

Site 85. Provence Rise Reserve, Rowville

Narrow roadside verge and a small council reserve in two parts retaining surprisingly rich remnant ground flora.

Melway ref. 82 J2.

Site Significance Level: *State*

- The vegetation type is the regionally vulnerable Valley Grassy Forest with rich ground flora (although scant shrubs);
- There are at least twenty plants of Forest Buttercup *Ranunculus lappaceus*, one of the largest populations in Knox;
- Sixty-one indigenous plant species were found overall, a good number for such vegetation.

Boundaries

The site comprises two council reserve lots (one each side of Provence Rise) and the abutting road verges. The total area is 0.21 ha. See the map on p. 429, which covers this site and the Fruitful Vine Melbourne Church (Site 84).

Land use & tenure: Council reserves and road reservation.

Site description

The two lots in this site were reserved as a result of the first edition of this report when the property of which they were part was subdivided. The new reserves contain most of the original lot's natural assets other than individual trees (which are protected under a planning permit condition). The reserves are being intensively managed as compensation for the loss of other, less significant, vegetation due to the subdivision.

The reserves were, until the recent subdivision, periodically grazed by a goat. Small wildflowers that are characteristic of the local Valley Heathy Forest in its natural state persisted surprisingly well, including *Arthropodium strictum*, *Bossiaea prostrata*, *Drosera whittakeri*, *Helichrysum scorpioides*, *Tricoryne elatior*, *Veronica plebeia*, *Viola hederacea* and at least twenty of the locally-vulnerable *Ranunculus lappaceus*. The ground flora are dominated by indigenous plants, particularly *Microlaena stipoides*. Shrubs, however, have been decimated. The road verge has been recently planted with indigenous species to complement the reserves, including shrubs.

Relationship to other land

This site shows the richness of ground flora that could result on the adjoining Fruitful Vine Melbourne Church property if Burgan were to be suppressed there. These two properties are well connected to other habitat, as discussed under the heading of the Fruitful Vine Melbourne Church.

Bioregion: Highlands Southern Fall (on the rather diffuse boundary with the Gippsland Plain bioregion).

Habitat types

Valley Grassy Forest (EVC 47, **regionally Vulnerable**) dominated by Bundy: 0.21 ha in area, of which 1,500 m² is in good ecological condition (rating B) and 5,500 m² is in poor ecological condition (rating D). 42 indigenous plant species found in winter, and ten or more others likely to be found in other seasons.

Dominant canopy trees: *Eucalyptus goniocalyx* with fewer *E. radiata*, *E. macrorhyncha*, *E. melliodora* and *E. cephalocarpa*;

Dominant lower trees: *Acacia melanoxylon*, *Exocarpos cupressiformis*, *A. mearnsii* and a patch of *A. implexa*;

Shrubs: Decimated except for *Kunzea ericoides* regrowth in patches.

Ground flora: Densely grassy with *Themeda triandra* dominant and abundant *Poa morrisii*, *Austrostipa rudis* and *Microlaena stipoides*.

Plant species

The following plant species were observed by the author in February 2005. Additional species might well be detectable in other seasons. The column headed 'Risk' indicates the indigenous species' risk of extinction in Knox as follows: 'C'=Critically Endangered; 'E'=Endangered; and 'V'=Vulnerable.

Risk	Indigenous Species	Risk	Indigenous Species
V	<i>Acacia implexa</i>		<i>Acrotriche serrulata</i>
V	<i>Acacia mearnsii</i>		<i>Arthropodium strictum</i>
V	<i>Acacia melanoxylon</i>		<i>Austrostipa pubinodis</i>
E	<i>Acacia pycnantha</i>		<i>Austrostipa rudis</i> subsp. <i>rudis</i>

