisa Range can provide for it.

## Mountain biking

The proposed park has numerous mountain biking opportunities. One of the more popular is the link between Gibbston and the Nevis Valley via Coal Pit and Doolans Saddles. A poorly maintained 4WD road goes to Coal Pit Saddle; then an old farm track crosses branches of Doolans Creek to Doolans Saddle and Nevis Crossing. From there some riders may continue over the Nevis Road and back to Bannockburn. Guided mountain heli-biking trips go from Ben Cruachan to Coal Pit Saddle and down old farm tracks on the eastern foothills of the Hector Mountains.

## Kayaking

The Lower Nevis and Waikaia Rivers are highly regarded by the kayaking community for their challenging Grade 4-5 rapids. The East Waikaia has been paddled from near its source, but the section between Canton Bridge and Piano Flat is most regularly run. This is serious, technical kayaking and there has been more than one fatality. Commercial rafting companies occasionally use the Lower Nevis, but rafts can run it cleanly and safely only with enough flow.



Kayaking the upper Waikaia River. Photo: Zak Shaw

## 4WD driving and trail biking

The proposed park area has numerous 4WD opportunities on old farm tracks. Many of these tracks were retained when the land tenure changed from high country lease to public conservation land. With good management their use can continue without impacting on national park values. Most organised 4WD club trips are carefully run, but some rogue vehicles straying from designated tracks cause damage to the fragile alpine wetlands.

In the Waikaia Valley trail bikes have caused damage off-track, and Glenarary Station therefore manages access by locking the gate at Canton Bridge. Well managed, these are valued opportunities. However, to avoid excessive damage and conflict with other users, continued access for 4WD and trail bikes is likely to be by permit for many tracks. Some areas have taken years to recover from illegal off-road trail bike use. The General Policy for National Parks places no barrier in the way of these activities as long as they are specified in the Management Plan.



Camping in Wye Creek. Photo: Erik Bradshaw



# Huts

The proposed national park has about 12 huts. All have some historic interest and some are useful for recreation. New huts could be built to link with them and create a multi-day summer walk or winter ski touring opportunity unique in New Zealand.

**Old Woman Hut:** This six bunk former musterers' hut near the crest of the range is the third hut on the site. Built in the 1960s by Harrison Holloway of Cairnmuir Station, it is in excellent condition and well used for recreation all year round.

**Nicholsons Hut:** Gold miners working in the nearby basin built this hut in about 1900. Earnsclough Station also used it for the autumn muster. It is in fair condition thanks to work carried out by DOC and by Bruce Mason.

**Boundary Hut:** This small three-bunk structure is thought to have been a boundary keeper's hut between Glenarary and Earnsclough Stations. It was substantially rebuilt in the 1960s and has been maintained by the Otago Tramping and Mountaineering Club and latterly DOC.

**Head Hut (Water Raceman's Hut):** Head Hut is an example of an increasingly rare type that is well worth preserving for its heritage value. The two-bunk hut was built around 1900 as accommodation for the Carrick Range water raceman. It is in reasonable condition for its age and still useable.

**Long Gully Hut (Water Raceman's Hut):** This two-person hut was built in about 1900 to accommodate men maintaining the Carrick Range water race. The structure is in reasonable condition but needs restoration if it is to provide more than basic shelter.

**Glen Roy Water Raceman's Hut:** This two-bunk hut was reputedly built more than 100 years ago for men maintaining the Welshmen's water race.

**Two Mile Hut:** This stone musterer's hut was built as a boundary hut for Kingston Station. Before World War II it was often used by The Remarkables Station for the autumn muster. Restored by a volunteer group and used by walkers and ski-tourers, it sleeps three.

**Whites Hut:** This historic stone boundary-keeper's hut was probably built in the 1850s by the then Earnsclough Station. While the stonework and roof are intact, it needs restoration. The hut may now lie within the Kopuwai Conservation Area.

**Potters Huts:** These two huts stand near historic gold workings in the Campbell Creek catchment. One is an old stone hut, partially restored, and the second a newer musterers' hut provided by Roxburgh farmers.

