

WORLD HERITAGE NOMINATION - IUCN SUMMARY

421 TONGARIRO NATIONAL PARK (NEW ZEALAND)

Summary prepared by IUCN (August 1990) based on the original nomination submitted by New Zealand and other sources. This original and all documents presented in support of this nomination will be available for consultation at the meetings of the Bureau and the Committee.

1. LOCATION

Situated in the Tongariro and Wanganui regions on the central North Island volcanic plateau. The boundary encircles the Ruapehu, Ngauruhoe and Tongariro mountain massif at an altitude of 500-1550m. An outlier, 3km north of the main park area and separated from it by Lake Rotoaira, includes Lake Rotopounamu, Mount Pihanga and Mount Kakaramea. The total area of the park is 79,596ha.

2. JURIDICAL DATA

Established on 23 September 1887 by deed of gift when Paramount Chief Te Heuheu Tukino of the Ngati Tuwharetoa people presented 2,630ha of the central volcanic area to the government. The area was constituted as the nation's first National Park in 1894 and gazetted in 1907 with an area of 25,213ha. By 1922, when the Tongariro National Park Act was passed, the size of the park had increased to 58,680ha. In 1975 the outlying Pihanga Scenic Reserve (5,129ha) was added, and further additions were made in 1953 and 1962. The current enabling legislation is the National Parks Act, 1980.

3. IDENTIFICATION

The park lies at the southern end of a discontinuous 2,500km chain of volcanoes which extends north-east into the Pacific Ocean. The volcanoes in the park, which are predominantly andesitic in composition, fall into two groups on the basis of location, activity and size. Kakaramea, Tihia and Pihanga volcanoes and their associated vents, domes, cones and craters form the northern group. These lie on a 10km north-west to south-east axis and have not been active for some 20,000-230,000 years. The active group extends for some 20km along a south-west to north-east axis, with a width of some 10km and comprises Tongariro, Ngauruhoe and Ruapehu volcanoes. The Tongariro complex consists of recent cones, craters, explosion pits, lava flows and lakes superimposed on older volcanic features. In addition to these major features, the park contains other extinct volcanoes, lava and glacial deposits and a variety of springs. Extensive glaciation up to 14,700 years ago eroded both Tongariro and Ruapehu and glacial valleys with terminal and lateral moraine formations are present. Glaciers are currently restricted to Mount Ruapehu although all are less than 1km in length after several decades of retreat.

Habitats are diverse, ranging from remnants of rain forest to nearly barren icefields. From the lowest altitudes to 1,000m in the west and north, about 3000ha of once wide spread mixed Podocarp-broadleaf rain forest is present. At higher altitudes beech forest occurs. Scrublands cover some 9,500ha.

Tussock shrubland and tussockland cover extensive areas in the north-west and around the mount Ruapehu massif at about 1200-1500m. The highest altitudes in the park are dominated by gravelfields and stonefields. The vertebrate fauna is restricted mainly to birds although native mammals are represented by short-tailed bat and long-tailed bat. More than 56 bird species have been recorded in the park including brown kiwi and North Island fern bird.

The area has been occupied by Maoris since they first arrived from Polynesia and ethnic mythology identifies the mountains in the park with 'tupuna' or god-like ancestors. Until the land was given to the nation in 1887 the area was occupied by the Tu Wharetoa tribe.

4. STATE OF PRESERVATION/CONSERVATION

The park is valued for its landscape, cultural importance, ecological diversity, as breeding habitat for a number of threatened species and for recreation. The 1990 management plan was prepared by the Tongariro National Parks and Reserves Board and approved by the National Parks and Reserves Authority. The 1980 National Parks Act provides all protective, legal and administrative mechanisms for the park. The park is classified into natural environment, two wilderness areas, two pristine areas and three amenity service areas. Skifield development has been restricted and developments are prohibited above 1,500m in the Tongariro and Ngauruhoe area, and above 2,250m on Ruapehu Sport hunting of introduced red deer, goats and pigs is permitted under license and programmes to eradicate lodgepole pine, heather and broom are undertaken. The relative paucity of wildlife stems from the nationwide problem of introduced species. Furthermore, native flora have been reduced by exotic herbivores such as red deer and possum. Invasive lodgepole pine threatened to convert native communities into forest and has been a particular problem in the eastern Rangipo desert area.