Risk	Indigenous Species	Risk	Indigenous Species
	<i>Billardiera mutabilis</i>		<i>Lepidosperma gunnii</i>
	<i>Bossiaea prostrata</i>		<i>Leptospermum continentale</i>
	<i>Bursaria spinosa</i>		<i>Lomandra filiformis</i> subsp. <i>coriacea</i>
	<i>Carex breviculmis</i>	V	<i>Lythrum hyssopifolia</i>
E	<i>Centella cordifolia</i>		<i>Microlaena stipoides</i>
	<i>Dianella admixta</i>		<i>Microtis parviflora</i>
V	<i>Dianella longifolia</i> s.l.	V	<i>Opercularia varia</i>
	<i>Dichondra repens</i>		<i>Oxalis exilis/perennans</i>
V	<i>Drosera peltata</i> subsp. <i>auriculata</i>	V	<i>Pimelea humilis</i>
V	<i>Drosera whittakeri</i>		<i>Poa morrisii</i>
	<i>Eragrostis brownii</i>		<i>Poranthera microphylla</i>
V	<i>Eucalyptus cephalocarpa</i>	E	<i>Ranunculus lappaceus</i>
	<i>Eucalyptus goniocalyx</i>		<i>Rytidosperma geniculatum</i>
E	<i>Eucalyptus macrorhyncha</i>		<i>Rytidosperma laeve</i>
V	<i>Eucalyptus melliodora</i>		<i>Rytidosperma linkii</i> var. <i>fulvum</i>
E	<i>Eucalyptus radiata</i>		<i>Rytidosperma penicillatum</i>
V	<i>Euchiton collinus</i>		<i>Rytidosperma racemosum</i>
V	<i>Exocarpos cupressiformis</i>		<i>Rytidosperma setaceum</i>
	<i>Gahnia radula</i>		<i>Rytidosperma tenuius</i>
	<i>Gonocarpus tetragynus</i>	E	<i>Senecio minimus</i>
V	<i>Helichrysum scorpioides</i>		<i>Senecio quadridentatus</i>
E	<i>Hypericum gramineum</i>		<i>Themeda triandra</i>
C	<i>Hypoxis hygrometrica</i>		<i>Tricoryne elatior</i>
	<i>Juncus pallidus</i>	V	<i>Veronica gracilis</i>
	<i>Juncus sarophorus</i>	E	<i>Veronica plebeia</i>
E	<i>Juncus subsecundus</i>	E	<i>Viola hederacea</i>
	<i>Kunzea ericoides</i> spp. agg.		

Introduced Species

<i>Acacia baileyana</i>	<i>Ehrharta erecta</i>	<i>Pittosporum undulatum</i>
<i>Acacia ?floribunda</i>	<i>Genista linifolia</i>	<i>Plantago lanceolata</i>
<i>Acacia longifolia</i> subsp. <i>longifolia</i>	<i>Genista monspessulana</i>	<i>Prunella vulgaris</i>
<i>Agapanthus praecox</i>	<i>Holcus lanatus</i>	<i>Romulea rosea</i>
<i>Agrostis capillaris</i>	<i>Hypochoeris radicata</i>	<i>Rubus anglocandicans</i>
<i>Aira elegantissima</i>	<i>Juncus articulatus</i>	<i>Sonchus oleraceus</i>
<i>Anthoxanthum odoratum</i>	<i>Lonicera japonica</i>	<i>Taraxacum officinale</i> spp. agg.
<i>Briza maxima</i>	<i>Lotus subbiflorus</i>	<i>Trifolium</i> sp.
<i>Centaurium erythraea</i>	<i>Paspalum dilatatum</i>	<i>Vinca major</i>
<i>Chrysanthemoides monilifera monilifera</i>	<i>Pennisetum clandestinum</i>	<i>Vulpia bromoides</i>
<i>Cirsium vulgare</i>	<i>Phalaris aquatica</i>	
<i>Conyza sumatrensis</i>	<i>Pinus radiata</i>	

Notes concerning some of the locally threatened plant species

Ranunculus lappaceus (Forest Buttercup). Twenty individuals seen west of Provence Rise.

Veronica plebeia (Trailing Speedwell). A patch with a diameter of ½ m in the northeastern corner of the site.

Fauna habitat features

The large eucalypts are frequented by native birds.

Significance ratings

The road verge and the adjacent strip outlined in white on the map (p. 163) are of Regional significance whereas the rest of the site is of Local significance. The reasons are as follows:

Richness of Flora

Approximately 40 indigenous plant species were recorded in the site. To have so many species within 0.2 ha stands out on the local scale, but it would have to stand out at the regional scale to qualify for recognition under the standard criteria of Amos (2004).