**AA Hut:** This historic hut near Potters Huts was built as an emergency shelter when the Potters Goldfield was reoccupied during the depression of the 1930s.

**Jack Mac's Hut (Glenarary Station):** This was the main base hut for mustering the vast upper Waikaia Catchment. It fell into disrepair after the area was largely destocked but has been recently restored.

**Blue Lake Huts (Glenarary Station):** This important group of huts comprises an 1850s-stone ruin, a pre-WW1 musterers' hut and a post-WW2 10-bunk hut that was dragged up to the site by a bulldozer in the 1950s. The latter is in good condition and well used by recreational groups. Station staff use it only intermittently now that the high country around Blue Lake is no longer grazed.

**Bush Huts (Glenarary Station):** One of these two huts is a partially restored historic log cabin. The more modern 10-bunk musterers' hut, with log burner and coal range, is still used by station staff.



# Historic values

## Māori sites of significance

The Nevis Valley has a long history of human activity with at least two recorded pre-European sites dating from around the 14<sup>th</sup> century. The Nevis provided a pathway for early Māori between the Tai Poutini (West Coast) and the Murihiku (Southland) districts. Post contact with Europeans, the Ngai Tahu guide Reko (c1803-1868) is known to have guided Nathanael Chalmers through the Nevis. Chalmers was the first European to see this hidden valley.

Accumulated evidence suggests that these Central Otago highlands were home to a healthy population of upland moa (*Megalapteryx didinus*), a valuable food source for Māori travellers. The species is thought to have survived longer than any other. Sub-fossil remains—some with skin, muscle tissue and feathers—have been found in the proposed national park area, which can realistically be called ‘the last home of the moa’.

The birds were around a metre tall and weighed up to 35 kilograms. They probably nested in the dry eastern beech forests that once clad the lower mountain slopes but which (apart from Waikaia Forest) were long ago burnt off. In summer the moa would have ventured into the vast upland areas to browse on tussocks.

The most significant archaeological site is the moa-hunting camp near Schoolhouse Creek, a tributary of the Nevis. This site was discovered in 1917 by Philip George. He excavated two stone fireplace hearths of probable moa-hunter huts. Other implements found at the site include scrapers, hammer stones, an adze and other stone tools. These are now at the Otago Museum.

Old miners told George that before gold mining disturbed the area several acres were covered with similar remains and larger ovens, and that moa bones were plentiful. The Nevis was clearly significant for early Māori, but gold workings have sadly erased most of the evidence.

The site is listed as a category II Historic Places site (NZHPT No: 5615) and was relocated in 2009.

Blue Lake Huts, Glenaray Station. Photo: Rob Brown

In 1954 a group from the Otago Museum found another significant moa-hunter site on Hawksburn Station, east of the Old Woman Range (NZHPT No: 5620). At an altitude of 660 metres, this site is thought to have been near the prehistoric bush line when beech forest covered much of the area.

## Farming

Nearly all of the proposed park area has been used for summer grazing of merino sheep at some stage in the past 150 years. Formerly a single large run covered nearly all of The Remarkables, mustering sheep from the Wye Creek and Rastus Burn catchments each autumn.

Earnsclough Station was once a huge pastoral lease running as many as 40,000 sheep by the 1880s. Rabbits all but bankrupted it, and by the time the property was bought by Stephen Spain it had fewer than 300 sheep. The new owner set up a rabbit canning works in Alexandra.

The Old Woman Range was initially part of the large Hawksburn Run which was taken up in 1859 by J. Paterson and Co. Smaller runs, including Craigroy and Obelisk, were split off from this about 1910.

Farming has left heritage buildings in the proposed park area, and it is intended that the park will embrace and preserve their history. White's Hut, at 1,300 metres on the Old Woman Range, is one of the oldest in New Zealand and is thought to have been built as a boundary keeper's hut between Earnsclough and Hawksburn Stations.

