

Contemporary understanding of conservation extends far beyond man's oldest and most fundamental occupation—the quest for food.

During the past two decades in New Zealand the term soil conservation has become a household word throughout the land.

A start has been made to teach the children at the schools and the students at the colleges some of the principles and practices of conservation of the soil, of water and of other natural resources. The conservation idea heralds a change in the thinking of men in their use of resources provided by nature.

This movement stems largely from the realisation of the extent and severity of soil erosion in many lands and particularly in those countries that have been settled and developed by Europeans in the past few centuries. The technical achievements in altering rapidly the surface cover of huge areas of the earth during very recent times have led to benefits to the material comforts of men and also to changes in some of his ways of thinking.

An important contribution of conservation to New Zealand already has been its effects on the thinking of the people. In a score of years soil and water conservation has brought about a marked change of thought not only amongst the people directly connected with the land, but amongst people in all the different walks of life—the school teacher, the clerk, accountant, civil servant, farm adviser, bank manager and others.

The acceptance of two basic ideas helps in an approach to an understanding of the concept of conservation of natural resources.

(a) A philosophy incorporating the idea that the earth is the product of design, orderliness and pattern in which man has been privileged to possess several and particular talents.

(b) An appreciation of the natural phenomenon that in all physical things there is nothing permanent but change. There is birth, growth and development, decay and regeneration in the plant and animal kingdom; water is continually in motion in the hydrologic cycle; the soil gives of itself to plants which in turn nourish the soil to maintain a continuum of physical things.

In the understanding of a group of wild animals (e.g., a herd of red deer), a community of plants (e.g., tussock grasslands) a stream of flowing water (e.g., the Waimakariri River) or a soil, the particular component under observation is part of a pattern where change occurs in an orderly fashion under natural conditions.

The low-tussock grasslands on mountain slopes, for instance, are made up of many different and closely inter-related parts—biotic, climatic, edaphic and topographic. The component parts have an influence one upon the other and under natural conditions they form an integrated whole, a landscape with a mantle of indigenous grasslands. There is birth, growth and development, decay and regeneration of the individual plants as part of the orderly change of plant life. The soil, the plants and other components of the grassland complex have developed in an environment where there has been continual change. The weather with its seasons is not constant, the insects and other elements of the biota fluctuate in numbers and the volume of vegetative cover varies. In this environment of change, soil and vegetation have grown up together on the slopes of hills and mountains so steep that the soil would fall downhill if it were not held in place by vegetation. This has been possible by normal and orderly development because the components of the complex plants, animals and factors of the soil, topography and climate—are knit together in an integrated whole.

In normal succession, as a change in the character of the vegetation occurs it is accompanied by an orderly change in the character of the soil, of micro-