Titiro whakamuri
kia papatau nga rā o nāianei
kia mauritau i nga rā ki mua.

—

We reach back to the past
to consolidate the present
so that we are better prepared for the future.

The Department of Conservation (DOC) turned 25 years old in April 2012. To mark the anniversary we have put together this exhibition.

It covers the origins of modern conservation's European roots, from 1848, the events leading to the creation of DOC and the 25 years of challenge, set-backs and accomplishment.

Not quite what it seemed: 1830s–1952

It took Māori several hundred years, a rapidly growing population and the extinction of several species, before they evolved a relationship that served the environment as well as themselves.

This display focuses on the country's second colonisation period. Despite the effects of necessity, presumption and often violence to the land, this period was marked by occasional acts of conservation as we know it. Two world wars and Depression slowed progress, however, until the mid-20th century.

Not understood: the price of possum and deer introductions. *DOC West Coast*

1830–1950

A folly unforeseen: possum and deer

The collapse by about 1810 of fur sealing, New Zealand's first extractive export industry, was succeeded in the 1830s by early attempts to introduce Australian brushtail possums. This was one of New Zealand's first animal introductions, but many attempts were made before possums actually 'took'.

Debate on the possible effects of exotic predators, such as possums and deer, on native biota was also obscured by rapid habitat loss in the late 1890s.

Even the indefatigable horticulturalist and botanist Leonard Cockayne, was for many, years blind-sided to the damage possums were doing to forest canopy. His focus was deer and their impact on native forests and erosion. Despite reports of destruction to crops, orchards and forests by possums, Cockayne and fellow botanist Professor H.B. Kirk concluded in an official report to government that possum damage to native forests was negligible and their fur economically valuable. The Animals Protection and Game Act 1921–22 initially enshrined these attitudes.

Soon after, New Zealand naturalists and scientists began to close on the problem of deer and possum. A.N. Perham's report on deer devastation in forests exotic and native, and in mountain grasslands, set off alarm bells. The Deer Menace Conference of 1930 revealed the folly—and fecundity—of earlier deer imports. Government deer culling operations began later that year.

Government attempts to control possums provoked a flurry of illegal liberations and a bounty was imposed of 2s/6d (25c per head) in 1951.

1848

Scarcity: Canterbury and conservation

The Deans family saved this stand of Canterbury kahikatea in 1848. *Riccarton Bush Trust*

Lack of native bush cover on the Canterbury Plains, often the effect of early Māori fires, provoked a conservation response among a small handful of pioneers. Earliest among them were the Deans brothers, John and William, immigrant farmers from Ayrshire, near Glasgow.

In 1848, the Deans signed an agreement with the New Zealand Company to protect a parcel of their land at Putaringamotu, Riccarton, west of Hagley Park. This was a patch of established kahikatea forest, once widespread on the Canterbury Plains. John's dying wish in 1854, and that of his widow, Jane (who died in 1911), was that part of this forest be forever preserved.

Within a decade, the timber of seven other remnant blocks around Christchurch was all but gone. By 1915, when Deans Bush was gifted to the people of Christchurch, just 6.4 hectares remained of this forest—now unique to the Canterbury Plains. The historic homestead, erected in three stages, survived the February 2011 earthquake but requires extensive repairs.

The Riccarton Bush Trust, now chaired by a Deans' descendant, has erected a predator-proof fence around the site, which until recently has been a habitat for juvenile kiwi.

An influential near-contemporary was Thomas Henry Potts, a wealthy high country farmer, brilliant ornithologist, Canterbury Provincial councillor and later MP. He was one of the first, in 1858, to advocate conservation in Parliament. Potts, who lived at Governors Bay, became deeply concerned at the casual firing by settlers of nearby forest. His advocacy secured the first national survey of forests and foreshadowed Hagley Park; his book, *Out in the open,* remains a conservation classic.

Continuing firing of forest increasingly exercised Parliament in the late 19th century.
Puketora Station, Frederick Hargreaves.
Ref: 1/1-023274-G. Alexander Turnbull Library

1874

Forest gazump

It has never been easy in New Zealand to advance big ideas, and never more so than in 1874 when Premier Julius Vogel attempted to restrain widespread forest destruction by Act of Parliament.

By axe and by fire, the colony was rapidly transformed into 'smiling farms' by a settler population that, in the 1870s alone, doubled in size. Thirty percent of original New Zealand forest was destroyed by settlers in 80 years.

That the parliamentary debate over Vogel's Forests Bill reflected many viewpoints is hardly surprising, but what is surprising is the level of erudition and international scientific argument displayed by the many members who participated over several days.

Prompted by James Hector's government survey of the state of our forests—with findings of alarmingly rapid deforestation—concerns expressed ranged from scarcity of timber for housing to American C.P. Marsh's concerns regarding soil 'desiccation' and loss. That the role of 'climatic forests' in healthy societies was a continuing concern into the early 20th century reminds us that anxieties concerning climate are far from recent.

From a House of 78 members, 34 spoke to the Bill—22 of them in support of Vogel's long, deeply informed speech, which included what we would regard as the fundamentals of good conservation. The Bill failed, defeated partly because it was entwined in a plan to reduce the powers of provincial government.

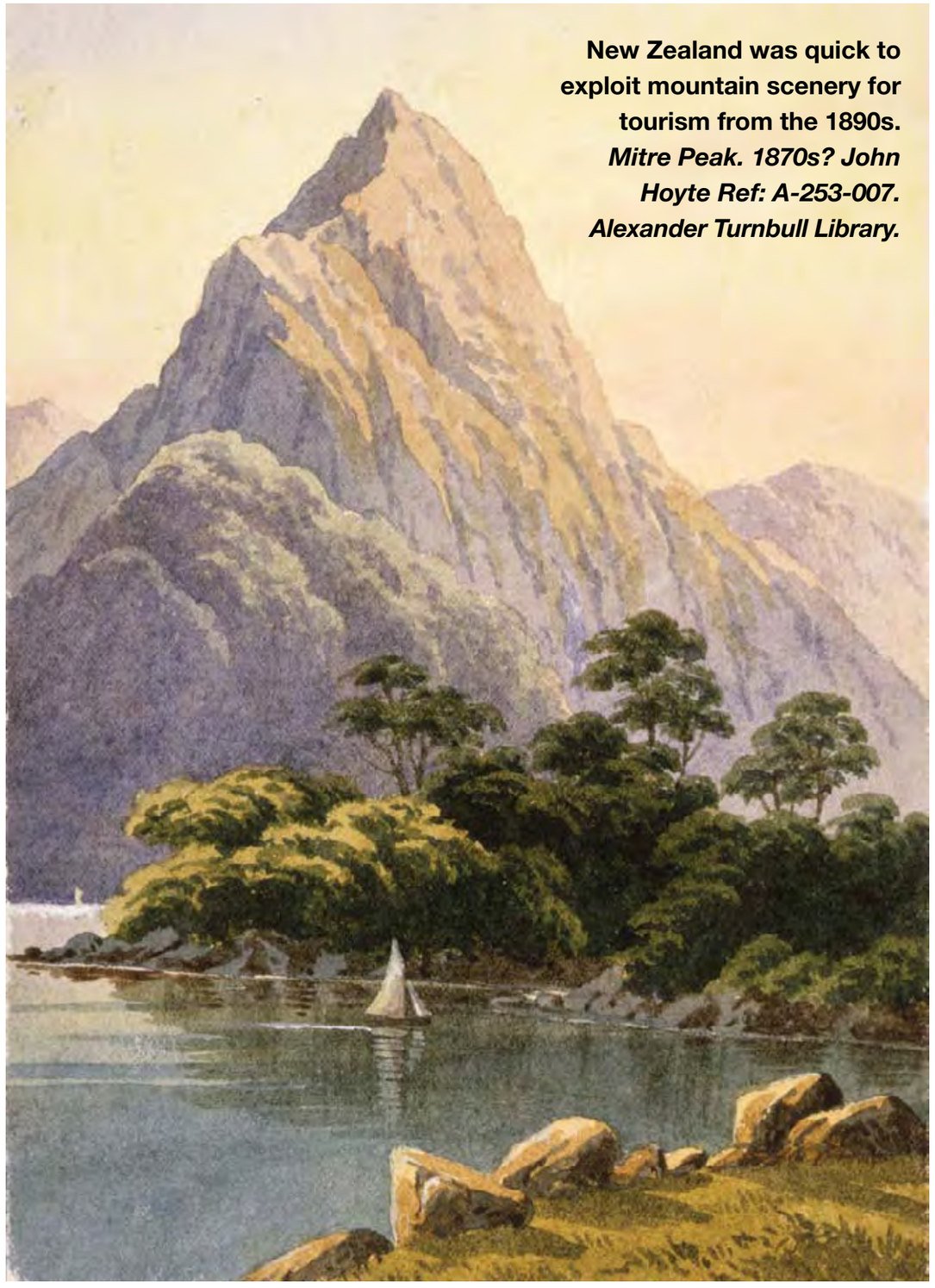
1878–1910

Tourism: conserving the picturesque

As early as 1878, the Union Steam Ship Company offered tourist excursions into Fiordland, and from the 1890s, private enterprise also pioneered glaciers, peaks and river tourism.

State recreational tourism based on landscapes is marked by the reservation of the Rotorua Thermal District in the 1880s. Then, 'taking the waters' was as 'health-giving' as was visiting nature and its spectacles. By the 1890s New Zealand's scenic regions attracted a small but steady trickle of tourists, usually high end travellers, including writers Mark Twain and Anthony Trollope. Impressions of scenery were invariably favourable, but some writers were horrified by the widespread destruction of casual forest firings.

The original Department of Tourist and Health Resorts was set up in 1901. Its superintendent was an Australian, T.E. Donne, who disseminated scenic photographs abroad. Donne introduced pedigree deer from the Scottish Highland lodges and is responsible for Roosevelt's gift of American wapiti, still hunted in Fiordland.



New Zealand was quick to exploit mountain scenery for tourism from the 1890s. *Mitre Peak. 1870s? John Hoyte Ref: A-253-007. Alexander Turnbull Library.*

From the 1890s, Alexander Hatrick's growing fleet of riverboats and associated accommodation targeted tourists for the Whanganui River 'Rhine of Maoriland'. Climbing tourists were being lured to the early Hermitage at Mount Cook, taken over by the Government in 1895.

