

FLORA OF TAWHAI BUSH, OXFORD

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Tawhai Bush is a 19 ha remnant of beech/podocarp forest adjacent to the View Hill Scenic Reserve, 10 kms north-west of Oxford. It is situated at an altitude of 300-400m (Topomap 1:50,000 grid ref. L35/352696), and the terrain consists of south and eastern facing slopes with some gullies. It also includes a narrow strip of swampy valley floor (3-4 ha) where kahikatea forest formerly grew. The soil is clay/silt, with exposed basaltic rock in places where slips have occurred.

At the time of purchase in March, 1976, approximately 25% of the property was occupied by mature or regenerating forest that had been modified - heavily in parts - by grazing cattle; the remainder consisted of extensive areas of gorse, blackberry, broom and rough pasture. The aim was to allow the whole block to revert to its original state, so that over time Tawhai Bush and the View Hill Reserve would merge into a single forest, providing better protection for both, and an enriched habitat.

The forested area of Tawhai Bush consists of black/mountain beech, with a small amount of mature kahikatea. The kahikatea have been seeding freely for some years, though few seedlings have reached sapling stage. In contrast to the View Hill forest, rimu is rare. Above the bushline a large area of regenerating manuka extends to the western boundary. Most of the manuka is now well over 2 metres tall, with some emergent beech, and patches of blechnum fern, gaultheria and broadleaf growing underneath. Throughout the property natural regeneration has been dramatic in the last 5 or 6 years, aided by a succession of damper summers in the foothills. The area in native cover is now close to 50%, and in terms of forest restoration, a successful outcome seems assured.

The Canterbury Botanical Society has been closely involved in monitoring the changes taking place in the vegetation of Tawhai Bush. Over the last 20 years 3 checklists have been made on field trips led by Brian Molloy (1977 and 1982), and Miles Giller (1996). They include most of the species listed in G.C. Kelly's 1972 View Hill report (*Scenic Reserves of Canterbury*), but extend it considerably. Note that absences from the list in one year do not necessarily mean that a species was not present.

Checklist of Plants - Tawhai Bush

	Feb 1977	Feb 1982	Nov 1996		Feb 1977	Feb 1982	Nov 1996
Ferns:							
<i>Asplenium bulbiferum</i>							
ssp. <i>gracillimum</i>	+	+	+	<i>Blechnum "procerum"</i>	+	+	+
<i>A.</i> <i>flabellifolium</i>	+	+		<i>Grammitis billardieri</i>	+	+	+
<i>A.</i> <i>flaccidum</i>	+	+		<i>Histiopteris incisa</i>	+	+	+
<i>A.</i> <i>richardii</i>	+	+	+	<i>Hymenophyllum multifidum</i>	+	+	+
<i>Blechnum chambersii</i>	+	+	+	<i>H. villosum</i>			+
<i>B.</i> <i>discolor</i>	+	+	+	<i>Hypolepis millefolium</i>	+	+	+
<i>B.</i> <i>fluviatile</i>	+	+	+	<i>H. rufobarbata</i>	+	+	+
<i>B.</i> <i>membranaceum</i>	+			<i>H. tenuifolia</i>	+	+	
<i>B.</i> <i>penna-marina</i>	+	+	+	<i>Leptolepia novae-zelandiae</i>	+	+	+
				<i>Ophioglossum coriaceum</i>	+	+	

