

By Bruce Hayward

SAVING THE LANDFORMS AND ROCKS

A new thrust is underway to protect important geological sites in New Zealand.

To ensure the survival of the best examples of the geological features and processes found in this country – many of which are under threat – the New Zealand earth science societies have begun compiling an inventory of all nationally and regionally important areas.

The aim is to identify and then ensure the protection of a full cross-section of the natural landforms, geological features and soil types which best characterise each part of New Zealand.

Urgent Action Needed

Only rarely do most people think of conservation of our landforms, yet like our biotic heritage these have also suffered greatly at the hands of modern technology and increasing population pressure. Many still require vigilance or urgent action to save them.

To date a somewhat random group of mostly spectacular landforms have found their way into the protected lands of the Department of Conservation or into local body reserves. Examples include Rangitoto, Waitomo, Ketetahi hot springs, Mt Egmont/Taranaki, Punakaiki rocks, Fox and Franz Josef glaciers, Milford Sound and Moeraki boulders.

Over the past 15 years, ten scientific reserves have also been established – Turakirae Head, Red Rocks (both Wellington), Chancet rocks (Marlborough), White Creek fault (Nelson), Target Gully shellbed and Hutchin-

son's quarry (Oamaru), Curio Bay, Otapiri Stream, Te Anau and Clifden (Southland).

Once again the selection and establishment of these reserves has been rather random. The Southland reserves resulted from the actions of a keen enthusiast within the old Lands and Survey Department; several of the others were established after long campaigns to save the sites from immediate threats of destruction by quarrying or fossicking (see insets).

By contrast, the new inventory has been divided into a number of categories, each of which is being compiled and assessed on a national basis using the combined experience and knowledge of the New Zealand earth science community.

Features selected will illustrate the different stages of New Zealand's geological history and the physical processes which have combined to produce its present landscape.

To date over 1,500 sites have been identified, documented and entered in the computerised data base. Categories so far completed are fossil sites, earthquake-related features, geothermal fields and Quaternary volcanoes and volcanic features (younger than two million years). Others underway include sedimentary rocks, older volcanic rocks, caves and karst, soils and geomorphological sites.

Each listed site has been given ratings based on its scientific and educational value and its vulnerability to modification or



Two of the three most spectacular examples of badlands' erosion in New Zealand have recently been given legal protection. Putangirua Pinnacles, Wairarapa (above and opposite) is in a conservation park and Omarama badlands, north Otago have a QEII National Trust Open Space Covenant. Photo: Lloyd Homer