

BOTANICAL EXCERPTS FROM THE PAST

Reading through the writings of early New Zealand naturalists provides us with one of our best windows into what New Zealand was like at the time of European settlement. We are especially lucky in Canterbury to have a good record of our natural history, particularly with respect to the plants (see Godley 1967 for a review of early botanists). Many accounts are sadly brief, but some provide us with sobering insights into the Canterbury seen by the early settlers, and help us appreciate how our present-day vegetation patterns and plant distributions have developed. The following excerpts illustrate the nature of the available information. Where plant names have changed, I have put the currently accepted name in square brackets [].

T.H. Potts wrote a series of articles on the natural history of New Zealand and makes regular mention of Canterbury and Banks Peninsula (he lived at Governors Bay for some time). These writings were published in a book entitled 'Out in the Open' published in 1882. The following three excerpts highlight the changes that have occurred on Banks Peninsula.

Potts during a trip to the Port Levy area searching for *Hymenophyllum malingii* described the sad progress of forest destruction on Banks Peninsula.

"The ramble promised to be delightful, but could not with safety be long delayed, for timber clearing and burning progresses cheerfully on Banks Peninsula, we denude mountain and valley of forest growth, professing to believe we are developing the resources of the country; nor are we anxious as to the aspect in which this righteous work may be regarded by posterity. This tree-killing maketh short work with ferns." (p 64)

Hymenophyllum malingii is now, as far as we know, locally extinct on Banks Peninsula, perhaps since not long after Potts' trip.

Potts also wrote extensively about native birds.

"Within this range at one time, the pio-pio might be found in any bushy place, not to far from water, where belts of shrubs afford shelter and abundance of seeds; ten years at least have passed since we heard of its occurrence in this neighbourhood (Governors Bay); on Banks Peninsula proper it is now scarce; in the bush-dotted gullies of the Malvern Hills, the Thirteen-mile Bush, Alford Forest, and many other localities, it is not very uncommon; now, let an enthusiastic naturalist traverse these places in quest of our feathered philosopher, he will find it has become a *rare avis* indeed." (p 198)

This species is now extinct in New Zealand.

"The saddle-back, which a few years ago was commonly met with in the more thickly wooded portions on Banks Peninsula, is now of rare occurrence there. The extensive area of growing timber at the Little Bush River will probably be its last refuge in that part of the country, so rapidly is the Peninsula becoming deforested." (p201)

Although still surviving on small islands off Stewart Island, the saddle-back has long been extinct on South Island proper.

One of the fathers of Canterbury botany, J.B. Armstrong, describes the vegetation of the Canterbury Plains as follows (1879).

"The most abundant grasses are tussock-grass, *Poa caespitosa* [*P. cita*], etc., an undescribed species of fescue usually referred to *Festuca duriuscula*, Linn. [*F. novae-zelandiae*], by most New Zealand collectors, the hammock-grass, *Aira caespitosa* [*Deschampsia caespitosa*], *Agrostis aemula* [*Lachnagrostis filiformis*]; the holy-grass, *Hierochloa redolens*; the plume-grass, *Dichelachne crinata*; and the blue-grass, *Triticum squarrosum* [*Elymus rectisetus*]. Among these grasses grew a few pretty little herbaceous plants belonging to the genera *Raoulia*, *Craspedia*, *Cotula* [*Leptinella*], *Wahlenbergia*, *Pelargonium*, *Geranium*, and *Geum*, and in wet places many interesting little plants, such as species of *Pratia*, *Ranunculus*, *Lomaria* [*Blechnum*], *Triglochin*, *Micromeria* [*Mentha*], and others." (p 330).

Leonard Cockayne provides a more general description of what the early plains vegetation must have looked like in the 1927 'Natural History of Canterbury'.

"The community under consideration belongs to that class known as 'low tussock-grassland' which is distinguished by the extreme dominance of tussocks of *Poa caespitosa* [*P. cita*] and *Festuca novae-zelandiae*, but both need not be present in the same area. Frequently the tussocks would grow so close together that insufficient light would reach the ground to permit the presence of other grasses, herbs, or small shrubs excepting *Agropyron scabrum* [*Elymus rectisetus*] - a tussock grass rivalling in size the poa or the fescue - or such plants, as liane-like, could lengthen their stems and so come into the light. But the patch left by death of a tussock - a common circumstance - or ground too stony for the full occupation of the tussocks, would be occupied by more or less of the minor members of the community Tall shrubs and even trees which could overtop the tussocks - originating only where there was sufficient light for their seedlings to develop - would be present here and there, especially the cabbage-tree (*Cordyline australis*), the kowhai (*Edwardsia microphylla* [*Sophora microphylla*]) - but certainly not everywhere - the

manuka (*Leptospermum scoparium*), the wild-irishman (*Discaria toumatou*) and one or more tall species of New Zealand broom, especially *Carmichaelia subulata* [*C. robusta*]." (p 116)

The few remaining tiny fragments of Canterbury Plains tussock grasslands and shrublands are poor examples of what the vegetation must once have been like. Even early photos of Christchurch (e.g., by Barker) show tussocks near the Provincial Government Buildings in the 1870's! Some of the plants mentioned above are no longer known to be present or are very rare in the remaining remnants like Bankside and Eyrewell Reserves (e.g., *Geum* and *Pelargonium*) while the naming of others is confusing. For example, Cockayne refers to *Leptospermum scoparium*, while *Kunzea ericoides* is by far the most common shrub on the plains today.

References

- Armstrong, J.B. 1879. A short sketch of the flora of the Province of Canterbury, with catalogue of species. *Transactions of the New Zealand Institute* 12, 325-353.
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- Potts, T.H. 1882. *Out in the Open: A Budget of Scraps of Natural History, Gathered in New Zealand*. Lyttleton Times Company, Christchurch. (Reprinted by Caper Press, 1976)