The park receives up to 800,000 visitors annually, mostly during the ski season.

5. JUSTIFICATION FOR INCLUSION ON THE WORLD HERITAGE LIST

The Tongariro National Park Nomination, as presented by the Government of New Zealand, provides the following justification for designation as a World Heritage property:

a) Natural property

- (i) Earth's Evolutionary History. The park lies at the south-western terminus of a Pacific chain of volcanoes aligned along a major tectonic plate boundary.

(ii) Ongoing geological processes. The park's volcanoes contain a complete range of volcanic features. The related ecological succession of plant communities is of special scientific interest.

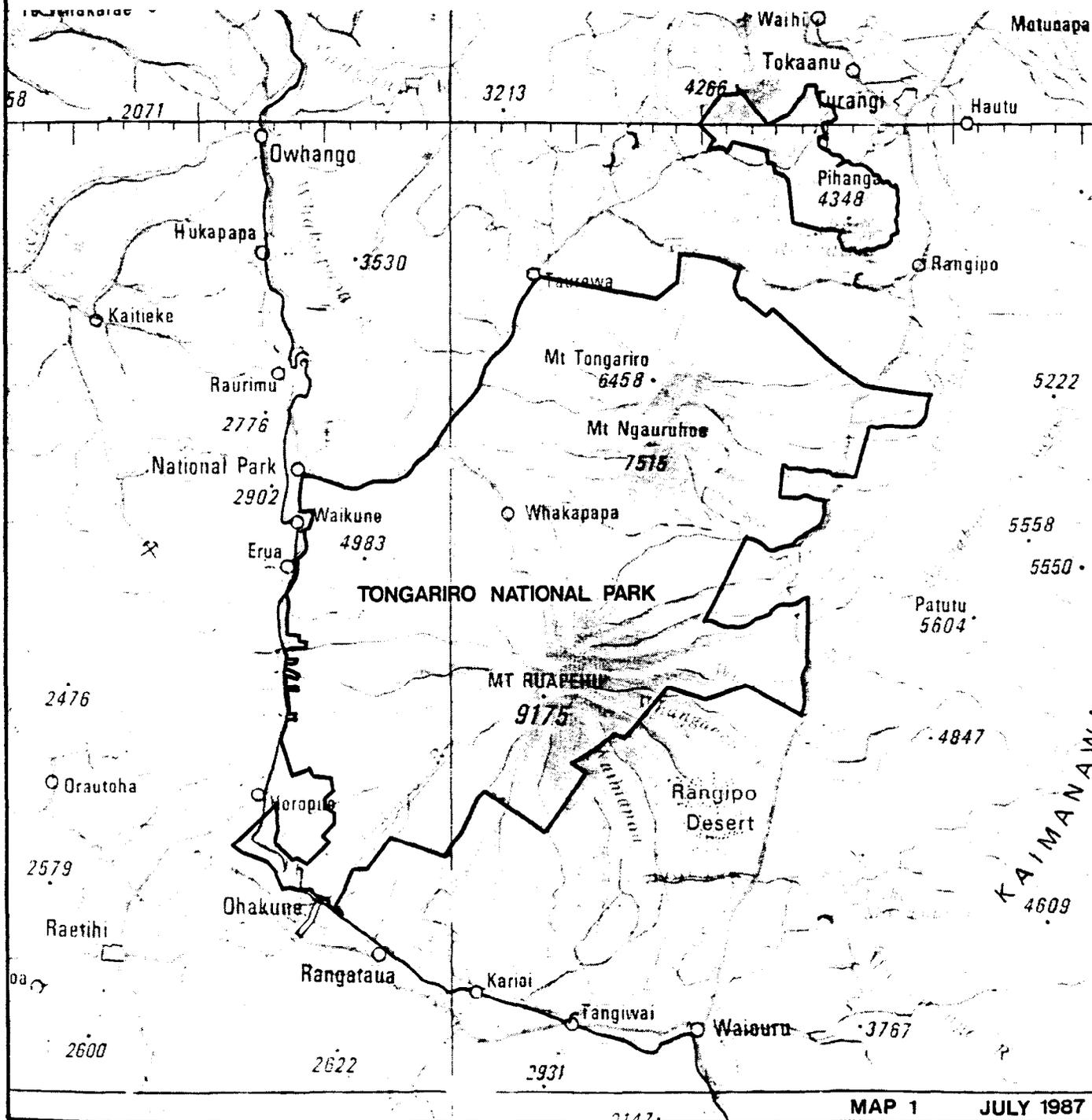
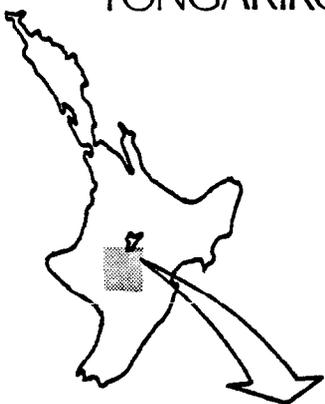
(iii) Superlative natural phenomena and natural beauty. The main volcanic peaks are outstanding scenic features of the island.