As rail links were forged, railway's scenic tourism possibilities were raised in Parliament by the conservation-minded, who were equally concerned by 'unnecessary destruction'.

The New Zealand Illustrated, 1899–1905, raised awareness of the picturesque in its graphic photography as well as articles by top local writers.

Tongariro National Park, *Rob Suisted.*

1887

Trendsetter: Tongariro 1887

In securing Yellowstone for posterity in 1872, American conservationists set up the world model for national parks, rapidly imitated in Canada and, within a few years, New Zealand.

The idea of preserving the scenic values of the central North Island volcanic plateau had been around from the 1870s. However, it was the mounting pressure of European land-grabbing that forced the hand of paramount chief Horonuku Te Heuheu, Tūkino IV. In 1887, he made his tuku to the Crown. This was to protect, for all time, the tapu nature of Ngāti Tūwharetoa's peaks. This led to the proclamation of one of the world's early national parks.

One hundred and twenty-five years ago—and for decades after—such were colonial attitudes in New Zealand, a case had to be made that land for reservation had no economic (farming) value.

In the face of land-lust, protection of those mountain tops therefore passed the double test of non-productivity for Pākehā and of sanctity for iwi.

Gradually, over the years, through the advocacy of conservationists such as our first ecologist, Leonard Cockayne, the park became extended to today's boundaries.

In 1993, it was declared a UNESCO world heritage site, the first in recognition of a culture still practised within its boundaries, as well as for its natural values. It is one of New Zealand's 14 national parks.

–

Horonuku Te Heuheu, Tūkino IV, an abiding ancestral presence behind Tongariro National Park. Cowan, James. 1922: *The New Zealand wars: a history of the Maori campaigns and the pioneering period.* Vol. 1, p. 374. Government Printer, Wellington.

Early Arbor Day, Rata School, Rangitikei 1894.
Edward Child. Ref: 1/1-011003-G.
Alexander Turnbull Library

1888

Late, great, green Victorians

The origins of important social movements are always multi-rooted. It is possible, however, to trace a line from today's considerable community energy around regeneration and species protection back to late Victorian activity.

American events, such as Arbor Day, as well as the British reaction to the squalor engendered by its industrial revolution, gave rise to ideas of both a romantic and health-giving nature. These and other factors, some of them arising directly from Edinburgh's urban renewal endeavours, produced in 1888 the Dunedin and Suburban Reserves Conservation Society. Alexander Bathgate, Dunedin lawyer, poet and Arbor Day enthusiast, was an important figure in its establishment.

Still thriving today, almost 125 years later, as the Dunedin Amenities Society, it is New Zealand's oldest conservation organisation. It began campaigning for the creation of parks and reserves, the planting of trees, both exotic and native, and for 'open air aesthetics'.

Actively involved in early efforts to replant part of the Town Belt, it continues as a watchdog in its preservation of living nature and has been a strong critic of Dunedin City Council.

Similar societies soon followed in Christchurch and Wanganui. In Auckland, the focus was on natives, kauri particularly, while in Taranaki, the preservation of native reserves was often closely associated with old Maori pā, both traditional and gunfighter.

1895

Hauturu: jewel in the crown

Hauturu (Little Barrier) in the Hauraki Gulf was designated as an offshore island bird sanctuary in 1895 after naturalists pressed for places where endangered species might survive. An extinct andesite volcano, rugged and densely forested, its introduced pigs were soon eradicated; it took another a century before cats were eliminated.

> Here was a place where rarities such as stitchbirds, North Island robin, whitehead, bellbird, Cook's petrel, tuatara, giant earthworm and giant wētā might be able to survive in an environment as near to pre-human contact condition as anywhere in New Zealand. Considered to be one of the most important reserves of its kind in the world, it contains some 400 species of native plants and is said to be 'the most intact ecosystem in New Zealand'.

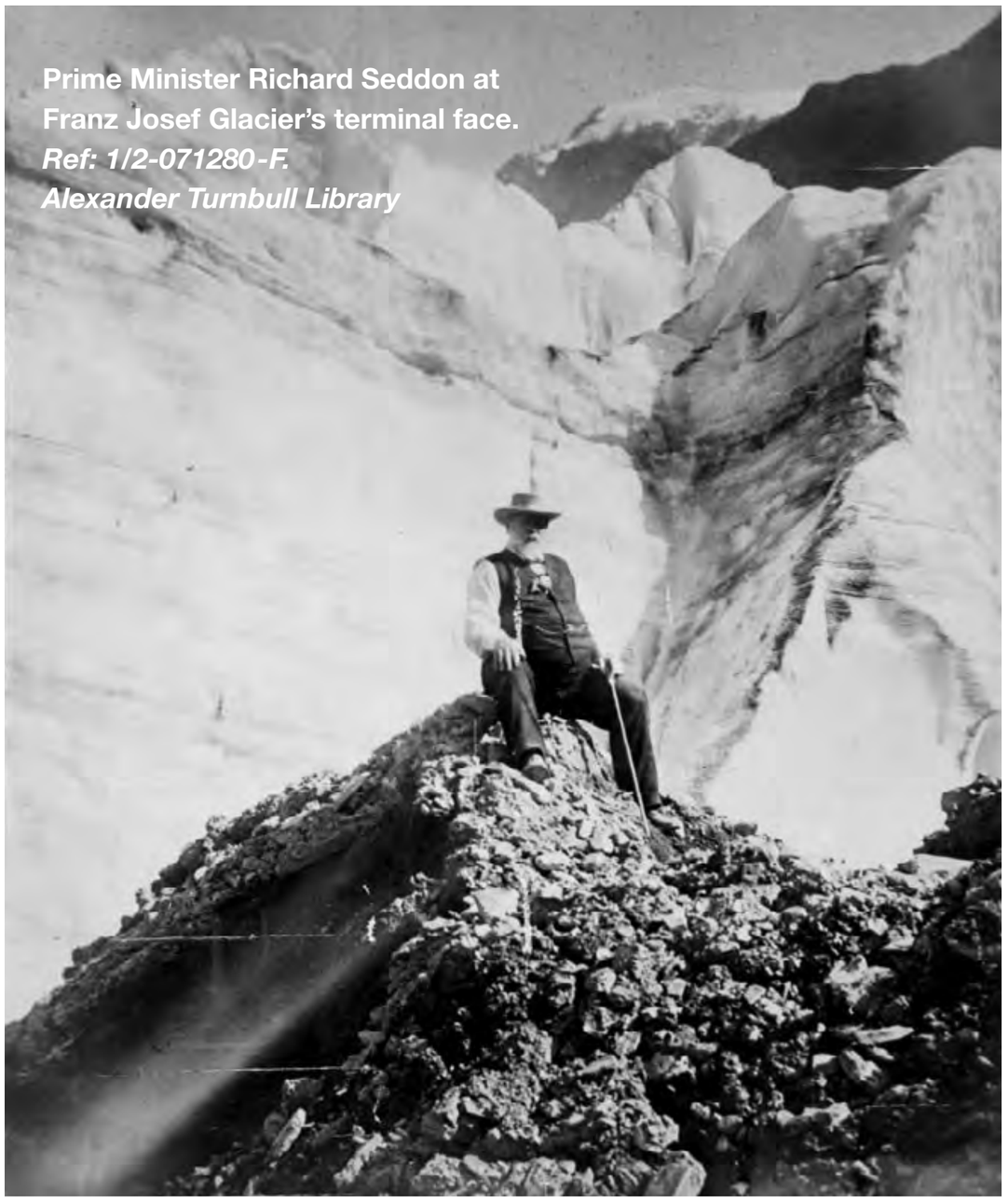
However, acquisition of the sanctuary was complicated. Ngāti Wai chief Tenetahi, who—partly to help pay his Native Land Court costs—was milling kauri on the island, resisted. He cited his Treaty of Waitangi rights and, eventually, after court hearings, was bundled off his island by a bailiff and soldiers. Māori history on the island is considerable and some issues remain alive for Ngāti Wai.

At 2,817 hectares, Hauturu's landmass makes it one of New Zealand's largest offshore island reserves.

—
Little Barrier Island (Hauturu)—most intact ecological treasure of all that DOC administers.
Image database DOC

1903

Scenery Preservation Act



Prime Minister Richard Seddon at Franz Josef Glacier's terminal face.
Ref: 1/2-071280-F.
Alexander Turnbull Library

Premier 'King Dick' Seddon led the Liberal Government that, broadly speaking, brought New Zealand out of the colonial and into the modern era. In 'God's Own Country' Seddon's boosterism promoted New Zealand's beauty and identity to the world.

However, mounting scientific papers and reports on losses of indigenous plants and animals and romantic expression, from the paintings of former Premier William Fox to the writings of Blanche Baughan, coalesced with political pragmatism in an impulse to secure a bit of New Zealand. Sympathy for the heritage perspective of conserving Māori sites was also evident within the Government, albeit for that of a 'dying race'.

Tourism and recreation were further reasons for preservation, underpinned by the belief that picturesque and heritage landscapes needed to be in public hands for public good, not for private gain. Liberal MP Harry Ell, who advocated for forest retention, water and soil conservation, reserves and afforestation, campaigned for systematic reservation to accompany settlement. Apart from his noted reserves on Christchurch's Port Hills, he was a major influence in establishing reserves nationally.

In 1903, the Liberals passed the Scenery Preservation Act, the first law to protect land for its aesthetic, scientific, historic and natural values. Land clearances continued—in the same year, the Scenery Preservation Act's polar opposite, the Swamp Settlement Act was passed.

The Government set aside £100,000 and a Scenery Preservation Commission was set up to recommend sites under the Act. While maintenance and care were often at issue, by 1940, New Zealand had a national network of more than 1,000 reserves, in addition to its national parks.

