VEGETATION OF THE PROPOSED QE2 NATIONAL TRUST COVENANT, IFFLEY, WAIKARI, NORTH CANTERBURY

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A QE2 National Trust covenant has been proposed for a 12-14 ha area of the Iffley estate owned by Mr B.H. Palmer. The area consists of three south facing gullies and intervening ridges with rock bluffs, near Moores Hill South (NZMS1 S61 180253), about 10 km east of Waikari. The site is situated at about 300 m a.s.l. and is on Iffley Station. The underlying rocks are mapped as interbedded greywacke and argillite of Jurassic age and the soils as yellow-grey earths. Rainfall is probably between 700-750 mm per annum (Glenallen 728 mm, Sandhurst 704 mm).

Five main plant communities are present.

1. On the spur and upper faces, small leaved shrub species (*Coprosma crassifolia, Sophora prostrata, Discaria toumatou*) are dominant with abundant scrambling plants (*Muhlenbeckia complexa, Clematis afoliata, Rubus spp*).

2. Between the shrubs is an often dense grass sward dominated by naturalized species especially *Dactylis glomerata* and *Anthoxanthum odoratum*. *Rytidosperma* sp. is locally abundant while a few scattered *Poa cita* tussocks testify to the previous short-tussock grassland history of these sites.

3. Rocky bluffs are prominant around the upper rim of the gullies. They support a number of crustose and other lichens, bryophytes, small ferns (e.g. *Asplenium flabellifolium*), herbs (e.g. *Scleranthus* sp, *Leucopogon fraseri*) and grasses.

4. In the three gullies a low forest (4-5 m tall) dominated by *Melicytus ramiflorus* occurs. *Carpodetus serratus* and *Coprosma robusta* are the only other shrub/small tree species present and neither is common. *Pellaea rotundifolia*, *Polystichum richardii* and *Asplenium flabellifolium* are the dominant plants in a sparse ground vegetation.

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5. In the stream bed at the base of the proposed covenant area, a dense stand of *Carex secta* (1.5 m tall) with *Blechnum minus* and *Cordyline australis* occurs. The stand is impressive with respect to the density and stature of the sedges, but is very small in area; a larger stand occurs further down the valley outside the proposed covenant area but has been adversely affected by fire in places.

The vascular plant species list is based on approximately 4 hours field inspection in good weather on August 6th 1988 during a Botanical Society field excursion. In total 84 species were recorded, of which 50 were indigenous and 34 naturalized. Of the indigenous species, the presence of *Scandia geniculata* and *Urtica linearifolia* is of particular interest. Although not rare, both species are local in their distribution. *Scandia* was found scrambling through shrubs near the top of the proposed covenant, while *Urtica* occurred in damp ground amongst *Carex secta* adjacent to the bottom fence.

The area proposed for covenant has important natural values in a part of the country that has undergone intensive and extensive agricultural development for over 100 years. The forest association is floristically poorer than might be expected, but the shrub community on the drier slopes is an excellent example of what was once a much more widespread vegetation type on north Canterbury disturbed or broken country. It is unlikely that the species diversity in the forested gullies will increase substantially as seed sources for potential additional species (e.g. *Pseudopanax*) are not in close proximity, although it may be felt desirable to establish these artificially at some stage in the future.

Given that the indigenous grassland values of the area are small, the most appropriate type of management is likely to be largely passive, except for control of some woody weeds. Both *Sambucus nigra* and *Cytisus scoparius* are present, and *Ulex europaeus* and *Pinus radiata* could establish in the future. Hand weeding at an early stage should keep these species in check. Care will be needed to ensure that fire does not spread into the area.

Vascular plant species list
(*naturalized species)

Acaena anserinifolia
*Agrostis capillaris**
*Anthoxanthum odoratum**
Asplenium flabellifolium
Asplenium richardii
Asplenium terrestre

Blechnum minus
*Bromus diandrus**

*Callitriche stagnalis**
Calystegia turguriorum
Carex secta
Carmichaelia sp [? *arborea* var *robusta*]
Carpodetus serratus
*Cerastium fontanum**
Cheilanthes sp (? *sieberi*)
*Chenopodium sp**
*Cirsium arvense**
*Cirsium vulgare**
Clematis afoliata
Coprosma crassifolia
Coprosma propinqua
Coprosma robusta
Cordyline australis
Crassula sieberiana
*Crepis capillaris**
*Cynosurus echinatus**
*Cytisus scoparius**

*Dactylis glomerata**
Dichondra sp (? *repens*)
Discaria toumatou

Elymus rectisetus
Epilobium pubens

Festuca novae-zelandiae
*Festuca rubra**
Fuchsia perscandens

*Galium aparine**
Geranium microphyllum
*Geranium molle**
Gnaphalium sp

Haloragis erecta
*Hypochaeris radicata**

Ileostylus micranthus

Juncus gregiflorus

Leucopogon fraseri
Linum monogynum
*Lolium perenne**
Lotus sp*
Luzula banksiana

Melicytus alpinus
Melicytus ramiflorus
*Mimulus guttatus**
Muehlenbeckia australis
Muehlenbeckia complexa
*Mycelis muralis**

*Nasturtium microphyllum**

Oxalis exilis

Pellaea rotundifolia
Poa cita
*Polycarpon tetraphyllum**
Polystichum richardii
Pteridium esculentum
Pyrrosia serpens

*Rosa rubiginosa**
Rubus schmidelioides
Rubus squarrosus
*Rumex acetosella**
Rytidosperma sp

*Sagina apetala**
*Sagina procumbens**
*Sambucus nigra**
Scandia geniculata
Scleranthus sp
Senecio sp (Erichtites group)
Solanum laciniatum
*Solanum nigrum**
Sophora prostrata
*Stellaria media**

*Trifolium arvense**
*Trifolium glomeratum**
*Trifolium repens**

Uncinia sp
Urtica linearifolia

*Verbascum thapsus**
*Vicia sativa**