b) Cultural property

Criteria for cultural property are being assessed by ICOMOS.

TONGARIRO NATIONAL PARK MANAGEMENT PLAN

LOCALITY PLAN TONGARIRO NATIONAL PARK



MAP 1 JULY 1987

WORLD HERITAGE NOMINATION - IUCN TECHNICAL EVALUATION

421 TONGARIRO NATIONAL PARK (NEW ZEALAND)

1. DOCUMENTATION

- (i) IUCN Data Sheet
- (ii) Consultations: D. Pitt, C. Burns, J.W. Cole, D. Given, R. Milne, H. Eidsvik, G. McSweeney, P.H.C. Lucas, K. O'Connor, B. Jefferies, D. Thom, B. Houghton, New Zealand Government Officials.
- (iii) Additional literature consulted: Tongariro National Park Management Plan 1990. Department of Conservation 3 Vols.
- (iv) Site visits: January 1986, August 1987, March 1990 (J. Thorsell).

2. COMPARISON WITH OTHER AREAS

Within the Neozelandia Biogeographical Province there are 145 protected areas, including several areas which comprise the SW New Zealand World Heritage nomination. These are on the South island and their features are not comparable with Tongariro which is exclusively a volcanic landscape on the North Island. Within New Zealand, Tongariro stands out as the protected area with the greatest diversity of volcanic features.

Within the South Pacific region Tongariro is the south west terminus of the Pacific "ring of fire", a series of volcanoes that extends virtually around the Pacific Ocean. These include Fujiyama in Japan, Krakatau in Indonesia, the Kermadec Islands and Mt. St. Helens in the USA. The distinctions of Tongariro are that it is fully protected, it is one of the most active, it is especially high in scenic values and it displays an exceptionally wide range of volcanic features. Distinctions can be made with the World Heritage site on the island of Hawaii which is a shield volcano (rather than one occurring at the edge of a continental plate), is much larger in size, more continuously active and the site of a more active research programme.

There are numerous other parks in the world with volcanic features, including Timanfaya in Spain, Kilimanjaro in Tanzania, Sangay in Ecuador, Katmai in Alaska and the Hawaiian Volcanoes. There are also 500-600 active volcanoes worldwide including 11 in the Philippines and 77 in Indonesia, but it is difficult to make "value" comparisons among these as all have a certain uniqueness. Certainly Tongariro's species composition and Maori cultural aspects add distinctive elements not found elsewhere (for instance in the Hawaiian Volcanoes).