The Forest Service adopted a multiple-use approach to forestry. Pureora Forest Park.
Les Molloy, Image database DOC

1921

Forest Service: multiple use

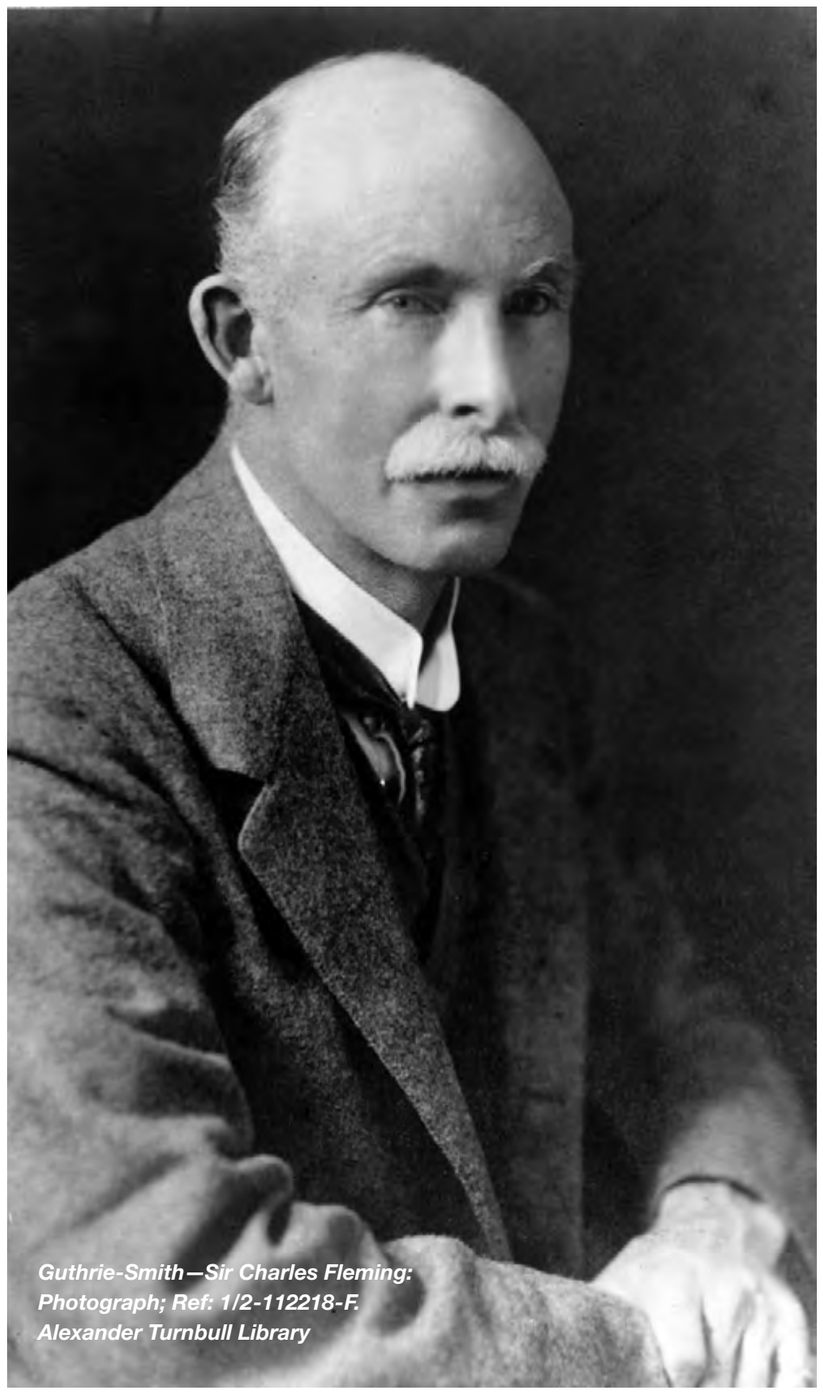
It was not so much the picturesque as the principle of 'wise use' that gave rise to the New Zealand Forestry League in 1916. As fires continued to destroy forests to make way for farming, late Victorian and Edwardian New Zealand debated forests in the chambers and journal of the philosophical societies.

Knowledge from as far afield as France and the United States, as well as Australia and India was used to argue the importance of climatic forests, the risks of soil losses, flooding and of timber scarcity as well as intrinsic conservation values. The Forestry League, founded by Rangitikei farmer Sir James Wilson and international forestry expert Sir David Hutchins, was motivated by all of these concerns, as well as the importance of farm and state forestry. It also sought protection status for Waipoua kauri forest.

Hutchins, with experience in France, India, South and West Africa, went on to write the report that led to the formation of New Zealand's Forest Service in 1921. Another league member, surveyor Edward Phillips Turner, was an informed protector of native plants and animals and was responsible for several reserves on the Whanganui and Mokau rivers.

Many of these interests and concerns shaped the role of the Forest Service, whose first head, Canadian MacIntosh Ellis, shared similar views. The Service grew into a highly trained operation, its expertise supported by an active research programme in production forestry and pest control. Like Lands and Survey, it provided increasingly for public use of its holdings until restructuring in the mid-1980s.

Sanderson—Royal Forest and Bird Protection Society of New Zealand archives



Guthrie-Smith—Sir Charles Fleming: Photograph; Ref: 1/2-112218-F. Alexander Turnbull Library

Moncrieff—Kingsford Collection 124247/6 Nelson Provincial Museum

1923–1940s

Three minds: a century of influence

As conservationists of great influence, three contemporaries, with surprising commonalities, can make considerable claim to such a title. Herbert Guthrie-Smith (1861–1940), Val Sanderson (1866–1945) and Pérrine Moncrieff (1893–1979) corresponded and supported one another other in ways that secured considerable conservation benefits for the nation.

Of the three, only Sanderson was born in New Zealand. Both Guthrie-Smith and Moncrieff were well-born and well-educated, of privileged British stock. Both were authors, the former's notable works, *Tutira* and *Sorrows and joys of a New Zealand naturalist,* particularly, have long outlived their author. Moncrieff's *New Zealand birds and how to identify them,* sold steadily over five editions. Sanderson, after an early successful business life, confined writing to his campaigns.

All three had strong backgrounds in hunting. This they eschewed, as their deep love of birds motivated protection of native species. Each devoted considerable resources, financial and physical, to the seemingly impossible goals they set themselves.

Sanderson advocated for the managed protection of Kapiti Island as a legal sanctuary. When government continued to stall, Sanderson organised the group that, in 1923, founded the Native Bird Protection Society, later the Royal Forest and Bird Protection Society. He held high office in it until his death.

Apart from personally securing several important reserves in the Nelson area, Moncrieff's determination ensured the creation of Abel Tasman National Park, as well as reserving Lake Rotorua, and Maruia forest land. Guthrie-Smith's Tutira station and lake is today a reserve and education centre. One of his sayings, 'I would devastate a shire to save a species', sums up the passion of the trio.

—

Sanderson, Guthrie-Smith and Moncrieff: today's conservation built on their shoulders.

1931

Recreation and conservation

Conservation achievements in New Zealand owe much to the influence of outdoor recreation interests—beginning with early naturalists from the latter 19th century, closely followed by the growing requirements of mountaineering—sporting and tourist—and, after WWI, tramping's influence.

The New Zealand Alpine Club was originally formed in 1891 and is one of the world's oldest. The Tararua Tramping Club was founded in 1919, as transport opportunities helped liberate a post-war generation into the beauty and challenge of the mountains. But a tramper might also double as a geologist, naturalist, hunter, fisher or climber. Other, similar organisations soon followed suit around the country. By 1931, tramping and alpine clubs had coalesced into the Federated Mountain Clubs of New Zealand.

The intrinsic value of wild nature, strongly affirmed by American philosophers John Muir and Henry Thoreau, has found some of its strongest supporters in the Federation. Its 12,000 membership today includes skiers, mountain bikers, canoeists and hunters, as well as climbers. The Federation's long history of policy development and lobbying has often meant securing both its own interests and protecting critical sites, forests and landscapes as well as threatened species.

It influenced the long-delayed National Parks Act 1952, ended the bounty offered for dead kea in South Westland, fought the Government's beech forests utilisation scheme and advocated for the creation of new, and the extension of old, national parks and protected areas. Together with Forest and Bird, recreation represents the most vigorous and active membership of the environmental umbrella organisation, ECO.

—

Easter trampers—Mangatepopo Huts 1928 *(Ian Powell album—Hutt Valley Tramping Club photo archive)*; and Christmas trip, Aspiring N.P, HVTC 1960s. *(John Rundle collection)*

1945–1953

Closing on the problems: Wildlife Branch

Early species protection work began with the Wildlife Service. ***Image database DOC***

Within days of the end of WWII, the Wildlife Division of the Department of Internal Affairs was planned. Major Yerex, who had held the old deer culling service together during the war, was in charge.

There was no Wildlife Act until 1953. Under the 1922 Animals Protection and Game Act, a 'mixed bag' if ever there was one, almost all native birds were given legal protection, except those perceived as threats to farming or exotic fisheries: kea, hawks and shags. Trout hatcheries and hunting regulation were also a departmental matter.

Responsibility for culling of deer and goats continued with the Branch, which also retained a considerable role in fisheries acclimatisation at hatcheries at Rotorua and Southern Lakes acclimatisation districts. Finally, however, New Zealand had a body dedicated largely to the protection of native wildlife.

Technical training was introduced and research, conducted by both field staff and, now, academically qualified biologists, was developed. The Department of Scientific and Industrial Research also began to build expertise in related areas under Kazimierz Wodzicki.

Furthermore, a relationship between the scientific 'public' and the Division was forged with an advisory Native Bird Preservation Committee, later the Fauna Advisory Protection Council.It was led by ornithological luminary, Dr Robert Falla, Director of the Dominion Museum. Two other members were Dr Charles Fleming, whose career in bird research was matched only by work in wider science, and Edgar Stead, whose legacy enabled him to achieve world ranking as an ornithologist, competitive shooter and rhododendron cultivator. In 1939, Falla, Fleming and Stead were foundation officers of the Ornithological Society of New Zealand.

1952

Parks and rangers

Sixty years ago the National Parks Act was finally passed, with bipartisan agreement after several attempts over four decades. At that time, 1952, New Zealand had just five national parks and eight rangers. While reserves were abundant, the only national parks were Tongariro, Egmont, Arthur's Pass, Abel Tasman and Fiordland. Now, for the first time, the country had one Act for all parks and a unified parks system protecting special landscapes and native flora and fauna.

The first few rangers were deployed in national parks by parks boards, under the 1892 Land Act. In 1958, Ray Cleland, who had been the first ranger at Arthur's Pass, was appointed supervisor of national parks. He began to standardise terms and conditions, uniforms and insignia and, by 1965, a National Park Rangers' Association was formed. Ten years later, a formal ranger training programme was launched, by which time the service had over 100 men and was highly respected.

