



THE TASMANIAN NATURALIST

ISSN 0819-6826

POSTAL ADDRESS: G.P.O. BOX 68A, HOBART 7001

EDITOR: R.J. TAYLOR

PLANTS OF THE CARR VILLA CEMETERY, LAUNCESTON

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The Carr Villa Cemetery, Crematorium and War Memorial is located in the suburb of Kings Meadows in Launceston. In addition to an extensively developed portion having graves, headstones and memorial walls, there is an adjoining ca. 40 hectare portion of native bushland bounded on the south, east and north by Quarantine and Opossum Roads, which has been set aside as the Carr Villa Wildlife Sanctuary. A part has been fenced off as a Flora Reserve available to school groups, natural history clubs and others to visit, by application to the Launceston City Council, Parks and Recreation Section. The present survey reports on the vegetation of this undeveloped portion of the cemetery.

The bushland of the survey area can be characterised as dry sclerophyll. The soils are moderately acidic sandy loams or clay loams, developed on clays, gravels and sands. Although not perfectly level, there is little variation in topography over the survey area, which is mostly from 65 to 90m above sea level. Visits were made approximately once per week between September, 1991 and February, 1992.

Despite its rather small size, the survey area is rich in plant species. This survey identified 200 flowering plant species (of which 117 are native), 2 ferns, 9 mosses, 1 liverwort and 21 lichens (see Table 1). The flowering plants encompass 62 families, of which the most abundant are the grasses (Poaceae) with 28 species, the "daisies" (Asteraceae) with 26 species, the wattles and "pea" flowers (Fabaceae) with 21 species, and the orchids (Orchidaceae) with 13 species.

The scientific names of the flowering plants and ferns follow Buchanan *et al.* (1989); those of the mosses, Dalton *et al.* (1991); and that of the single liverwort, Ratkowsky (1987). For the lichens, the authorities as well as the scientific names are listed, as there have been many additions and alterations since the previously published checklist of Kantvilas (1989). For the flowering plants and ferns, a measure of abundance, either local, rare, occasional, frequent or common, is given for each species. Since bryophyte and lichen species require microscopic examination and/or chemical analysis for unambiguous identification, estimation of their abundance was not attempted.

Given the lack of detailed published accounts of the vegetation of comparable areas, it is difficult to assess whether any of the species recorded are unusual for the north of Tasmania for dry sclerophyll environments on soils of this type. For example, a work devoted to the plant species of parks and cemeteries (Kirkpatrick *et al.* 1988) only makes cursory mention of the Carr Villa Cemetery. Nevertheless, the great diversity of species obtained in the present survey is noteworthy. Two of the species recorded, *Brunonia australis* and *Gratiola pubescens* are unknown from any secure reserve in Tasmania (Kirkpatrick *et al.* 1991). A further four species, *Crassula decumbens*, *Danthonia geniculata*, *Dichopogon strictus* and *Myosotis australis* are classified as r2 by these authors (*loc. cit.*), that is, they occur in 20 or less 10km x 10km National Mapping grid squares in Tasmania.

The undeveloped portion of the cemetery, including the Flora Reserve which is not necessarily exempt, may eventually be ploughed up and converted to graves, headstones and memorial walls as the need for more burial space increases. Indeed, part of the undeveloped portion is already undergoing such modification. Thus, many of the species that are currently present will disappear in the future. The results of this survey will serve as a record of the vegetation that is there at the present time.

ACKNOWLEDGEMENTS

The authors are grateful for the assistance in plant identification provided by Mary Cameron (Queen Victoria Museum and Art Gallery, Launceston), Alex Buchanan and Dennis Morris (both of the Tasmanian Herbarium).

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Table 1. List of species found in survey area.

(I) = species introduced to Tasmania

Abundance l = local (growing in a few places only, sometimes abundantly)