3. INTEGRITY

Within New Zealand's National Park there are high standards of legislation, staffing and management planning. The park is well protected and managed and enjoys a high level of public support. By legislation, the Ngati Tuwharetoa tribe is guaranteed participation in policymaking and management planning. There are serious problems with introduced plants (exotic heather and contorta pine) and lesser problems with introduced animals and control programmes attempting to deal with these have been cut back due to reduced budgets. The man-made developments in the park (skifields and attendant facilities) are restricted to a specified area amounting to almost 10% of Mt. Ruapehu or 3% of the entire park. The revised management plan addresses the issue of ski area expansion and rehabilitation of other disturbed areas.

4. ADDITIONAL COMMENTS

The park has important historical and cultural values which complement the natural features although the latter appear more visible and dominant and the centennial of the park in 1987 saw this reinforced with Maori ceremonial and dedication of cultural exhibits in the park's new visitor centre. Built in traditional Maori style, this reflects management's efforts to reinforce the cultural dimensions of the park. The evaluation by ICOMOS on the cultural component will outline these values and provide additional rationale for assessing the site. It is recognised, however, that results of the World Heritage Committee's 1987 request for a theme study on the cultural values of the Pacific are not yet available.

5. EVALUATION

With its volcanic cones, lakes and glacier, Tongariro is certainly the most spectacular volcanic site in the Southwest Pacific. Its scenic aspects merit its inclusion on the World Heritage List on Criteria (iii) exceptional natural beauty. It also meets criteria (ii) as an outstanding site for on-going geological processes. Tongariro is important to several branches of the physical sciences (e.g. seismology, geology, geochemistry, and pedology) as sites for teaching and research. It is also important for botanists and zoologists as a habitat for threatened and rare species and for study of the effects of invasive plants and animals. The Maori cultural aspects add further to its significance and reinforce its natural values.

On volcanological grounds, Tongariro's case for World Heritage status is based on three main features. First, it is the most frequently active composite volcano in the world. This activity allows observation of volcanic processes in action and the park is thus an ideal natural laboratory. Second, the crater lake on Ruapehu is unique due to its high frequency of eruption and its glacial setting. It is one of two crater lakes (together with Kelut in Java) regarded as classic case studies of interaction of magma and lake water which often produce lahars (fluid mixtures of volcanic debris and water).

Finally, Tongariro contains deposits from the most powerful volcanic eruption ever known at nearby Lake Taupo. The park protects these deposits for scientific research on this dramatic event of 1800 years ago.

During a field mission to the area in August 1987 by several members of CNPPA, strong concern was expressed on two aspects of management of the area that relate to conditions of integrity:

- a) The extent of the ski development on Mt. Ruapehu, the current plans for expansion, and the impact of these developments on cultural values and "image" of the park. This is compounded by new proposals for slope grooming and snowmaking which would have substantial impacts on scenic values and stream hydrology. It has been suggested that the ski fields of Tongariro would be very susceptible to effects of global warming which would require and upward movement of skiing activity.
- b) The extent to which the cultural values of the park are given prominence in the new management plan and the level of involvement by the local Maori people.

In the preparation of the new management plan for the park, both these issues have been resolved in a manner that protects the natural values of the park and enhances the cultural and spiritual values associated with the Maori people. Skifield development is constrained within specific zones which have detailed plans and measures to place limits on their expansion and operation. A management goal to promote appreciation of cultural values has been added and extensive discussions with the Maori Trust Board have resulted in a plan that better reflects their concerns and traditions.

6. RECOMMENDATIONS

The new management plan for Tongariro adequately covers the concerns of the Bureau expressed in 1987. The park should now be inscribed on the World Heritage List. The Committee may wish to commend the New Zealand authorities for recognising the need to limit inappropriate recreational development and their efforts to strengthen the appreciation of the cultural values of Tongariro in the new management plan.