Their work was wide-ranging, meeting the demands of everything from search and rescue to conservation, tourism and hut and track building. By 1975, they were also involved in national park training in Nepal and Peru. The ranger service was terminated when DOC was formed in 1987; the term 'ranger' was revived in 1998.

–
Botanical values inspired its protection—Arthur's Pass National Park, created 1929.
Rob Suisted

Mounting protest, slow gain: 1953–1986

After WWII, conservation consciousness was increasingly evident in public life, legislation and in gradual gains as government responded to a growing demand for protective measures.

1957

New Zealand in Antarctica

New Zealand's interest in the Ross Dependency stemmed from Britain's association with it. In 1922 Britain handed administrative responsibility for this area, which was a hunting ground for Norwegian whalers, over to New Zealand.

The International Geophysical Year 1957 foreshadowed an intensifying international focus on Antarctica. Ed Hillary's dash for the South Pole in Massey Ferguson tractors was a piece of light relief. The Antarctic Treaty with its unprecedented 'deferred claims', was signed in 1959, at first by just eight nations, New Zealand among them. In 1964, Antarctic wildlife was legally protected under international law. This led finally, in 1982, to both the Agreed Measures for the Conservation of Antarctic Fauna and Flora and the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) being given effect.

Although successive New Zealand governments' involvement in the frozen continent has not been an absolute record of conservation, overall, the role of government has been to argue for protection and precaution. This stance owes much to the efforts and influence of New Zealand conservationists, particularly Cath Wallace, long-time chair of Environment and Conservation Organisations of Aotearoa New Zealand (ECO) and its Antarctic working party, the Antarctic and Southern Ocean Coalition. In 1991, Wallace's analytical and campaign work was recognised internationally by the prestigious Goldman Environmental Prize. The work contributed to the overthrow of the Antarctic Minerals Convention in favour of a protocol to the Antarctic Treaty for the protection of the Antarctic environment. The work continues on tourism, unsustainable fishing, seamounts and krill.

–

Antarctica: national interest and international cooperation.
Image database DOC

1962–1989

Nature Conservation Council

Established in 1962 as an independent advisory council, the Nature Conservation Council became more influential than its political masters had ever reckoned on.

Defining its approach as 'positive and constructive', it concerned itself with facts and making an 'assessment of the need for research into particular aspects of nature conservation'.

The Council sought 'wise use' of resources in ways to reduce 'destruction and detrimental change'.

Over the years, it challenged head-on several government plans, including the beech forests utilisation scheme, raising Lake Manapouri, selective logging experiments in central North Island native forests and the Clutha Dam at Clyde.

It also took on the neglected and the then unfashionable, such as the need to protect wetlands, mangroves and threatened plants, and initiated Nature Conservation Week, originally an idea from scouting. In its 1981 publication, *Integrating conservation and development: a proposal for a New Zealand conservation strategy,* the Council's constructive critique of current attitudes and policy went to the very heart of sustainable development.

It became the respected environmental conscience of government. Today, part of its role is reflected in the community–government linkage played by the New Zealand Conservation Authority and conservation boards in relation to DOC. But anticipated, too, were elements of the work of, first, the Commission for the Environment, and its successor the Parliamentary Commissioner for the Environment.

–

The Nature Conservation Council campaigned long and hard on Lake Manapouri. *Rob Suisted*

1964

Small island, big lesson

Stead's bush wren.
Don Merton

Big South Cape: its 1964 infestations transformed island predator control.
Image database DOC

The trick of history—ever making the problems of the past seem simple through hindsight—is startlingly evident in our growing understanding of why our native species become threatened, endangered or even extinct.

The name of Taukihepa, better known as Big South Cape, a small mutton-birding island off the south-west corner of Stewart Island/Rakiura, is associated with this process in conservation understanding. As recently as 1964, the island was home to an exceedingly rare group of birds. They were the endangered South Island saddleback, Stead's bush wren and Stewart Island snipe. That year they were hit by an irruption of rats, which Forest and Bird got to hear about.

A young Wildlife Service recruit, Don Merton, later famed for his work in saving, among others, the almost totally extinct Chatham Island black robin, was certain that the views held by his elders on the Fauna Protection Advisory Council were unhelpful. Though it was less than 50 years ago, these scientists held that habitat was what mattered, that exotic predators such as rats could not eliminate a native species.

By taking matters into his own hands, and translocating the saddleback to adjoining, rat-free islands, Merton saved it. Sadly, it was too late for the wren and snipe. This became a critical moment in understanding rat predation, and its consideration was, from then on, never the same.

'Turned game-keeper':
New Zealand today, a leader in whale conservation.
Image database DOC

1964

Whales

Early 19th-century Aotearoa evolved from whaler and sealer contact. Commercial whaling did not end in our waters—for economic reasons—until 1964. However, this country has mounted an increasingly protectionist stance towards whales over many decades.

New Zealand's signature to the 1938 International Agreement for the Regulation of Whaling was renewed with the 1948 International Convention for the Regulation of Whaling. New Zealand withdrew in protest in 1968, rejoining in 1976. When attempts to place commercial whaling on a sustainable management basis failed, the International Whaling Commission announced a moratorium on commercial whaling in 1986.

Some member countries opposed to the moratorium, the Russian Federation, Norway and Iceland, for example, have a reservation on it, but Japan does not. Whaling quotas for customary subsistence are permitted to aboriginal peoples, as are 'scientific permits', which Japan has issued since 1986, provoking both diplomatic and non-violent protest responses—some from ship-board New Zealand conservationists.

In 1994, the Southern Ocean Whale Sanctuary was created by the International Whaling Commission. Today, nearly 50 years since whaling ended, the skills of our old whalers are still employed as whale spotters and identifiers of species. Since 2004, seven of them have helped with whale counts during seasonal migrations through Cook Strait.

Whale Watch Kaikoura, a Ngāi Tahu-owned, post-Treaty settlement enterprise, has been an outstanding success commercially and socially. Since the 1990s, Kaikoura has become a multi-experience eco-tourism centre based not only on whales—attracted to its near deep-water feeding on the Kaikoura trench—but also other cetaceans and seals.

The water cycle: an early exercise in water quality awareness. Dairy factory wash water incident—Mangatainoka River (circa 1990). *Horizons Regional Council*

1967

The water cycle

Few environmental struggles have taken longer—sometimes to limited effect—than that for the protection of our freshwater.

New Zealand was an early adopter of legislation to control flooding and soil erosion, with the Soil Conservation and Rivers Control Act of 1941. The Act, influenced by American legislation, owes much of its effectiveness to the steadfast campaign and last-minute lobbying of Lance McCaskill. Conservationist since Harry Ell's days, teacher and author of the high country classic *Molesworth,* McCaskill was one of the far-sighted who knew the value of sound practice.

It was not until 1953 that the Waters Pollution Act was passed. Yet the regulations preventing meat works and sewage discharges directly into rivers took longer, until 1963.

The 1967 Water and Soil Conservation Act created entities responsible for both water 'quantity' and quality issues. Gradually, catchments came under early integrated management systems. McCaskill, together with Professor Kenneth Cumberland, continued to be influential.

But a foot-dragging approach to improving natural water quality persisted. The National Water and Soil Conservation Authority, with its directorate based within the Ministry of Works, commissioned the National Film Unit's 1967 film, *The water cycle*. Widely shown, it won a documentary prize at Cannes and a large following at the dawning of modern environmental consciousness.

Ironically, since about 1990, just as 'point source' pollution was becoming much less of an issue for New Zealand rivers, diffuse pollution, the nitrate run-off of seemingly ever-expanding dairy farms and herds, has provided a new challenge to river health and our international image.

1970s

A century of forestry protests

Community protests over logging of pristine native forests began in Nelson in the 1890s. Efforts to end kauri milling at Waipoua, Northland, succeeded only after many years in 1952. However, it was the South Island beech forests campaign of the early 1970s, to spare them from milling and chipping, that raised wide public consciousness.

While by 1975 the Government had backed away from its most ambitious and destructive plans for beech, those protests morphed into what was to be a sustained campaign over almost 30 years to end logging in state-owned native forests.

Okarito and Waikukupa, in remote Westland, were first up, with protective measures announced in 1981. However, the future of logging communities in these places became major considerations, pitted against the survival of endangered species, such as the little brown kiwi. Then focus shifted to the North Island, where Waihaha, Pureora and Whirinaki tōtara and the North Island kōkako, central to conservation arguments, finally carried the day.

Forest and Bird, the Native Forests Action Council, ECO and other groups were involved; but attitudes were not always in concert. Conservation became somewhat divided between sustainable use and protectionism—increasingly, with growing rarity of flora and fauna, protectionism won out. Attempts to formally rein in logging in state native forests began on the West Coast in 1986. Finally, in 2000, the Forests (West Coast) Accord Act began the phasing out of such practices.

—

Cleared native forest, as practised by government, 1980s, NW Nelson.
Image database DOC

1972

Manapouri

Forty years after much strenuous debate, protest marches and petitions, Manapouri, an exquisite Fiordland lake, still represents an historic turning point in emergent public environmentalism.

Governments from the 1920s had eyed its hydro potential through a lens of gigawatts. In 1959 Australian Conzinc's investigations into the possibility of hydro-electricity for smelting aluminium grew into an agreement between Comalco and the Government.The state would build a dam; Comalco would build a smelter at Bluff.

In 1966, Electricity Minister Tom Shand announced the raising of the lake by up to 11 metres, provoking strong criticism from the Nature Conservation Council. The first turbine, generating 400 megawatts, had been commissioned in 1959. However, with the lake not yet raised, a public meeting in Invercargill in October saw the beginning of the Save Manapouri campaign. Invercargill returned serviceman Ron McLean ('Mr Manapouri') stumped the country. Save Manapouri organisations formed throughout New Zealand and, a few months later, Forest and Bird's third petition was launched, attracting a then record 264,907 signatures.

A Commission of Inquiry confirmed fears that raising the lake would cause irreparable damage to the lake edge. In Labour's 1972 landslide victory, new Prime Minister Norm Kirk honoured his party's commitment not to raise the lake and announced guardians for Lake Manapouri and Te Anau. One of those guardians, now Sir Alan Mark, Emeritus Professor of Botany, University of Otago, had fought against the raised lake and is still an environmental campaigner today.