At the southern end of the Garvie Mountains is another valuable group of historic mustering huts, the Blue Lake Huts. All three structures at this site are listed as historic buildings with Heritage New Zealand. The second and third huts were built in the 1950s. Nearby are the stone remains of the earliest, probably built in the late 1850s. Further down the old 4WD track from Glenaray are the Bush Huts, also listed with Heritage New Zealand.

Other remnants of farming heritage scattered through the highlands take the form of boundary fence wire and standards, and schist slabs made into strainer posts. The crest of the Garvies has such a fence, which separated the Nokomai and Glenaray runs.



## Historic gold mining areas

The proposed park has a rich gold mining history with numerous historic relics scattered through the area. Four of the key historical areas are the Waikaia Valley, the Old Woman Range, the Potters field on the Old Man Range and the Nevis Valley.

Gold was discovered in the Waikaia Valley in 1862. Switzers, a small town near Carnie's Hill, soon had about 800 inhabitants, at least half of whom were from China. Carnie's Hill was all but sluiced away in the pursuit of gold, and when it was gone the town moved three kilometres down-valley to present day Waikaia.

The headwaters of the Earnsclough (or Fraser) catchment and Omeo Creek were the obvious places to look for the 'mother lode' that was the source of all the Clutha gold and many small claims were worked in these catchments.

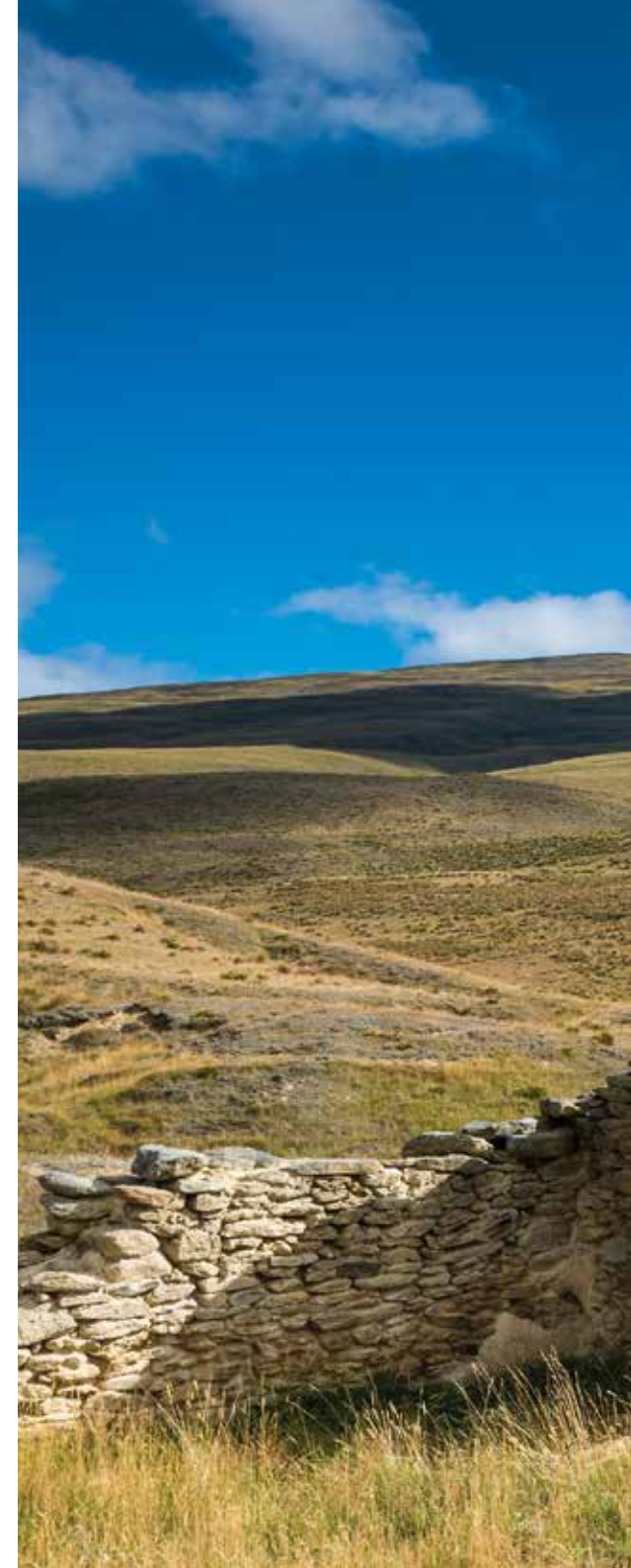
While some alluvial gold was recovered, to unlock the real riches meant crushing quartz from the parent veins. This needed water-powered stamping batteries, and some companies invested considerable sums getting water to quartz-rich areas. The Alpine Battery in the headwaters of the Earnsclough was started in April 1883 but closed before the end of that year. The abandoned water wheel was taken to the Alexandra Museum in 1973 but the stamper battery and machinery are still at their remote site.