r = only 1-3 plants observed, rare

o = widespread, but only occasional

f = widespread and frequent

c = widespread and common

	Abundance		Abundance
FLOWERING PLANTS			
Acanthaceae		<i>Gnaphalium purpureum</i> (Purple Cudweed) (I)	r
<i>Acanthus mollis</i> (Bear's Breech) (I)	r	<i>Helichrysum apiculatum</i> (Everlasting)	o
Alliaceae		<i>Helichrysum scorpioides</i> (Button Everlasting)	c
<i>Allium triquetrum</i> (Three-cornered Garlic) (I)	f	<i>Hypochaeris radicata</i> (Cat's Ear) (I)	o
Apiaceae		<i>Lagenifera huegelii</i> (Coarse Bottle-Daisy)	r
<i>Hydrocotyle callicarpa</i> (Pennywort)	o	<i>Leontodon taraxacoides</i> (Hawkbit) (I)	o
Apocynaceae		<i>Lepiorhynchos squamatus</i> (Scaly Buttons)	f
<i>Vinca major</i> (Blue Periwinkle) (I)	l	<i>Olearia myrsinoides</i> (Silky Daisy Bush)	l
Asteraceae		<i>Pseudognaphalium luteo-album</i> (Cudweed)	f
<i>Arctotheca calendula</i> (Cape Weed) (I)	c	<i>Senecio hispidulus</i> (Scabrid Fireweed)	o
<i>Bellis perennis</i> (Daisy) (I)	f	<i>Senecio quadridentatus</i> (Cotton Fireweed)	r
<i>Brachyscome decipiens</i> (Field Daisy)	o	<i>Sonchus asper</i> (Prickly Sow Thistle) (I)	o
<i>Brachyscome spathulata</i> ssp. <i>glabra</i> (Daisy)	f	<i>Sonchus oleraceus</i> (Sow Thistle) (I)	o
<i>Carduus tenuiflorus</i> (Winged Slender Thistle) (I)	f	<i>Tanacetum parthenium</i> (Feverfew) (I)	r
<i>Cassinia aculeata</i> (Dolly Bush)	r	<i>Velleerophyton dealbatum</i> (Silver Cudweed) (I)	o
<i>Conyza albidula</i> (Tall Fleabane) (I)	r	Boraginaceae	
<i>Cotula australis</i> (Common Cotula)	r	<i>Cynoglossum suaveolens</i> (Hound's-Tongue)	r
<i>Cotula coronopifolia</i> (Water Buttons)	r	<i>Myosotis australis</i> (Forget-me-not)	o
<i>Craspedia glauca</i> var. <i>glauca</i> (Billy Buttons)	c	Brassicaceae	
<i>Filago gallica</i> (French Filago) (I)	r	<i>Barbarea intermedia</i> (Wintercress) (I)	r
		<i>Coronopus didymus</i> (Lesser Swine-cress) (I)	r