—

Manapouri: watershed in public conservation consciousness, 1970s.
Royal Forest and Bird Protection Society of New Zealand archive

1972

Stockholm environmental conference

Air pollution and acid rain were key drivers for Stockholm 1972. Stack Emissions: Creative Commons; *Wisconsin Department of Natural Resources 2011*

'Once a photograph of the Earth, taken from the outside, is available, a new idea as powerful as any in history will be let loose', attributed to the late British astronomer Sir Fred Hoyle, before any such photograph was taken.

In 1970, preparation began for laying the foundations for global environmental governance at the Stockholm Conference on the Human Environment in 1972. The world's first international forum to address global environmental concerns, its origins lay in the trans-border issues of Northern Europe's pollution and acid rain. While opposed by the Communist bloc and—a precursor here for later climate change diplomacy—the developing nations Group of 77, 113 countries attended.

Among New Zealand delegates were Minister for the Environment (a new portfolio in January 1972) Duncan McIntyre, a senior Cabinet Minister, and young environmentalist Guy Salmon.

The conference achieved a high degree of unanimity among about 85 percent of the UN member nations attending, setting an agenda for international cooperation on environmental degradation. It contributed to an upwelling of environmental awareness around the world and laid the foundations for the 1992 UN Earth Summit in Rio de Janeiro.

On a more sobering note, the topic of Ministry of Works Water and Soil division's presentation was the importance of multiple use planning for quickly developing Lake Taupo basin. It was to take nearly another 40 years before serious measures were taken on this matter.

1975

'Leigh': NZ's first marine reserve

'Everyone was surprised at what happened when (the first) "no take" marine reserve was created, and all the surprises were pleasant ones,' wrote Bill Ballantine, Director of New Zealand's first marine reserve at Cape Rodney–Okakari Point, north of Auckland.

'Leigh', as it is often called, was the brain-child of Professor of Botany Val Chapman at the University of Auckland, which already operated a marine laboratory at the site, and Dr Bill Ballantine, who ran it. Under the first 1971 Marine Reserves Act, the primary purpose of the protection of flora and fauna was science-enabling. Ballantine's pioneering work in design and operation has proved inspirational internationally as well as locally. It was he who some 30 years ago set the goal, still unrealised, of securing 10 percent of New Zealand's sea coast in reserves.

Poor Knights Islands was the second, in 1981. More recently, on DOC's watch, 32 of New Zealand's total of 34 marine reserves have been created—including the large area around the Kermadec Islands to the north and the southern Auckland Islands, representing 7.3 percent of our territorial sea.

Marine reserves have proved themselves to be a vital tool in the protection of New Zealand's marine biodiversity. Among a range of other coastal tools, taiāpure (recognising special significance for hapū and iwi within their rohe moana) and mahinga mātaitai (customary harvest only) have proved successful.

—

Marine reserves represent ecological protection, enhancement and conservation education.
Image database DOC

1975

Our historic heritage

The Clyde Dam project in the 1980s was a milestone as the first large public project with a significant archaeological programme attached. The old town of Cromwell and many mining sites were inundated, but not before a full archaeological programme was instigated for the entire project. This was a direct result of the Historic Places Amendment Act 1975.

From the late 1960s, rising Māori consciousness and awareness among New Zealand's small archaeological community resulted in concerns being raised about archaeological sites generally. There were no effective legal controls over digging and pillaging of artefacts. Indiscriminate fossicking fed an increasing trade in Māori artefacts, both locally and overseas.

A vigorous political campaign was launched by the professional archaeological community led by Dr Roger Green and New Zealand Historic Places Trust (NZHPT) archaeologist Jim McKinlay. This brought protection to New Zealand's archaeological heritage and controls on the trade and export of Māori artefacts.

The Historic Places Amendment Act 1975 provided the first legal provisions to regulate any disturbance to an archaeological site more than 100 years old, and the Antiquities Act 1975 regulated the sale and export of Māori artefacts. These Acts have now been incorporated into the Historic Places Act 1993 (HPA) and Protected Objects Act 1975.

The NZHPT administers the Historic Places Act while the Ministry for Culture and Heritage administers the Protected Objects Act.

However, from 1987–93 the NZHPT was attached to DOC and its archaeological team transferred to DOC's Science and Research group.

The HPA moved the NZHPT from DOC to the Ministry for Culture and Heritage. The Act's provisions have substantially reduced the illegal fossicking of sites, ensuring that, where sites need to be disturbed, archaeological investigation is undertaken.

Today, archaeological assessment is routine to any resource consent involving land disturbance.

The HPA has also ensured Māori play a greater role in determining their archaeological heritage. The HPA consent process requires consultation and the views of relevant iwi, and any sites relating to Māori are assessed by the NZHPT Māori Heritage Committee.

DOC still remains legally responsible for all historic and/or archaeological sites on the lands it administers, more than 12,000 sites in total, and is bound by the HPA.

—

The Historic Places Act 1993 protects Chinese gold mining relics like these in Central Otago. *Neville Ritchie, DOC*

1978–1989

Pureora–Whirinaki

Of all the protests over native forest felling and loss in the turbulent years from 1971 until 1988, perhaps none captured hearts and minds quite as much as those in the central North Island.

Here were ancient podocarp (pine) forests predominantly of tōtara and rimu sprung from the ash falls of Taupo's immense eruption around 232 AD. With its legislated dual purpose of protection and production, the Forest Service had one eye on conservation and one on exploitation. The contradictions of 'multiple use', exacerbated by the social priority to sustain established timber towns and their product for building, came to a head in what was already diminished—and increasingly rare—lowland forest. Compounding all that was the discovery by Wildlife Service that not only had the now at-risk kōkako (wattled crow) lost 87 percent of its habitat in the previous 30 years, its numbers had probably halved.

If trees couldn't carry the day then birds would—surely? But when politicians remained unmoved, conservationists, with the Native Forests Action Council as their spearhead, backed by Forest and Bird and the Environmental Defence Society, got going. Hoisted into treetops of trunks marked for felling—and remaining hidden—the protestors served up the perfect spectacle for television—and also, eventually, for protection of those forests.

—

Tree-top protests, world-first at Pureora, 1978. *Marcus Ladd, private album*

1981

Wild and scenic

The Rakaia: our second protected river in 1988. *Image database DOC*

Legislative provision for the protection of wild and scenic rivers was a concession in 1981 made by the government of the time. Its 'Think Big' programme, including hydro on the Rangitaiki and Whaeo rivers, had exposed the limitations of the 1967 water and soil legislation. The 'multiple-use' approach to water management had meant endless compromise of outstanding values worthy of protection.

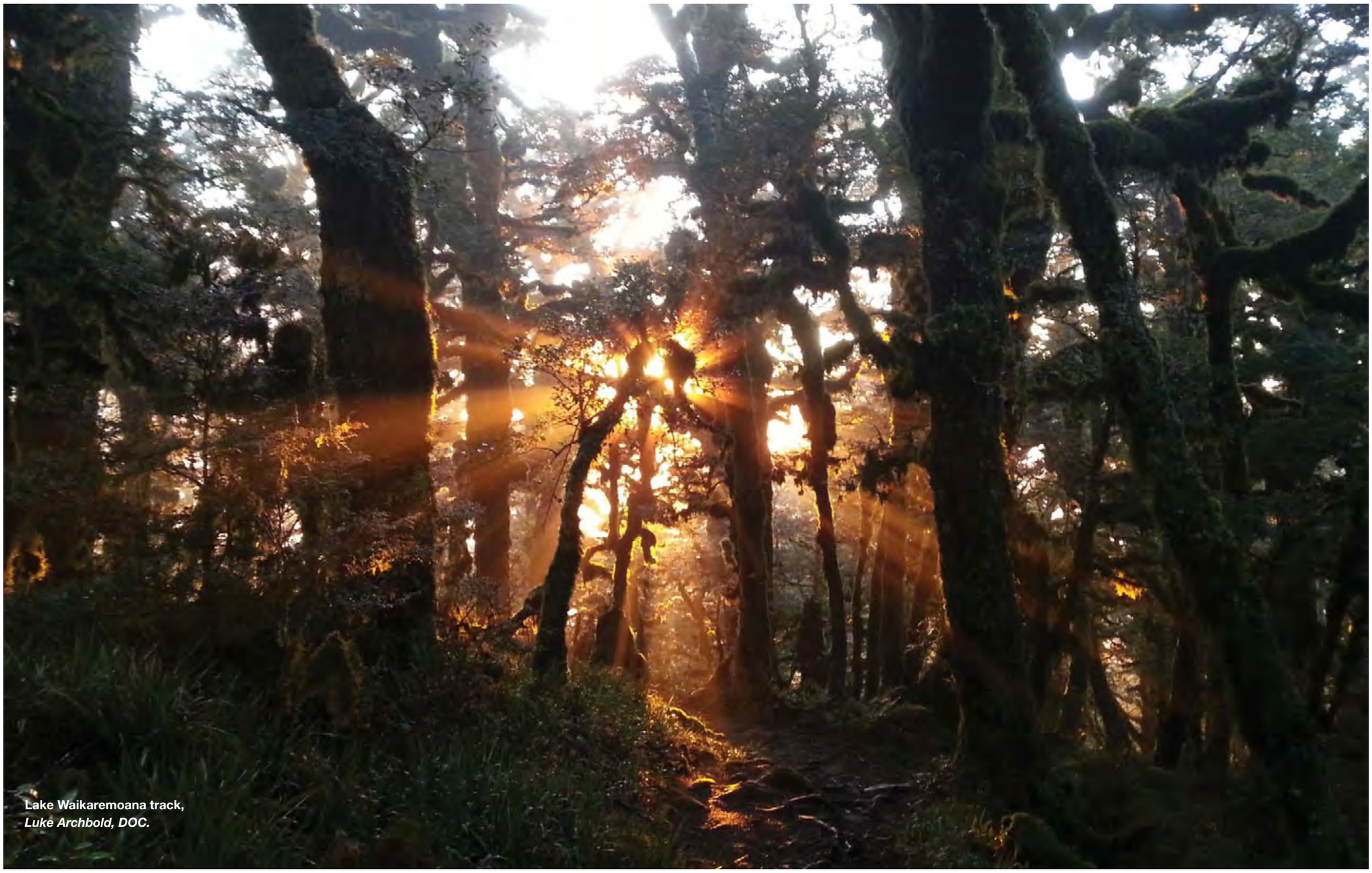
An American concept, river protection measures were magnified by a decade of bickering and protest over the proposed dam at Clyde on the Clutha. Clyde was the final artefact from an era of heroic engineering that raised a series of hydro dams successively from 1929. Each exacted an environmental price.

