

discovery - since her loving care allowed them life - of clematis and bush orchids in flower. The whole project belonged to her retirement but this did not discourage her from waging war herself with adze and mattock against the encroaching broom and bracken, or from the countless hours of labour preparing and transplanting the fragile seedlings.

She described October as "the one planting month" between winter snow and frost and summer droughts and sun, and this was the month she tried to keep for Bealey averaging each year the planting of 80 beech seedlings and numerous hebes and others native to that area. Birds returned and settled to reward her with their song and spread the seeds of returning natives.

Bealey Crag is certainly a fitting memorial to Eileen Fairbairn who loved the mountains and the native trees and who worked to bring them back together. Now that she has gone this piece of land has been bequeathed to her old school, to the future pupils of Christchurch Girls' Highh School in the hope that the love she had for growing things will be shared by generations to come.

#### MERISTEM CULTURE

Eileen Fairbairn

The world Orchid show at Long Beach, California a few years ago was memorable not only for its displays of orchids, wild and cultivated, as was to be expected in these days of easy transport and increasing luxury, but also for the variety in the papers read ranging from high adventure with tigers, to exquisite drawings for the permanent records of Scientific Societies, and a demonstration of Meristem Culture by two experts from Paris. This attracted much attention, so that it was not surprising that it was rapidly developed a few years later in Honolulu where Orchid

Cultivation was highly advanced.

The Hawaii islands lie across the Tropic of Cancer and with their great varieties of altitude, rainfall, and winds, they present in each valley, almost in each back yard, a bewildering variety of microclimates. Added to this there have long been residents who are specialists of world renown, flourishing Orchid Societies, and an Orchid Department of Horticulture at the University. As well there is an enthusiasm for growing orchids among all sections of the public, undiscovered treasures in near-by tropical lands, and a ready market among the wealthy city folk of U.S.A. and Japan.

Briefly, Meristem culture is a system of propagating by growing small pieces of a bud in sterile test tubes of liquid nutrient. It requires a sharp scalpel, chlorine, deft fingers, and aseptic conditions. Your prize orchid can then be reproduced in infinite numbers with great speed, so your winning prize bloom can shortly decorate the greenhouses of several millionaires without the depressing results which may come from seeds of self-pollination.

The continuous care necessary during growth has resulted in further specialisation, and in the use of intriguing mechanical aids. One specialist may take charge of the whole cultivation for several growers. His premises is a laboratory of shelves of thousands of sealed, labelled test tubes containing thin wisps of green matter in all stages of development. They must be fed nutrient; guarded from infection; supplied with varying, adequate sunlight, shade, and drying off periods with clocklike precision. All this is time consuming and costly.

So at Lincoln College last week, seeing a modest exhibit of meristem culture, I enquired what place there was in New Zealand in these hard times for such sophistication and learnt that experiments with fruit tree budding have already begun.

Diversification brings strange bedfellows.