<i>Lobularia maritima</i> (Sweet Alyssum) (I)	o	Ericaceae	
<i>Raphanus raphanistrum</i> (Wild Radish) (I)	l	<i>Erica lusitanica</i> (Spanish Heath) (I)	o
<i>Sinapsis arvensis</i> (Charlock) (I)	o	Euphorbiaceae	
Brunoniaceae		<i>Poranthera microphylla</i> (Small-leaf Poranthera)	f
<i>Brunonia australis</i> (Blue Pincushion)	f	Fabaceae	
Campanulaceae		<i>Acacia baileyana</i> (Cootamundra) (I)	r
<i>Wahlenbergia gymnoclada</i> (Bluebell)	f	<i>Acacia dealbata</i> (Silver Wattle)	c
<i>Wahlenbergia litticola</i> (Bluebell)	o	<i>Acacia genistifolia</i> (Spreading Wattle)	c
Caryophyllaceae		<i>Acacia sp.</i> (I)	r
<i>Cerastium glomeratum</i> (Sticky Mouse-eared Chickweed) (I)	c	<i>Bossiaea prostrata</i> (Creeping Bossiaea)	r
<i>Silene gallica</i> (French Catchfly) (I)	r	<i>Cytisus scoparius</i> (Broom) (I)	o
<i>Spergularia rubra</i> (Sand Spurrey) (I)	o	<i>Daviesia latifolia</i> (Bitter Leaf)	o
<i>Stellaria media</i> (Chickweed) (I)	o	<i>Genista monspessulana</i> (Canary Broom) (I)	o
Casuarinaceae		<i>Gompholobium huegelii</i> (Bladder Pea)	r
<i>Allocasuarina littoralis</i> (Bull Oak)	c	<i>Hovea linearis</i> (Common Hovea)	r
Centrolepidaceae		<i>Kennedia prostrata</i> (Running Postman)	f
<i>Centrolepis aristata</i> (Pointed Centrolepis)	r	<i>Lotus corniculatus</i> (Bird's-foot Trefoil) (I)	l
<i>Centrolepis strigosa</i> (Hairy Centrolepis)	r	<i>Lotus pedunculatus</i> (Greater Trefoil) (I)	o
Chenopodiaceae		<i>Medicago arabica</i> (Spotted Medick) (I)	o
<i>Chenopodium album</i> (Fat Hen) (I)	l	<i>Medicago lupulina</i> (Black Medick) (I)	l
Clusiaceae		<i>Medicago polymorpha</i> (Burr Medick) (I)	o
<i>Hypericum gramineum</i> (Small St. John's Wort)	o	<i>Platylobium obtusangulum</i> (Common Flat-pea)	o
<i>Hypericum japonicum</i> (Matted St. John's Wort)	o	<i>Trifolium repens</i> (White Clover, Dutch Clover) (I)	o
Convolvulaceae		<i>Trifolium subterraneum</i> (Subterranean Clover) (I)	o
<i>Convolvulus erubescens</i> (Australian Bindweed)	r	<i>Ulex europaeus</i> (Gorse, Furze) (I)	c
<i>Dichondra repens</i> (Kidney-weed)	r	<i>Vicia hirsuta</i> (Hairy Vetch) (I)	r
Crassulaceae		Fumariaceae	
<i>Crassula decumbens</i> (Spreading Crassula)	c	<i>Fumaria muralis</i> (Wall Fumitory) (I)	l
Cyperaceae		Gentianaceae	
<i>Cyperus eragrostis</i> (Umbrella Sedge) (I)	l	<i>Centaureum erythraea</i> (Common Centaury) (I)	o
<i>Cyperus tenellus</i> (Tiny Flat-sedge)	o	Geraniaceae	
<i>Isolepis fluitans</i> (Floating Club-rush)	l	<i>Erodium moschatum</i> (Musk Storksbill) (I)	f
<i>Lepidosperma lineare</i> (Narrow Sword-sedge) (I)	o	<i>Geranium potentilloides</i> (Geranium)	f
<i>Schoenus apogon</i> (Common Bog-rush)	c	Goodeniaceae	
Dilleniaceae		<i>Goodenia lanata</i> (Native Primrose)	f
<i>Hibbertia riparia</i> (Guinea Flower)	c	Haloragaceae	
Dipsacaceae		<i>Gonocarpus tetragynus</i> (Common Raspwort)	c
<i>Dipsacus sylvestris</i> (Teasel) (I)	l	Hypoxidaceae	
Droseraceae		<i>Hypoxis glabella</i> (Yellow Star)	r
<i>Drosera peltata</i> ssp. <i>auriculata</i> (Sundew)	f	Iridaceae	
<i>Drosera peltata</i> ssp. <i>peltata</i> (Sundew)	o	<i>Diplarrhena moraea</i> (White Iris)	o
Epacridaceae		Juncaceae	
<i>Acrotriche serrulata</i> (Ant's Delight)	f	<i>Juncus articulatus</i> (Jointed Rush) (I)	o
<i>Astroloma humifusum</i> (Native Cranberry)	o	<i>Juncus bufonius</i> (Toad Rush)	o
<i>Epacris impressa</i> (Common Heath)	f	<i>Juncus capitatus</i> (Capitate Rush) (I)	l
<i>Lissanthe strigosa</i> (Peach Berry)	o		