By legislative amendment, statutory bodies were able to nominate a river, or river section for designation, as nationally or locally outstanding. If, after a robust independent tribunal process, a river was found to be outstanding, the obligation was to determine what measures were required to preserve or protect those features. A recommendation went to the Minister for the Environment. This process is arguably more robust than an investigation into a national park in that it is subject to appeal to higher courts.

Today, 13 rivers, including the Motu, Rakaia, Mohaka, Buller and Ahuriri, plus Lakes Ellesmere (Te Waihora) and Wairarapa, enjoy this enduring measure of protection. Criteria include: wild and scenic, native and sport fisheries, wildlife values (such as for braided river birds or whio/blue duck), as species habitats, scientific and ecological, recreational, historic, spiritual or cultural (fishing, canoeing, kayaking, rafting), and tikanga Māori.

Science and management, public and private: 1987–2012

Since DOC's creation, its improving ability to bring together science, policy, management and the public and private sectors, as well as iwi, in the service of conservation, has improved the quality of action taken.



Lake Waikaremoana track,
Luke Archbold, DOC.

1987

DOC: born of democracy

DOC was born in one of the most strenuous eras of political reform in the 20th century. Shortly after coming to office, the David Lange-led government held an environment summit in 1985 in which 150 key players met in Parliament before a gallery of public officials. Over several days of self-styled radical democracy, they debated the government structures required for a new era.

Minister for the Environment Russell Marshall announced a new policy ministry, seen then as the senior agency. The other 'nature conservancy' agency's shape was less clear, but the summit's express desire was the separation of former departmental activities, such as Forest Service commercial logging, from its conservation roles. After years of divided and conflicted conservation responsibilities, a single agency, mandated with integrated management responsibility for habitats and species, protection and recreation, was envisaged. The move was publically supported by outgoing Director-General of Lands and Survey Bing Lucas who had influenced the professionalisation of New Zealand's parks and reserves system as well as UNESCO's World Heritage protection.

So DOC began on 1 April 1987. The Conservation Authority followed in 1990. Under its unique provisions, within each conservancy community, representatives on conservation boards—not the department—signed off on park management. The system was modelled on the old national park boards and authority.

Also defining, in 1991, was Kaupapa Atawhai, a unit of Māori liaison officials whose task was to help honour the department's unique legislative requirement to give effect to the principles of the Treaty of Waitangi.

1990s

Candid camera: red-handed possums and rats

Amazingly, it was only as recently as the 1990s when research on kōkako revealed the identity of predators that cause declines in native bird populations. John Innes's leading work involved catching, banding and tracking kōkako back to their nests where they were most vulnerable. It showed a sex bias, meaning that nest-sitting females were predated; males often survived. Rats, possums and harriers were identified. Innes led the team whose camera implicated with forensic finality the possum in bird population decline.

This work in the Central North Island showed that it was possible to manage kōkako populations, reversing trends, largely through controlling rats and possums. Innes followed up with wood pigeon/kūkupa in the North, where, until then, the rat and possum predation effect had been entirely left out in any reckoning of its scarcity.

David Mudge

Soon after, Graeme Elliott showed that yellow-head/mohua were vulnerable to rats when beech trees produced mass seed. Previously, stoats were thought to be the main predator. All this impacted psychologically on the complex issue of pest management thinking nationally, shifting DOC towards many of the species management systems that have become standard practice today.

Te Wāhipounamu–*South West New Zealand* World Heritage Area—Milford Sound. *Rob Suisted*

1990–2007

World Heritage recognition

The listing, in 1990, of Te Wāhipounamu–*South West New Zealand* by UNESCO as a World Heritage site was an outstanding achievement of the early DOC. A wide range of conservation and recreation non-governmental organisations, notably Forest and Bird and the Federated Mountain Clubs of New Zealand, supported by Ngāi Tahu, backed DOC's 'outstanding universal values' advocacy for this area of 2.6 million hectares—10 percent of New Zealand's land area. The 1989 decision to pass to DOC 300,000 hectares of South Westland's indigenous forests south of the Cook River paved the way for this international initiative, ending decades of forest conservation controversy.

Soon after, in 1993, the indigenous element in the designation of Tongariro National Park as New Zealand's second World Heritage site played an even more decisive role. After a nomination led by Lands and Survey in 1986 and an application led by Sir Hepi Te Heuheu, of Ngāti Tūwharetoa, UNESCO decided to reconsider its cultural criteria for world heritage. A presentation by Sir Hepi's son, Tumu, in 1993 to a World Heritage experts group, resulted in a special designation of the park based, for the first time ever, on its living cultural values as well as its unique history and extraordinary natural qualities.

Koichiro Matsuura, UNESCO Director General, is greeted by Tumu and Susan Te Heuheu at Tapeka. *Dave Wakelin, DOC*

It was therefore fitting that New Zealand hosted the 31st session of the World Heritage Committee in Christchurch in 2007. Paramount Chief of Ngāti Tūwharetoa Tumu Te Heuheu was then Chair of the World Heritage Committee. The park is one of only 23 sites in the world with dual World Heritage status. New Zealand's third World Heritage site is the subantarctic islands.

1995

Cave Creek

Cave Creek is synonymous with terrible, avoidable tragedy; with what has been DOC's greatest ordeal and with the development of systems to ensure that such an event never happens again.

Located within Paparoa National Park, this was the site of a viewing platform that, soon after construction in April 1995, collapsed under the weight of 18 people, most of them outdoor education polytech students. Plummeting 30 metres, the accident caused the deaths of 14, injuring four others, one seriously.

In the ensuing inquiry, it became clear that the causes were manifold and systemic. In a culture of doing more with less, training, supervision and engineering inspection were seriously wanting. Successive restructurings, the pervading climate of less government and deregulation also contributed.

Apart from further, significant restructuring and the reassessment of safety throughout its network of tracks, bridges, huts and other constructions, DOC established new and powerful management systems. These went beyond public safety, and elements of risk averseness, to ways in which plans and their implementation, be it in the science of endangered species management or the control of spending, became systematic and, in the jargon, 'transparent'. In the process, the law for government chief executives changed and DOC traded its 'coalition of free spirits' for a lean and more accountable, focused bureaucracy.

—
Cave Creek: tragic prelude to quality management systems for DOC.
DOC

1996

Kapiti Island: place of a second chance

In the early 19th century, Te Rauparaha, 'the Napoleon of the South Pacific', chose Kapiti, north of Cook Strait, as the centre for his resettled tribe, allies and strategies. Late in the century, it became an island sanctuary for native birds; in the 1920s, its neglect was an inspiration for the formation of the Forest and Bird Society. From the 1980s, it was a leader in, first, large-scale ground possum control (1986) then aerial rat eradication (1996). Consequently, it became a key site for translocation of a rich range of endangered species and a must-see destination for eco-visitors.

Furthermore, it opened DOC's eyes to the possibility that large areas, at that stage offshore islands, could be pest free, leading to a succession of 'conquests' of bigger and bigger landmasses, including the mainland island concept. The necessary techniques, involving aerial poison drops, followed by trained dogs tracking remnant possums and vigilant surveillance systems forever after, were also pioneered on Kapiti.

Kapiti is also one of New Zealand's oldest marine reserves, whose challenging stakeholder representation included three tangata whenua groups and—being recreationally vital to a large urban area—a myriad of others. Māori, business and recreational groups make up its advisory committee.

Kapiti represents, then, one of those special places where seemingly impossible dreams can be manifested.

–

Kapiti: exemplary in offshore islands' role in species recovery. *Rob Suisted*

Karori Sanctuary (Zealandia): the world's first fully enclosed mainland island.
Rob Suisted

1999

Karori: thriving within walls

In the early 1990s, the realisation that predator control was the key to protection of endangered species coincided with the Wellington Regional Council's decision to turn its 130-year-old water catchment at Karori into a reserve. Conservation neophyte, Jim Lynch (planner, systems designer and strategic thinker) put these two ideas together with his inspiration that Wellington-wide native wildlife restoration could kick-start at Karori behind an 8.6 kilometre predator-exclusion fence.

It was a radical idea, a world first. But, again serendipitously, technology to enclose the 225 hectares of valley stream from all predators was just becoming feasible.

In 1999, Karori Sanctuary was born. Tracks were built, restoration furthered and translocations undertaken. Before long, the dream of restoration of saddleback/tīeke, stitchbird/hihi, kākā and bellbird/korimako to what until recently, had been a Wellington domestic edge dominated by gnarly pines, magpie and possums, became reality. Since then, the name has changed to Zealandia, tourism has become important, but conservation innovation continues with such species as tuatara and little spotted kiwi.

This ecological island concept, bringing the rare, unseen and endangered back to the mainland, has inspired several similar projects throughout New Zealand. Among these are the 7.7 hectare kahikatea remnant of Riccarton Bush/Putaringamotu, 98 hectare Bushy Park and 3,500 hectare Maungatautari, which encloses an entire mountain.

2000

Biodiversity in action

'Biodiversity', a recent word popularised by American ecologist Edward O. Wilson to promote ecologically based conservation, became enshrined in thinking worldwide following the UN Environment Summit in Rio de Janeiro in 1992.

In 2000, the New Zealand Biodiversity Strategy was published, stimulating protective measures in coastal, marine and terrestrially based restoration. Often driven by communities on private and public land across the country, forest regeneration, wetland renewal and protection of endangered birds, lizards, snails and fish have benefitted.

Shoring up what was under threat, preserving and extending limited representativeness and intensifying predator control measures—some in mainland islands—was supported by $42 million in the Fund available to Māori, community projects and science.

Trapping of exotic predators and elimination of invasive weeds were essential measures in most places. As lead agency, DOC, but also other departments and local and regional government, provided advice, training and leadership, particularly technical support. The translocation of native species to a site always marks a win for significant predator control.

