

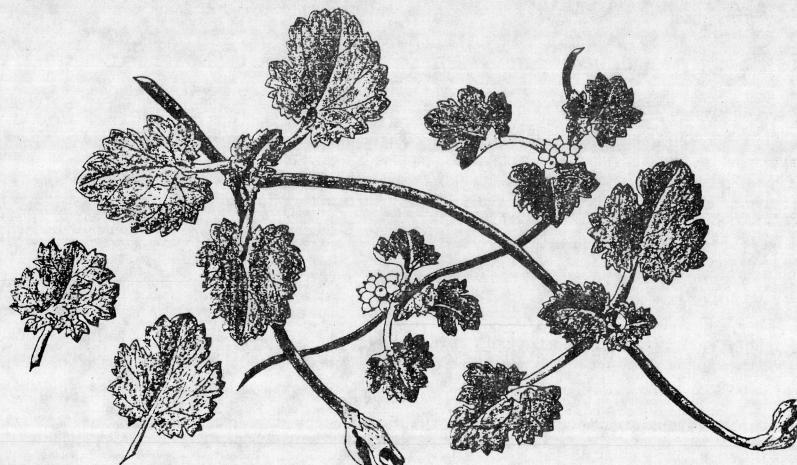
AUCKLAND BOTANICAL SOCIETY - LUCY M CRANWELL LECTURE

HUGH D WILSON

**THE SURPRISING BOTANY OF
BANKS PENINSULA**

Wednesday 3 September 8.00 pm
Conference Centre, School of Architecture
22 Symonds Street, Auckland University

Botanist Hugh Wilson is well known through his superbly illustrated Field Guides 'Wild Plants of Mount Cook National Park' and 'Wild Plants of Stewart Island'. He is currently studying Banks Peninsula. Hugh finds that rather than being somewhat mundane the peninsula is full of surprises. He will describe the funny and the serious aspects of this battered, but not cowed, volcanic landscape.



Gunnera monoica

THE SURPRISING BOTANY OF BANKS PENINSULA (THE LUCY CRANWELL LECTURE 1986)

given by Hugh Wilson on 3 September 1986 at University of Auckland

Hugh Wilson has worked previously on detailed botanical surveys of Mount Cook and Stewart Island. When he began work on Banks Peninsula he thought that the project would prove a little mundane in comparison to those wilder places. Now, two thirds of the way through the Banks Peninsula fieldwork, he keeps finding fascinating surprises in this unique bit of Canterbury, altered and modified as it is by 1000 years of Māori occupation and about 150 years of Pakeha attention.

The two major volcanoes which formed the present landmass erupted their basaltic lavas between 12 and 6 million years ago, but there are much older rocks present. Some of these are remnants of much older volcanoes, but also exposed are basement sediments of the Torlesse Terrane, some 240 million years old.

For nearly all of its history the "Peninsula" was an island, more or less forested, until the growing shingle aprons of the Canterbury Plains joined it to the rest of the South Island some 20,000 years ago. This raises the intriguing problem of the origin of Nothofagus forests in the south-east quarter of Banks Peninsula; beech does not easily colonise across a sea barrier. Isolation has produced several local endemics, among them two Hebe species, a handsome Celmisia, and an attractive blue fescue tussock. The strongly oceanic climate, markedly different from most of the rest of Canterbury, also helps explain why several northern species reach their southern limit here, such as nikau palm, titoki, akeake (Dodonaea) and kawakawa (Macropiper). At least one tree finds its northern limit here -- Olearia fragrantissima. Rather frequent summer drought probably explains the absence of species such as kamahi and southern rata, but the rainfall is abundant enough in the interior uplands to support such moisture-demanding species as Cordyline indivisa and Libocedrus bidwillii. The total fern flora is surprisingly large, and ranges from those of arid habitats (e.g., Pleurosorus, Cheilanthes) to tree ferns, filmy ferns, and rainforest epiphytes.

The Māoris cleared about one third of the once almost continuous forest cover. Native grasses, especially silver tussock, fescue tussock and narrow-leaved snow tussock, expanded into the newly opened spaces, along with bracken, kanuka and manuka. With the arrival of Europeans, the remaining forest was rapidly cleared through both milling and fire. Now only remnants of the original forest remain, with rather more and rather vigorous second-growth hardwoods. Enough remains to reconstruct what the original varied forest cover must have been like. Historical records help make the picture clear. Almost completely vanished are the tall, kahikatea-rich forests of the alluvial valley floors. Larger remnants survive of the upland forests, dominated by thin-bark totara. Both totara and matai are regenerating vigorously on the Peninsula, even against sheep-grazing. Cattle and deer are harder on the surviving native vegetation, and the increasing use of goats, as elsewhere in New Zealand, is a botanical nightmare.

Much of the Peninsula is now dominated by exotic species, many of them with their own intrinsic interest. It is hard not to feel regret for the continuous, varied forests which covered the Peninsula so recently,

and for their fauna, much of which is lost forever. Nevertheless, the Peninsula now is an attractive mosaic of productive grassland and native vegetation, and still supports good populations of some native birds. Changes are continuing to take place rapidly, many of them deleterious to botanical values, so that much information and effort is needed to conserve the diversity of vegetation, habitat and landscape. Hugh Wilson hoped that his survey would help towards this end. A publication on Banks Peninsula Botany is planned.

Received 15 October 1986.

NEW ZEALAND ALPINE PLANTS BY A.E. MARK AND NANCY M. ADAMS
(REED METHUEN, 265 PP., \$29.95)

Reviewed by R.O. Gardner

This is a revision of the 20x20 cm edition of 1979, the painterly and practical frame for Nancy Adams' glowing-with-health watercolours of nearly five hundred of our alpine plants. The page layout is unaltered so recent novelties, e.g. in Gentiana have had to be noted without illustration. Sharp-eyed readers of the rather small print will find name changes &c. to about fifty species and some introductory material has been rewritten.

According to ecological definition, health is the full expression of phenotype, that is, familial character and individual personality; and though most plants are depicted either flowering or fruiting the excellence of their form and colouring gives even the mistiest beginner a good chance of identifying vegetative material. By the same token it would be a treasure to have in a future edition an illustrated key to the families and life-form groups.

A bouquet of helichrysum and chionohebe to the publishers for an excellent and well-priced production.

Received 12 January 1987.