<i>Juncus secundus</i> (Finger Rush)	1	<i>Plantago lanceolata</i> (Ribwort) (I)	c
Lamiaceae		Plumbaginaceae	
<i>Prunella vulgaris</i> (Self-heal)	o	<i>Limonium sinuatum</i> (Notch-leaf Sea Lavender) (I)	r
Lauraceae		Poaceae	
<i>Cassytha melantha</i> (Native Dodder)	c	<i>Agrostis capillaris</i> (Brown-top Bent) (I)	f
<i>Cassytha pubescens</i> (Downy Native Dodder)	o	<i>Aira caryophylla</i> (Silvery Hair Grass) (I)	f
Liliaceae		<i>Aira elegantissima</i> (Elegant Hair Grass) (I)	f
<i>Arthropodium milleflorum</i> (Pale Vanilla-lily)	r	<i>Anthoxanthum odoratum</i> (Sweet Vernal Grass) (I)	o
<i>Burchardia umbellata</i> (Milkmaids)	o	<i>Arrhenatherum elatius</i> var. <i>bulbosum</i> (Onion Twitch) (I)	o
<i>Chamaecilla corymbosa</i> var. <i>corymbosa</i> (Blue Stars)	r	<i>Briza maxima</i> (Quaking Grass) (I)	c
<i>Dianella revoluta</i> var. <i>revoluta</i> (Flax-lily)	f	<i>Briza minor</i> (Lesser Quaking Grass) (I)	c
<i>Dichopogon strictus</i> (Chocolate Lily)	f	<i>Bromus catharticus</i> (Prairie Grass) (I)	f
<i>Thysanotus patersonii</i> (Twining Fringe-Lily)	r	<i>Cynurus echinatus</i> (Rough Dog's-Tail) (I)	o
<i>Wurmbea dioica</i> (Early Nancy)	f	<i>Dactylis glomerata</i> (Cocksfoot) (I)	f
Linaceae		<i>Danthonia caespitosa</i> (Wallaby Grass)	f
<i>Linum marginale</i> (Wild Flax)	o	<i>Danthonia geniculata</i> (Wallaby Grass)	l
Myrtaceae		<i>Danthonia pilosa</i> (Wallaby Grass)	f
<i>Eucalyptus amygdalina</i> (Black Peppermint)	c	<i>Danthonia setacea</i> (Wallaby Grass)	o
<i>Eucalyptus viminalis</i> (White Gum, Manna Gum)	o	<i>Deyeuxia quadriseta</i> (Bent Grass)	f
Orchidaceae		<i>Dichelachne nana</i> (Plumegrass)	f
<i>Caladenia catenata</i> (Pink Fingers)	r	<i>Ehrharta distichophylla</i> (Ricegrass)	o
<i>Calochilus robertsonii</i> (Red Beard-orchid)	r	<i>Ehrharta stipoides</i> (Weeping Grass)	f
<i>Dipodium punctatum</i> (Hyacinth Orchid)	r	<i>Holcus lanatus</i> (Yorkshire Fog) (I)	f
<i>Diuris maculata</i> (Leopard Orchid)	o	<i>Hordeum murinum</i> ssp. <i>leporinum</i> (Barley Grass) (I)	f
<i>Diuris pedunculata</i> (Golden Moths)	r	<i>Lolium perenne</i> (Perennial Ryegrass) (I)	o
<i>Diuris sulphurea</i> (Tiger Orchid)	r	<i>Paspalum dilatatum</i> (Paspalum) (I)	f
<i>Eriochilus cucullatus</i> (Parson's Bands)	r	<i>Phalaris aquatica</i> (Phalaris) (I)	f
<i>Glossodia major</i> (Parson-in-the-Pulpit)	f	<i>Poa annua</i> (Annual Poa)	f
<i>Microtis</i> sp. (Onion Orchid)	r	<i>Poa labillardieri</i> (Tussock Grass)	f
<i>Pterostylis nutans</i> (Nodding Greenhood)	l	<i>Stipa semibarbata</i> (Speargrass)	f
<i>Pterostylis pedunculata</i> (Maroonhood)	1	<i>Stipa mollis</i> (Speargrass)	f
<i>Thelymitra ixioides</i> (Dotted Sun-orchid)	r	<i>Themeda triandra</i> (Kangaroo Grass)	f
<i>Thelymitra pauciflora</i> (Slender Sun-orchid)	r	Polygalaceae	
Oxalidaceae		<i>Comesperma volubile</i> (Blue Love Creeper)	f
<i>Oxalis corniculata</i> (Yellow Wood Sorrel)	c	Polygonaceae	
<i>Oxalis incarnata</i> (Pale Wood Sorrel) (I)	l	<i>Polygonum aviculare</i> (Wireweed, Knotgrass) (I)	o
Papaveraceae		<i>Rumex acetosella</i> (Dock; Sheep's Sorrel) (I)	c
<i>Eschscholzia californica</i> (Californian Poppy) (I)	r	<i>Rumex obtusifolius</i> (Broad-leaved Dock) (I)	l
<i>Papaver somniferum</i> (Opium Poppy) (I)	r	Primulaceae	
Pittosporaceae		<i>Anagallis arvensis</i> ssp. <i>arvensis</i> (Pimpernel) (I)	f
<i>Billardiera procumbens</i> (Mary's Flower)	o	Proteaceae	
<i>Billardiera scandens</i> (Apple Berry)	o	<i>Banksia marginata</i> (Honeysuckle)	o
<i>Bursaria spinosa</i> (Australian Prickly Box)	c	Ranunculaceae	
Plantaginaceae		<i>Clematis aristata</i> (Australian Clematis)	f
<i>Plantago coronopus</i> (Buck's-horn Plantain) (I)	c	<i>Ranunculus lappaceus</i> (Common Buttercup)	r
		<i>Ranunculus muricatus</i> (Sharp Buttercup) (I)	r