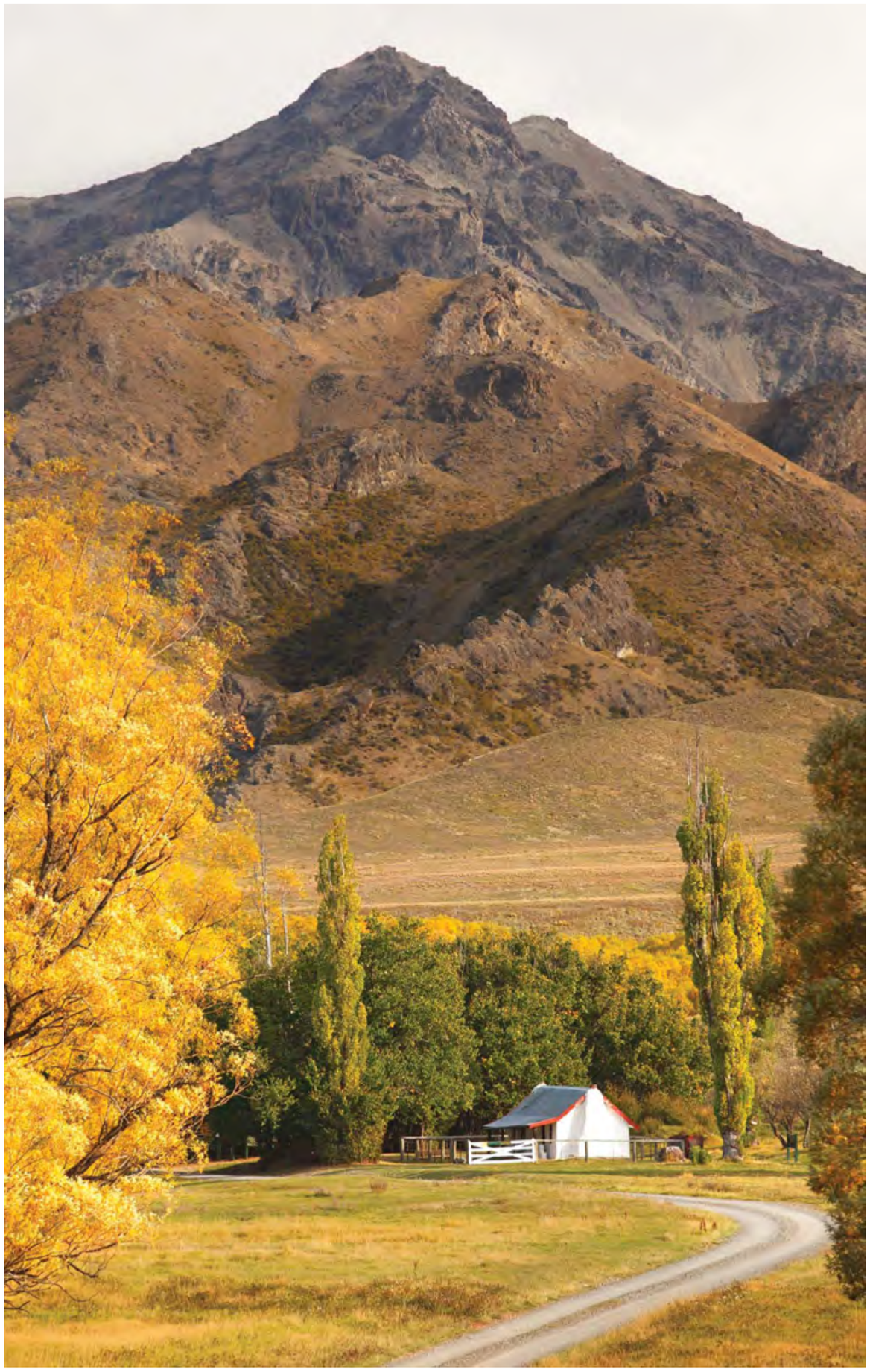
Despite the fact that, overall, New Zealand's native biodiversity is still losing ground, large numbers of New Zealanders are committed to ending such trends. Predation is not the only cause. Draining, private logging, housing development, inadequate waste disposal—especially in parts of the dairy sector—continue to take their toll on environmental quality and threats to species.

—

The modern term 'biodiversity' has helped catalyse thinking, policy and action world-wide. Volunteers make a vital contribution—Wakatipu Wilding Conifer Control Group. *Emily Adamson Photography*

2005

Molesworth Station: heritage in motion



Historic, archetypal Molesworth is mythical New Zealand. Today, owned by DOC, it is run on three entwined principles—conservation, recreation and production.

At 181,000 hectares, its vastness makes a similar footprint to Stewart Island's. In remoteness and in heritage value as a classic high country station, dating from the 1850s, it has been described by one cyclist as 'like riding through a painting'. Since 2005, when it formally took over, the department has leased back Molesworth to Landcorp. The corporation commercially runs 9,000 head of beef cattle on a portion of this.

Once an 85,000-strong sheep station on the old Nelson–Canterbury route, Molesworth became synonymous with rabbit infestations and spectacular erosion. However, after WWII, with precautionary management, including aerial over-sowing, rabbit control, destocking and abandonment of sheep, it gradually became a model of land care in difficult country.

Today, the diversity of its ancient rocks, wild rivers, ecosystems with cryptic plant life in a range from herb and tussock lands is its conservation raison d'être. The landscape contains beech remnants to the west, grading into wood, shrub and tussock lands to the east. Species include Hall's tōtara, mountain daisy, hebes and native daphne, many endemic to south Marlborough.

Through the summer, its heritage trails are increasingly a recreational choice for hundreds of cyclists. Apart from exercise, the unfolding panorama of big riverscapes and mountains, historic sites, cob buildings and a continuing sense of pioneer life, Molesworth offers a unique experience only a short hop from the Cook Strait ferry.

–
Former high country station, today Molesworth is an adventure-tourism destination. ***Rob Suisted***

A range of agencies now works to conserve our natural heritage values on both public and privately owned lands. Wairepo kettlehole, Quailburn Conservation Park. *Joy Comrie, DOC*

2005

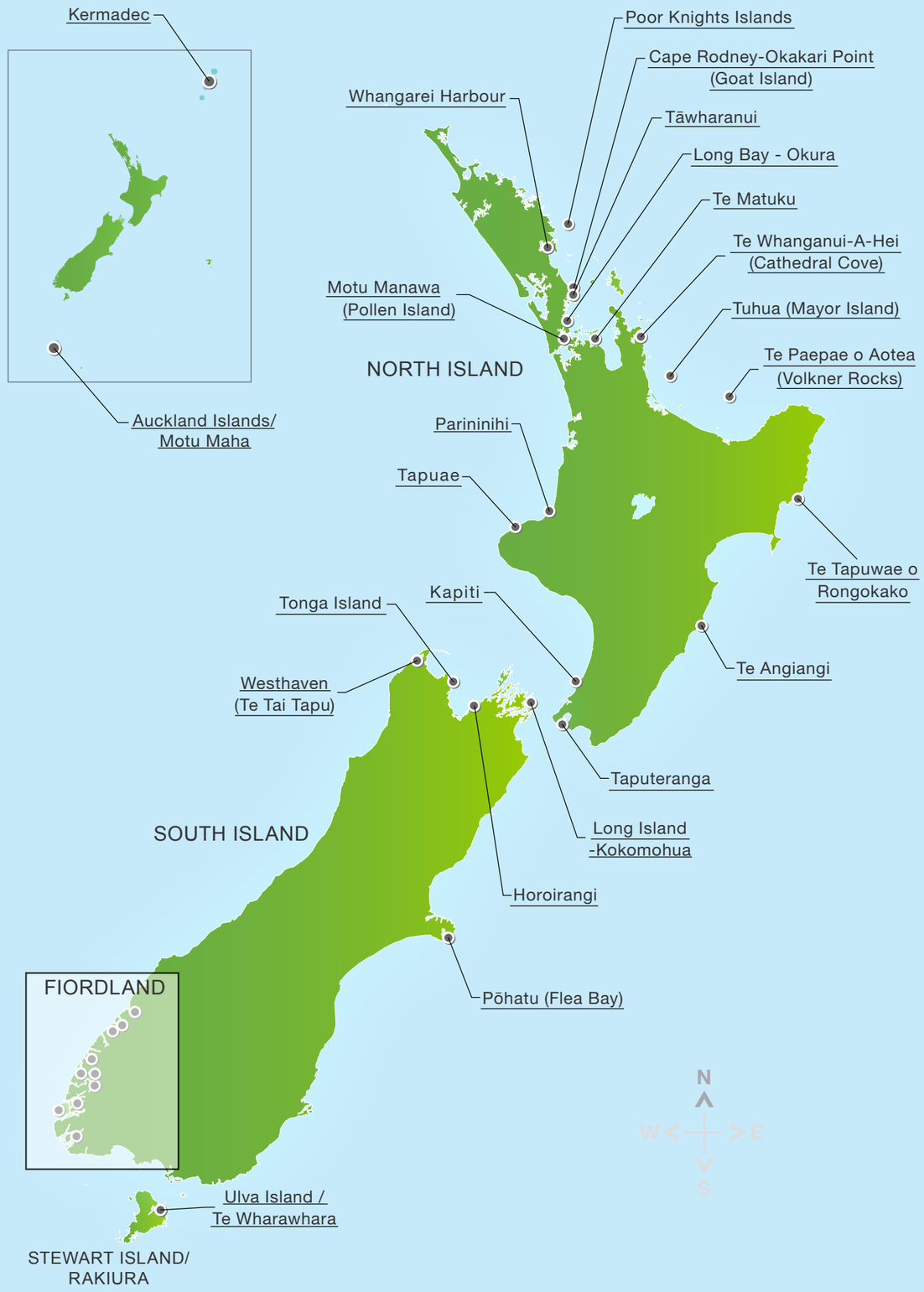
Covenants and other pathways to protection of natural lands

Until 1977, land for conservation purposes was held in trust in a range of reserves, from national parks down to local domains. These were administered on behalf of the public mainly by Lands and Survey, the Forest Service or local government.

In that year, inspired by conservationist–farmer, Gordon Stephenson, the Queen Elizabeth II National Trust was formed. Under its special legislation, landowners could place in permanent covenant their native forests, lakes, wetlands, coastline and other special landscapes, entered on the land title. In return, rates relief, fencing assistance and/or predator control assistance was made available. In the past 10 years the number of these covenants has increased from 1,400 to 3,600, the total area protected growing from some 50,000 to 110,000 hectares.