	Feb 1977	Feb 1982	Nov 1996		Feb 1977	Feb 1982	Nov 1996
<i>Paesia scaberula</i>	+	+	+	<i>*P. pratensis</i>			+
<i>Pellaea rotundifolia</i>			+	<i>Schoenus pauciflorus</i>	+	+	+
<i>Phymatosorus diversifolius</i>	+	+	+	<i>Uncinia angustifolia</i>	+	+	+
<i>Polystichum vestitum</i>	+	+	+	<i>U. uncinata</i>			+
<i>Pteridium esculentum</i>	+	+	+				
<i>Thelypteris pennigera</i>	+	+		Orchids¹:			
Lycopod:				<i>Caladenia carnea</i>	+	+	+
<i>Lycopodium volubile</i>		+		<i>C. lyalli</i>	+	+	+
Herbs:				<i>Chiloglottis cornuta</i>	+	+	+
Grasses, Sedges, Rushes, Irises etc.:				<i>Corybas trilobus</i>	+	+	+
<i>*Agrostis stolonifera</i>		+	+	<i>Gastrodia cunninghamii</i>		+	+
<i>*Alopecurus geniculatus</i>		+		<i>G. minor</i>			+
<i>*Anthoxanthum odoratum</i>		+	+	<i>Microtis unifolia</i>	+	+	+
<i>Astelia fragrans</i>	+	+	+	<i>Prasophyllum colensoi</i>	+	+	+
<i>Bulbinella angustifolia</i>	+	+		<i>Pterostylis banksii</i>	+	+	
<i>Carex breviculmis</i>	+	+		<i>P. montana</i>	+	+	
<i>C. cockayneana</i>			+	<i>P. venosa</i>	+	+	
<i>C. coriacea</i>	+	+	+	<i>Thelymitra hatchii²</i>			+
<i>C. flagellifera</i>			+	<i>T. longifolia</i>	+	+	+
<i>*C. ovalis</i>		+	+	<i>T. pauciflora</i>	+	+	
<i>C. secta</i>	+	+	+	<i>T. pulchella</i>			+
<i>C. testacea</i>			+	Other Herbs:			
<i>C. virgata</i>	+	+	+	<i>Acaena anserinifolia</i>	+	+	+
<i>*Cynosurus cristatus</i>		+	+	<i>A. novae-zelandiae</i>	+		+
<i>*Dactylis glomerata</i>		+	+	<i>Aciphylla subflabellata</i>	+		
<i>*Festuca arundinacea</i>		+	+	<i>Anisotome aromatica</i>	+	+	
<i>*F. novae-zelandiae</i>	+	+		<i>*Bellis perennis</i>	+		
<i>*F. rubra</i>			+	<i>Cardamine debilis</i>	+	+	
<i>*Glyceria fluitans</i>		+		<i>*Centaurium erythraea</i>		+	+
<i>*Holcus lanatus</i>		+	+	<i>Celmisia gracilentia</i>	+	+	
<i>Isolepis</i> sp.	+	+		<i>C. graminifolia</i>	+	+	
<i>*Juncus articulatus</i>		+	+	<i>*Cerastium glomeratum</i>		+	+
<i>*J. bufonius</i>		+	+				
<i>*J. bulbosus</i>			+	<i>*Cirsium arvense</i>		+	+
<i>*J. effusus</i>			+	<i>*C. vulgare</i>		+	+
<i>J. gregiflorus</i>	+	+	+				
<i>J. sarophorus</i>		+	+	<i>Dichondra repens</i>			+
<i>*J. tenuis</i>	+	+	+	<i>Epilobium pedunculare</i>			+
<i>Lepidosperma australe</i>	+			<i>E. billardierianum</i>		+	
<i>Libertia ixioides</i>			+	<i>E. chloraefolium</i>		+	
<i>Luzula picta</i> var. <i>pallida</i>	+	+		<i>E. cinereum</i>		+	
<i>L. rufa</i>	+	+	+	<i>*Galium aparine</i>			+
<i>Microlaena avenacea</i>	+	+	+	<i>Gnaphalium audax</i>	+	+	+
<i>Rytidosperma clavata</i>	+	+		<i>G. involucratum</i>		+	
<i>R. gracilis</i>	+	+	+	<i>G. sphaericum</i>	+	+	
<i>*Phleum pratense</i>		+		<i>Gonocarpus aggregatus</i>			+
<i>Phormium tenax</i>	+	+	+	<i>Helichrysum bellidioides</i>	+	+	+
<i>Poa cita</i>	+	+	+	<i>H. filicaule</i>	+	+	+