<i>Ranunculus parviflorus</i> (Small-flowered Buttercup) (l)	c	MOSSES (no abundance data)
Rosaceae		Bartramiaceae
<i>Acaena echinata</i> (Sheep's Burr)	c	<i>Breutelia affinis</i>
<i>Acaena novae-zelandiae</i> (Buzzy, Biddy-widdy)	f	Bryaceae
<i>Crataegus monogyna</i> (Hawthorn) (l)	o	<i>Bryum billardieri</i>
<i>Rosa canina</i> (Dog Rose) (l)	r	Dicranaceae
<i>Rosa</i> sp. (Garden Rose) (l)	r	<i>Campylopus introflexus</i>
<i>Rubus fruticosus</i> (Blackberry) (l)	o	Ditricaceae
Rubiaceae		<i>Ceratodon purpureus</i>
<i>Galium aparine</i> (Cleavers, Goosegrass) (l)	f	Funariaceae
<i>Opercularia varia</i> (Variable Stinkweed)	r	<i>Funaria hygrometrica</i>
Rutaceae		Orthotrichaceae
<i>Boronia nana</i> (Dwarf Boronia)	l	<i>Zygodon intermedius</i>
<i>Eriostemon verrucosus</i> (Fairy Wax-flower)	l	Polytrichaceae
Salicaceae		<i>Polytrichum juniperinum</i>
<i>Populus</i> sp. (Poplar) (l)	r	Pottiaceae
<i>Salix</i> sp. (Willow) (l)	r	<i>Barbula calycina</i>
Santalaceae		<i>Tortula princeps</i>
<i>Exocarpos cupressiformis</i> (Native Cherry)	f	LIVERWORTS (no abundance data)
Scrophulariaceae		Geocalycaceae
<i>Gratiola pubescens</i> (Hairy Brooklime)	r	<i>Chiloscyphus semiteres</i>
<i>Parentucellia viscosa</i> (Sticky Bartsia) (l)	o	LICHENS (no abundance data)
Solanaceae		<i>Calicium victorianum</i> (F. Wilson) Tibell sp. <i>victorianum</i>
<i>Solanum laciniatum</i> (Kangaroo Apple)	r	<i>Candelariella xanthostigmoides</i> (Müll. Arg.) R.W. Rogers
<i>Solanum nigrum</i> (Black Nightshade) (l)	l	<i>Cladia aggregata</i> (Sw.) Nyl.
Stackhousiaceae		<i>Cladonia corniculata</i> Ahti & Kashiwadani
<i>Stackhousia monogyna</i> (Native Mignonette, Candles)	o	<i>Cladonia pleurota</i> (Flörke) Schaerer
Stylidiaceae		<i>Cladonia praetermissa</i> Archer var. <i>praetermissa</i>
<i>Stylidium graminifolium</i> (Trigger Plant)	f	<i>Cladonia ramulosa</i> (With.) Laundon
Thymelaeaceae		<i>Flavoparmelia rutidota</i> (J.D. Hook. & Taylor) Hale
<i>Pimelea humilis</i> (Common Rice-flower)	f	<i>Heterodea muelleri</i> (Hampe) Nyl.
Tremandraceae		<i>Hypocenomyce australis</i> Tindal
<i>Tetradlea pilosa</i> (Hairy Lilac Bells)	o	<i>Lecidea</i> sp. A
Violaceae		<i>Lepraria</i> sp.
<i>Hymenanthera dentata</i> (Tree Violet)	r	<i>Pannoparmelia wilsonii</i> (Räsänen) D. Galloway
<i>Viola hederacea</i> (Ivy-leaf Violet)	c	<i>Parmelina conlabrosa</i> (Hale) Elix & Johnston
Xanthorrhoeaceae		<i>Parmelina pseudorelicina</i> (Jatta) Kantvilas & Elix
<i>Lomandra longifolia</i> (Sagg)	o	<i>Parmotrema chinense</i> (Osbeck) Hale & Ahti
<i>Lomandra nana</i> (Dwarf Sagg)	r	<i>Punctelia subrudecta</i> (Nyl.) Krog
FERNS		<i>Thysanothecium scutellatum</i> (Fr.) D. Galloway
Aspleniaceae		<i>Usnea inermis</i> Motyka
<i>Asplenium flabellifolium</i> (Necklace Fern)	l	<i>Usnea</i> cf. <i>oncodes</i> Motyka
Dennstaedtiaceae		<i>Xanthoparmelia tasmanica</i> (J.D. Hook. & Taylor) Hale
<i>Pteridium esculentum</i> (Austral Bracken)	c	