Under DOC, the Nature Heritage Fund (NHF), originally the Forest Heritage Fund, and Ngā Whenua Rāhui (NWR) have been formed to protect those ecosystems of natural biodiversity on private or Māori land. Independent, but serviced by DOC, NHF purchases, arranges covenants or provides management assistance. Both funds have been highly successful. Twenty-two years later, NHF has protected 340,000 hectares, a considerable proportion of it being that most rare of former ecosystems, wetlands. NWR is similar, but also provides an opportunity for Māori to apply Māori conservation values in their own right.

From the 1990s, the high country tenure review brought further ecologically significant lands into public lands administered by DOC, leaving the conventionally productive lands for agriculture.



Marine Protected Areas offer more comprehensive and inclusive ways of protection. *DOC graphic*

2006

Marine Protected Areas

While some impressive areas have been placed under reservation, the 30-year goal to establish marine reserves of '10 percent by 2010' is yet to be achieved. Much of the protection area in marine reserves lies around the Kermadec or subantarctic islands, leaving large mainland coastal gaps in the ecological representativeness of the network. Fewer marine reserves have been established over the past five years.

Efforts for a representative and holistic network of MPAs through community-driven processes and backed by the Biodiversity Strategy resulted in a Marine Protected Areas Policy and Implementation Plan, approved by government in 2006. This has resulted in a focus on particular biogeographic regions, rather than trying to run several marine protection application processes at once.

Regional MPA forums were run for the South Island West Coast and subantarctic islands. Despite the fact that there is no significant fishing in the subantarctic, the process was frustrated by relitigation by the fishing lobby. The approach has taken a few years, and protected areas are only now being established—a key reason for the slowing of acquisitions of reserves. There have also been unsuccessful marine reserve applications, for example, for Great Barrier Island.

The recommendations of both regional forums were eventually approved by Ministers of Conservation and Fisheries, with those for the subantarctic islands to be established by special legislation. Three subantarctic reserves should be secured this year. Those for the West Coast await the statutory process of the MPA.

2008

Innovations in weed management

Invasive weeds have taken root in New Zealand since James Cook's first voyage here. Naturalist Georg Forster noted that, between 1769 and the second voyage in 1773, canary grass was established.

New Zealand now has more introduced plant species established in the wild than it does natives. Invasive plants that threaten biodiversity values total more than 300 and continue to arrive here at the rate of two per year. It was 1998 when DOC wrote a smart weed strategy that has focused its weed work since. The weed budget has grown from $1 million to $20 million, reflecting an appreciation of the extent of the problem.

One of New Zealand's most intractable weeds has been the wilding pine whose relentless march has, for more than 50 years, been seen as a threat to be extirpated, root and branch—even off the giddy slopes of The Remarkables. Volunteers have played an important role at more accessible sites—recently, 60 removed 16,000 trees in two days from the Mataura basin.

However, ground-based and aerial application of herbicides is achieving even more effective control, across vast and often inaccessible parts of our high country. The generic term 'wilding pines' refers to at least 10 species of conifer including firs and spruce as well as pines.

Wilding pine control is only part of the Department's weed work that includes other nasties such as old man's beard, buddleia and wild ginger.

—

Wilding pines threaten New Zealand's ecological integrity, but innovative controls are being developed. *Jamie Cowan, DOC*

New Angelus Hut. A booked alpine destination. *Nelson Lakes, DOC*

2010

Understanding recreation demand

In 25 years of DOC recreation management, we have seen a shift from a supply driven model to one much more demand driven.

DOC's inheritance in the way of tracks, huts and even bridges from its land-holding predecessors, the Forest Service and Lands and Survey, was impressive in both scope and content.

The 1960s and 1980s saw considerable expansion of backcountry assets built for both recreation and wild animal management. Managers also noticed more public use of the front country and road-end development. The North American influences, whereby the US Park Service, Forest Service and Bureau of Land Management were expanding their asset base and understanding of recreation demand and needs, were considerable.

However, as the 1995 tragedy of Cave Creek sank in, two salient points of DOC's legacy became clear. One, publicly identified by Director-General Bill Mansfield, was that no one had identified the need for a national project management system before Cave Creek. The other was that such a system would entail identifying much more closely where public demand lay and—to meet DOC's limited budget—reducing the number of facilities available.

To manage within its capacity, DOC has sharpened its visitor management focus on 'understanding demand'. This has meant providing the best mix of facilities and services and ensuring a quality, enjoyable experience suitable for a range of visitors. Working with others, such as outdoor recreation groups and the tourism industry, is also now essential.

2010

1080: DOC's critical tool

1080 Teka

5 Common misconceptions of 1080

Based on feedback from Māori communities

Teka/Myth	**Pono**/Fact
1080 destroys the mauri of the ngāhere	**Possums and predators do far more damage to the mauri of the ngāhere than anything else**
Ground trapping would provide employment for Māori	**Trapping on its own is not and will not provide long-term employment for Māori**
1080 poisons the waterways	**Research shows 1080 breaks down quickly in water and does not poison waterways**
DOC and its partners are not interested in alternatives to 1080	**In Aotearoa, $4–5 million is spent each year on finding alternatives to 1080**
DOC uses 1080 on vast areas of the public conservation land that it manages	**DOC uses aerial 1080 on only 6% of all conservation land.**

In 2007, DOC released its threatened species list, showing that 416 new species had been added and 40 bird species were worse off. At the same time, however, two positive trends were well under way. One was the growth of mainland 'islands' with intensive predator control; the other, the elimination of predators from larger and larger islands by aerial application of 1080 and other toxins.

Despite its long-proven ability to protect native birds from exotic predators, and the refinement of aerial drops supported by a range of proven supplementary techniques, 1080 remains the bug-bear of some rural communities. Partly, this is an issue of trust and social control.

Some hunters continue to oppose the use of 1080 (sodium fluoroacetate)—primarily because, together with its primary target species of possums, rats, stoats and weasels, it can reduce deer and pig numbers.

When first introduced after WWII, Forest and Bird opposed 1080, but that is not the case today. Lack of native mammalian predators means New Zealand is the world's largest user of this disrupter of mammalian metabolism. As well as its value for predator control, 1080 is a vital tool for the Animal Health Board in its reduction of bovine tuberculosis in cattle and deer herds, as possums are a vector for the disease.

The most recent independent review of 1080 use came from the June 2011 report of the Parliamentary Commissioner for the Environment, which not only endorsed the targeted use of 1080 but urged more use of it, the better to protect our forests and fauna.

New Angelus Hut. A booked alpine destination. *Nelson Lakes, DOC*

2010

Understanding recreation demand

In 25 years of DOC recreation management, we have seen a shift from a supply driven model to one much more demand driven.

DOC's inheritance in the way of tracks, huts and even bridges from its land-holding predecessors, the Forest Service and Lands and Survey, was impressive in both scope and content.

The 1960s and 1980s saw considerable expansion of backcountry assets built for both recreation and wild animal management. Managers also noticed more public use of the front country and road-end development. The North American influences, whereby the US Park Service, Forest Service and Bureau of Land Management were expanding their asset base and understanding of recreation demand and needs, were considerable.

However, as the 1995 tragedy of Cave Creek sank in, two salient points of DOC's legacy became clear. One, publicly identified by Director-General Bill Mansfield, was that no one had identified the need for a national project management system before Cave Creek. The other was that such a system would entail identifying much more closely where public demand lay and—to meet DOC's limited budget—reducing the number of facilities available.

To manage within its capacity, DOC has sharpened its visitor management focus on 'understanding demand'. This has meant providing the best mix of facilities and services and ensuring a quality, enjoyable experience suitable for a range of visitors. Working with others, such as outdoor recreation groups and the tourism industry, is also now essential.

Whio/blue duck project, Tongariro, supported by electricity generator, Genesis. *Herb Christophers, DOC*

2012

Bangs, bucks and biodiversity

Surprising many of its supporters, in 1990, a cash-strapped DOC negotiated its first commercial contract—with Comalco, conservation's nemesis from the Lake Manapouri debate. Manapouri's hydro scheme powers Comalco's Bluff aluminium smelter. Originally, with funding from recycling of aluminium cans, Comalco (later Rio Tinto, now New Zealand Aluminium Smelters) pledged to assist saving the now famously eccentric and endangered kākāpō. Down to just 50 birds, and heading rapidly for extinction, numbers have—fitfully—increased and threatened status has eased. To date, the company has put millions of dollars into the kākāpō recovery project.

In 1991, the Bank of New Zealand's support for the Kiwi Recovery Programme began. Its financial pledge helped halt the rapid decline in mainland kiwi numbers, and birds remain in their natural habitat. After 21 years, kiwi still struggle in some regions. However, most of the five species now hold 'improving' status—progress even on six years ago. The 2006–16 Kiwi Recovery Programme is designed to ensure that healthy kiwi populations survive across as much of the mainland as is feasible.

In the 1990s, Genesis Energy committed to an effective mitigation package for the Tongariro Power Scheme to help protect the threatened blue duck. This year, the company partnered with DOC to fund $2.5 million for a whio recovery programme at eight sites nationally. Like kiwi, once found in most of New Zealand, the whio's presence is a sign of pure waters and good habitat.

These are just a few of DOC's current commercial partnerships, all of which are backed by smart science, responsive management and community support.

2012

Communicating conservation stories

For nearly as long as New Zealand has had governments, politicians have sought to sell this country's environmental and cultural distinctiveness to an international audience.

Fox used both pen and paintbrush to excellent effect. Liberal MP Richard Seddon promoted scenic wonders with photography, pamphlets and even poetry. In the process, an enhanced national identity—and stronger protective measures—emerged. In 1941 Lance McCaskill took his own fight for water and soil conservation in slide form to Parliament. Roy McGregor, Herbert Guthrie-Smith and Pérrine Moncrieff wrote books, often photographically illustrated, to make their point.

More recently, DOC was the first New Zealand government department to have a webpage, taking 11 hits in its first six months in 1997. Last year that number came close to 4.2 million. The amorous endeavours of Sirocco the kākāpō to cross-species communicate with visiting celebrity Mark Cawaradine was a 'YouTube moment' that later made Sirocco a Facebook and Twitter sensation—highlighting how online exposure for conservation may have rapid positive outcomes, especially when supported by other media.

Today, under the leadership of Director-General Al Morrison, DOC is focusing on two crucial tasks: engaging with others (including businesses, communities, and iwi) to increase conservation effort; and building recognition that spending on environmental health is an investment that underpins our economy, lifestyles and well-being.

Watch this space…