Crumbs Of Canterbury - Part 1

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Introduction

In his presentation to the 1989 New Zealand Ecological Society, Brian Molloy referred to the remaining areas of natural vegetation in many parts of New Zealand as being the crumbs of what was there originally (Molloy 1989). This analogy is probably no where more true than in Canterbury, especially on the Canterbury Plains, where perhaps the most dramatic transformation of the pre-European vegetation anywhere in New Zealand has occurred. It is frightening to recall that during only a few short years at the end of last century, much of the Canterbury Plains was burnt and ploughed, making survival of native plants (and who knows about the animals) virtually impossible. Where on the Canterbury Plains do we see today the scenes described by Armstrong and Cockayne (see Canterbury Botanical Society Journal 24, 1990, pp 40-41).

The remaining vegetation of the Canterbury Plains is confined to a few small and isolated fragments, totalling no more than a few hundred hectares out of some 300 000 ha. Even more sobering, is the fact that only a very small portion of this is actually protected (primarily in Eyrewell and Bankside Scientific Reserves). Through the work of Brian Molloy and more recently Colin Meurk, we are building up a knowledge of the remaining treasures of the Canterbury Plains (and they are very precious treasures, our Taonga as botanists). Accounts of some of these areas can be found in Molloy (1970, 1971) Molloy & Ives (1972), Meurk et al (1989), and other publications. In this, the first of what we hope will be a series of articles in this journal, we will describe the vegetation of two small fragments on the upper Canterbury Plains. We hope that anyone with an interest and love in what remains, and the wish to see these fragments conserved and hopefully extended, will contribute to this series in the future. We believe that it is essential to tabulate information on these crumbs, and hopefully this will form the basis for their long-term conservation.

Dagnum

The Dagnum farm is located on the north bank of the Waimakariri River, not too far from Eyrewell Scientific Reserve. The farm extends down a series of terraces to the river itself. We were fortunate to be shown by the owners, John and Joanna Scott, a low terrace with a surprisingly good cover of native plants. The site (NZMS260 L35 420535, 190 m a.s.l.) is on the first terrace above the riverbed broom and covers an area of about 40 ha. The land is leased from the Canterbury Regional Council

The vegetation is dry grassland, with scattered gorse and two kowhai trees. Dominant grasses are *Vulpia bromoides, Rytidosperma racemosum, Festuca rubra*

and *Anthoxanthum odoratum*. The main herbs are *Trifolium* spp, *Hypochoeris radicata* and *Acaena agnipila*. *Leucopogon fraseri* and *Muehlenbeckia axillaris* were relatively common throughout, while other native plants were scattered, often occurring in patches where they can be quite common (*Carmichaelia corrigata, Raoulia monroi, Microtis unifolia*, etc). The area has been burnt in the past and is presently lightly grazed by either sheep or goats.

Other interesting indigenous species recorded included *Coprosma intertexta, Leptinella serrulata, Muehlenbeckia ephedroides*, and *Raoulia monroi*.

The main threats to the indigenous species in this area would be invasion by gorse, broom and *Hieracium* species. All are present and the first two constitute a serious weed problem in the adjacent riverbed. A management regime of light grazing, preferably by sheep only, would best suit the maintenance of indigenous species, however some grubbing of gorse and broom bushes may be required in the future. Overgrazing could lead to an increase in *Hieracium*. The lease holders are keen to see the indigenous component maintained.

The following species were recorded during a visit on 16 November 1991. Herbarium vouchers were taken for several species and deposited in the University of Canterbury herbarium (CANU). Naturalised species are indicated by an asterisk*. The total flora seen consisted of 54 species (25 indigenous, 28 naturalised, and 1 species that was not identified).

*Acaena agnipila**
Acaena inermis (35399)
*Agrostis capillaris**
*Agrostis stolonifera**
*Aira caryophylla**
*Anthoxanthum odoratum**
*Arenaria serpyllifolia** (35392)
Bromus sp.* (insuff. material)
Carex breviculmis (35395)
Carmichaelia corrigata (35391)
Carmichaelia robusta (35398)
*Cerastium glomeratum**
Coprosma atropurpurea (35388)
Coprosma intertexta (35397)
Crassula tetramera (35394)
*Crepis capillaris**
Leucopogon fraseri (35405)
*Cytisus scoparius**
Dichondra sp. (possibly *brevifolia*)
*Digitalis purpurea**
Discaria toumatu
*Echium vulgare**
*Erodium cicutarium**
*Festuca rubra**
Geranium sessiliflorum
*Hieracium pilosella**
*Hypochoeris radicata**
Leptinella serrulata (35396)
Microtis unifolia
Muehlenbeckia axillaris (35403)
Muehlenbeckia ephedroides (35393)
Oxalis exilis (35402)
Poa cita
*Poa pratensis**
Pterostylis mutica (35404)
Pyrrhanthera exigua (35401)
Raoulia haastii (35389)
Raoulia monroi (35400)
*Rosa rubigenosa**
*Rumex acetosella**
*Rytidosperma racemosum** (35390)
Scleranthus uniflora
*Sedum acre**
Sophora microphylla

*Spergula arvensis** (?)
Thelymitra sp. (not in flower)
*Trifolium arvense**
*Trifolium dubium**
*Trifolium subterranium**
*Ulex europaeus**
*Verbascum thapsus**
*Vulpia bromoides**
Wahlenbergia albomarginata
Unidentified monocot (insuff. material & not in flower)

Waddington Cemetery

Cemeteries have long been of interest to botanists in Europe because of their relative freedom from disturbance, and a number of uncommon plants are often restricted to these locations. Little attention has been given to cemeteries in New Zealand, although Ruth Mason (1974) wrote an interesting article on the plants found in cemeteries at Kaiapoi and Prebbleton. However, she mainly discussed the naturalised flora. Cemeteries on the Canterbury Plains have the potential to be important refuges for indigenous plants, especially as some of the older cemeteries are unlikely to have ever been ploughed. We have had a look at our local cemetery and are sure that others may be more productive in terms of the numbers of indigenous plants.

Waddington Cemetery is situated on the Old West Coast Road, just east of the settlement of Waddington (NZMS260 L35 325559, 285 m a.s.l.). The cemetery vegetation is dominated by a largely naturalised pasture sward, but amongst this some indigenous plant species are present. On various visits we have recorded the following species.

Carex breviculmis (common)
Carex colensoi (uncommon)
Gnaphalium sphaericum (uncommon)
Hydrocotyle novae-zelandiae agg. (occasional)
Luzula rufa (uncommon)
Microtis unifolia (occasional)
Oxalis exilis (occasional)
Rytidosperma sp. (uncommon)

While not a particularly rich indigenous flora it is interesting to see that indigenous species are able to hold their own in pasture swards dominated by naturalised species. Most of the species recorded are commonly found in pasture and lawns elsewhere on the Canterbury Plains (e.g., *Carex breviculmis*, *Hydrocotyle novae-zelandiae* agg. and *Oxalis exilis*). *Leucopogon fraseri* and *Carex breviculmis* were particularly abundant around the older (1890-1940) graves where the ground had not been disturbed recently. The Australian *Rytidosperma racemosum* was common in the cemetery grassland, but the second *Rytidosperma* species was far less common and did not key out readily to any known species present in New Zealand. It resembles *Rytidosperma buchananii* in some floral characteristics, but does not fully match it.

References

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