Regionally Threatened Ecological Vegetation Class

Valley Grassy Forest is listed by the Department of Sustainability & Environment as Vulnerable in the Highlands Southern Fall bioregion. The example in the present site is in reasonable ecological condition and would undoubtedly qualify for at least 'High' conservation significance under Appendix 3 of *Victoria's Native Vegetation Management - a Framework for Action* (NRE 2002a). This gives the site **State** significance under criterion 3.2.3 of Amos (2004).

Rare or Threatened Flora

Most of the locally threatened plant species listed above have viable populations (in combination with neighbouring vegetation), thereby meeting criterion 3.1.5 for a site of **Local** significance.

Threats

- Potential site development;
- Invasion by environmental weeds, including:
 - Serious: Sallow Wattle (*Acacia longifolia* var. *longifolia*) and over-vigorous regrowth of Burgan;
 - Potentially or moderately serious: Brown-top Bent (*Agrostis capillaris*), Sweet Vernal-grass (*Anthoxanthum odoratum*), Boneseed (*Chrysanthemoides monilifera*), Panic Veldt-grass (*Ehrharta erecta*), Flax-leafed Broom (*Genista linifolia*), Cat's Ear (*Hypochoeris radicata*), Kikuyu (*Pennisetum clandestinum*) and Sweet Pittosporum (*Pittosporum undulatum*);
- Eucalypt dieback;
- Reduced visitation of the site by small insect-eating birds due to its isolation from other areas with indigenous understorey, possibly leading to a worsening of plant pests and diseases;
- Loss or decline of plant species whose populations are so small that they are vulnerable to inbreeding, poor reproductive success or elimination by incidents such as a falling branch. *Acacia pycnantha* and *Veronica gracilis* are present only as one plant each.

Management issues

Goat grazing has allowed the existing flora to persist for years. If it were to be removed or changed to a less compatible management approach, weeds could proliferate and indigenous flora decline seriously. On the other hand, the indigenous flora could benefit if grazing were shifted away from the most significant vegetation during the months of September to December.

From an ecological perspective, the optimum management regimen for the rich ground flora would probably be infrequent slashing.

The landowner has been suppressing Burgan regrowth, particularly below the house, and this is beneficial to the site's ecology.

Tree health and vegetation ecology generally would benefit from removal of Sallow Wattles, and to a lesser extent Sweet Pittosporums, Flax-leafed Broom and Boneseed as well.

Some of the remnant eucalypts, particularly *E. goniocalyx*, are in such bad health that they are likely to need removal before long.

Administration matters

If the site is considered for subdivision, the strip bordered in white on the map (p. 163) contains by far the most ecologically valuable vegetation to protect. One option may be to reserve it, thereby effectively widening the road reservation. Conservation of any of the significant ground flora is very unlikely if it falls into private lots under a subdivision of the site.

To minimise ecological impact, access to new lots would probably be best done by widening the existing driveway, either eastward, westward or both.

A small subdivision might be able to align boundaries so that houses can be positioned in existing expanses that have no healthy trees or native understorey. Care should nevertheless be exercised to avoid harming trees by root severance associated with excavation, trenching, driveways etc.

Information sources used in this assessment

- Detailed vegetation data and mapping in accord with this study's standard approach described in Section 2.4 of Vol.1, including a list of indigenous and introduced plant species, compiled by Dr Lorimer during this study on 5/6/02;
- Observations of Wood Duck and *Crinia signifera* noted incidentally on the same day. See also fauna lists gathered during this project at neighbouring sites;

- Additional intensive botanical survey for 13 hours by Dr Lorimer and Matthew Dell in March 2005 to guide the design of the Provence Rise subdivision and the associated land management plan;
- Two brief re-inspections of the site by Dr Lorimer following subdivision, including March 2008;
- Aerial photography from February 2001, April 2003 and February 2007;
- Satellite imagery of the district;
- The Department of Sustainability & Environment's BioMaps of the area;
- Maps of geology and topography produced by agencies of the Victorian government.

Acknowledgment

Thanks to the prior landowner, Mr Stamatopoulos, for granting permission to inspect his land in 2002 and for information about the property.