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<i>*Hieracium lachenalii</i>		+	+	<i>Parsonsia capsularis</i>	+	+	+
<i>*H. pilosella</i>		+		<i>P. heterophylla</i>	+	+	+
<i>Hydrocotyle moschata</i>	+	+	+	<i>Rubus australis</i>	+	+	+
<i>H. novae-zelandiae</i>	+	+	+	<i>R. cissoides</i>	+	+	+
<i>*Hypochaeris radicata</i>		+	+	<i>*R. fruticosus</i>		+	+
<i>*Hypericum androsaemum</i>			+	<i>R. schmidelioides</i>	+	+	+
<i>Lagenifera pumila</i>	+	+		<i>R. squarrosa</i>	+	+	
<i>Leontodon taraxacoides</i>		+					
<i>Leptinella dioica</i>		+		Parasites:			
<i>L. squalida</i>	+	+	+	<i>Alepis flavida</i>	+	+	
<i>Leucanthemum vulgare</i>		+	+	<i>Korthalsella clavata</i>	+	+	
<i>*Linum catharticum</i>		+		<i>K. lindsayii</i>			+
<i>*Lotus pedunculatus</i>		+					
<i>Mentha cunninghamii</i>	+	+		Conifers:			
<i>*Mimulus guttatus</i>			+	<i>Dacrydium cupressinum</i>	+	+	+
<i>*M. moschata</i>		+		<i>Dacrycarpus dacrydioides</i>	+	+	+
<i>*Mycelis muralis</i>		+	+	<i>ΔPodocarpus hallii</i>			+
<i>Myosotis caespitosa</i>		+	+	<i>ΔP. totara</i>			+
<i>Nertera ciliata</i>			+	<i>Prumnopitys taxifolia</i>		+	+
<i>N. depressa</i>	+	+	+				
<i>N. dichondraefolia</i>		+		Trees and Shrubs:			
<i>N. setulosa</i>	+		+	<i>Aristotelia serrata</i>	+	+	+
<i>*Parentucellia viscosa</i>		+		<i>Carmichaelis australis</i>		+	
<i>*Plantago lanceolata</i>		+	+	<i>ΔC. kirkii</i>		+	+
<i>Pratia angulata</i>	+	+		<i>Carpodetus serratus</i>	+	+	+
<i>*Prunella vulgaris</i>		+	+	<i>Cassimia fulvida</i>	+	+	+
<i>Ranunculus hirtus</i>	+	+	+	<i>Coprosma crassifolia</i>	+	+	+
<i>*R. repens</i>		+	+	<i>C. linaarifolia</i>	+	+	+
<i>Raoulia glabra</i>	+	+	+	<i>C. lucida</i>	+	+	+
<i>R. subsericea</i>	+	+	+	<i>C. microcarpa</i>	+	+	+
<i>*Rumex conglomeratus</i>		+		<i>ΔC. obconica</i>			+
<i>*R. crispus</i>		+	+	<i>C. sp. "1"</i>	+	+	+
<i>*R. obtusifolius</i>		+		<i>C. propinqua</i>	+	+	+
<i>Senecio minimus</i>	+		+	<i>C. propinqua x robusta</i>		+	+
<i>*Sonchus asper</i>		+		<i>C. rhamnoides</i>	+	+	+
<i>*Stellaria graminea</i>		+	+	<i>C. rigida</i>	+	+	+
<i>*Taraxacum officinale</i>		+	+	<i>C. robusta</i>			+
<i>*Trifolium dubium</i>		+		<i>C. roundifolia</i>	+	+	+
<i>*T. pratense</i>		+	+	<i>Cordyline australis</i>	+	+	+
<i>*T. repens</i>		+	+	<i>Cyathodes fasciculata</i>	+	+	+
<i>*Verbascum thapsus</i>			+	<i>C. fraseri</i>	+	+	+
<i>*Vicia sativa</i>		+	+	<i>C. juniperina</i>	+	+	+
<i>Viola cunninghamii</i>			+	<i>*Cytisus scoparius</i>		+	+
<i>V. filicaulis</i>	+	+	+	<i>Eleocharis hookerianus</i>	+	+	+
<i>Wahlenbergia gracilis</i>		+	+	<i>Fuchsia excortica</i>	+	+	+
				<i>Gaultheria antipoda</i>	+	+	+
Creepers and Climbers:				<i>G. crassa</i>	+	+	
<i>Clematis paniculata</i>	+	+	+	<i>Griselinia littoralis</i>	+	+	+
<i>Muehlenbeckia australis</i>	+	+	+	<i>Hebe salicifolia</i>	+	+	+
<i>M. complexa</i>	+	+	+	<i>Leptospermum scoparium</i>	+	+	+

	Feb	Feb	Nov		Feb	Feb	Nov
	1977	1982	1996		1977	1982	1996
<i>Leucopogon colensoi</i>			+	<i>Pennantia corymbosa</i>			+
<i>Lophomyrtus obcordata</i>	+	+	+	<i>Pittosporum</i> sp.			
<i>Melicope simplex</i>	+	+	+	<i>cf. anomalum</i>	+	+	+
<i>Melicytus alpina</i>	+	+	+	<i>P. divaricatum</i>	+	+	+
<i>M. micranthus</i>	+		+	<i>P. tenuifolium</i>	+	+	+
<i>Myrsine australis</i>	+	+	+	<i>Pseudowintera colorata</i>	+	+	+
<i>M. divaricata</i>	+	+	+	<i>Pseudopanax anomalum</i>	+	+	+
<i>Neomyrtus pedunculata</i>	+	+	+	<i>P. arboreus</i>	+	+	+
<i>Nothofagus solandri</i>				<i>P. crassifolius</i>	+	+	+
var. <i>solandri</i>	+	+	+	* <i>Rosa rubiginosa</i>		+	+
<i>N. solandri</i>				* <i>Salix fragilis</i>			+
var. <i>cliffortioides</i>	+	+	+	<i>Schefflera digitata</i>	+	+	+
<i>Olearia arborescens</i>		+	+	<i>Sophora microphylla</i>	+	+	+
				* <i>Ulex europaeus</i>		+	+

* adventive species Δ planted species

¹ the orchid flora has been checked by Tom Pendrigh (7-2-97).

² *Thelymitra hatchii* was found between 1982 and 1996 but has not been seen recently.