The Nevis Valley was first explored for gold in 1862 and by 1863 the area had a small town near Commissioners Creek (Lower Nevis). A significant relic of the Nevis rush is the remains of a hotel built in 1885 (replacing an earlier 1879 building) near the Nevis Crossing are a protected historic site. Also visited as part of a trip into the Nevis is

the Carrick Range Water Race, one of the longest still in operation. It picks up water at about 1,200 metres on the western side of the Old Woman Range and winds some 22 kilometres over Duffers Saddle and down to the Young Australian workings. Here the water powered a large water wheel which is still in place and protected as an historic site. The Young Australian site is a protected area and has numerous historic relics, including small restored miners' huts. The headwaters of the Nevis hold more historic sites from the gold mining era. The foundations for the old Earnsclough No. 3 dredge are still visible, as are stone huts near the ponds formed by hydraulic elevating in John Williamson's claim.

The fourth main gold mining area is in the remote Campbell Creek catchment on the crest of the Kopuwai/Old Man Range. Miners here built a significant stone wall and a tunnel to divert the creek so they could work the stream bed. The tunnel has long since been buried, but the wall and hut ruins remain. This historic area will forever be associated with one of the epic stories of the early gold fields when in the winter of 1863, up to 100 miners were marooned at the diggings on near the crest of the Kopuwai/Old Man Range. Some, half starved, made a break from their icy prison but at least 12 perished crossing the crest of the range. In 1928 the government erected a stone monument at Gorge Creek at the site of the old town of Chamounix Creek, today a deserted gully near the Alexandra-Roxburgh road. Stone shelters and poles were installed to prevent any repeat of the disaster and are still visible today. The last of the old miners to leave the Potters claim, in 1923, was Andrew Ree. The remains of his stone hut still exist.


Nevis Valley mining ruins. Photo: Rob Brown









A full-page background image showing a person in a yellow shirt and orange helmet climbing a dark, jagged rock face. The climber is positioned in the lower center of the frame. Below the rock face is a vast, white sea of clouds that stretches to the horizon. In the far distance, more mountain ranges are visible under a clear blue sky. Patches of snow are scattered on the upper right side of the rock face.

*The Remarkables is a unique place that provides an ideal playground for local people. The Remarkables offers an opportunity to discover the outdoors, to learn to respect the land and appreciate its beauty away from man-made structures. Should there be a greater impact on the land, fauna and flora this will mean that our local community will lose opportunities to connect with the place and for our students and children to be raised learning to respect their Whenua (the land), and for our national and international visitors to come for what the place is: preserved, beautiful and respected.*

*Guillaume Charton, Queenstown*



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**1887**



**1900**



**1952**

*"This great expanse of upland tall tussock grassland, wetlands, shrublands and high mountain ecosystems, that rises to over 2000 metres between the Wakatipu Basin and the mid Clutha Valley behind Alexandra, contains an amazing array of indigenous plants and animals, and landscapes, much in a wilderness setting, that is clearly overdue for recognition as one of New Zealand's really unique national parks." Sir Alan Mark*



**1953**



**1960**



**1964**