

**A VEGETATION AND FLORA RECONNAISSANCE
OF AVON LOCATION 19769**

by A.S. GEORGE AND R.J. HNATIUK

ABSTRACT

Seven vegetation formations comprising woodland, scrub (mallee), and shrubland are reported for the site about 280 km south east of Perth, Western Australia. One hundred species of vascular plants are listed as occurring there.

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Avon location 19769 ($32^{\circ}31'S$ latitude, $117^{\circ}56'E$ longitude) is situated about 25 kilometres north west of Kulin, a wheatbelt centre about 280 kilometres south east of Perth, Western Australia (Fig. 1). The area of the block of land is about 400 hectares and contains a variety of geomorphic features that range from deep, well-drained, yellow sand, to clayey sand, to lateritic outcrops.

Seven vegetation formations (as defined by Specht, Roe & Boughton, 1974, and modified by the Vegetation Committee of the Australian Biological Resources Survey) have been recognised on the location. These are:

- i) woodland dominated by *Eucalyptus wandoo* (Wandoo);
- ii) woodland dominated by *Eucalyptus salmonophloia* (Salmon Gum), sometimes with *E. longicornis* (Morrel);
- iii) low woodland dominated by *E. astringens* (Brown Mallet);
- iv) open scrub with the mallees *E. eremophila*, *E. redunca* and *E. pileata*;
- v) high shrubland of *Casuarina campestris*, *C. acutivalvis* and *Melaleuca uncinata*;
- vi) low open-woodland of *Casuarina campestris*, *Leptospermum*, *Melaleuca* species and other shrubs, with scattered trees of *Eucalyptus wandoo*;
- vii) shrubland dominated by *Eucalyptus macrocarpa* with a dense, species-rich, shrub understorey.

The most important formation on the Location is the *Eucalyptus macrocarpa* shrubland, for it is one which has become rare in the wheatbelt. Although *E. macrocarpa* itself extends north-westwards to the Hill River region, its associated species vary considerably, and no assemblage such as occurs on Location 19769 is known in a conservation reserve.

The woodlands of the Location are important biologically because they represent formations which through clearing have become scarce in the wheatbelt. The Location may be large enough to support viable populations of some smaller native fauna.

Plant species that are of special interest include outliers from the Eastern Goldfields such as *Daviesia pachylina*, *Eucalyptus sheathiana*, and *Olearia muelleri*. An undescribed *Baeckea* is known only from this locality, while an undescribed *Isopogon* found here is restricted to this part of the wheatbelt. *Acacia glaucoptera* is a northern outlier of a species of south coastal distribution, while *Acacia pulviniiformis* is a rarely found species.

A broad strip across the northern end of the Location has been rolled, probably about 8-10 years ago. It has apparently not been subsequently burned or cultivated, and the regeneration of indigenous flora has been excellent. This includes the main area of *Eucalyptus macrocarpa*. A small gravel pit has been opened on the site.

A tentative list of plant species is presented in Table 1 and represents 100 taxa that were found during two visits in September 1976 and April 1977. A series of photographs illustrating the range of vegetation is given in Figures 2-11.

TABLE 1

FLORA LIST FOR AVON LOCATION 19769

<i>Acacia acuminata</i> Benth.	<i>Eucalyptus pileata</i> Blakely
<i>Acacia glaucoptera</i> Benth.	<i>Eucalyptus redunca</i> Schau.
* <i>Acacia pulviniformis</i> Maiden & Blakely	<i>Eucalyptus salmonophloia</i> F. Muell.
<i>Acacia restiacea</i> Benth.	<i>Eucalyptus sheathiana</i> Maiden
<i>Amphipogon turbinatus</i> R.Br.	<i>Eucalyptus transcontinentalis</i> Maiden
<i>Baeckea crispiflora</i> F. Muell.	<i>Eucalyptus uncinata</i> Turcz.
* <i>Baeckea</i> sp.	<i>Eucalyptus wandoo</i> Blakely
<i>Banksia sphaerocarpa</i> R.Br.	<i>Gastrolobium spinosum</i> Benth.
* <i>Banksia violacea</i> C.A. Gardn.	* <i>Gastrolobium</i> sp.
<i>Beaufortia incana</i> (Benth.) A.S. George	<i>Goodenia watsonii</i> F. Muell. & Tate
<i>Beaufortia micrantha</i> Schau.	* <i>Grevillea</i> aff. <i>hookerana</i> Meisn.
* <i>Boronia capitata</i> Benth.	<i>Grevillea huegelii</i> Meisn.
<i>Borya nitida</i> Labill.	<i>Grevillea</i> ? <i>paniculata</i> Meisn.
* <i>Calothamnus</i> sp.	<i>Grevillea uncinulata</i> Diels
<i>Calytrix brachyphylla</i> Turcz.	<i>Hakea baxteri</i> R.Br.
<i>Cassia nemophila</i> Cunn. ex J.R.T. Vogel	<i>Hakea falcata</i> R.Br.
<i>Casuarina acutivalvis</i> F. Muell.	<i>Hakea gilbertii</i> Kipp.
<i>Casuarina campestris</i> Diels	<i>Hakea lissocarpa</i> R.Br.
<i>Casuarina humilis</i> Otto & Dietr.	<i>Hakea multilineata</i> Meisn.
<i>Chamaeceros serra</i> Benth.	<i>Hakea prostrata</i> R.Br.
<i>Chloanthes coccinea</i> Bartl.	<i>Hakea scoparia</i> Meisn.
<i>Conospermum bracteosum</i> Meisn.	<i>Hakea subsulcata</i> Meisn.
<i>Conospermum distichum</i> R.Br.	<i>Hakea undulata</i> R.Br.
<i>Conospermum ephedroides</i> (Kipp.) Meisn.	<i>Helichrysum</i> sp.
<i>Cryptandra</i> sp.	<i>Hibbertia subvaginata</i> (Steud.) F. Muell.
<i>Dampiera</i> sp.	<i>Isopogon</i> aff. <i>buxifolius</i> R.Br.
* <i>Daviesia pachylina</i> Turcz.	<i>Isopogon scabriusculus</i> Meisn.
<i>Dodonaea attenuata</i> A. Cunn.	<i>Isopogon teretifolius</i> R.Br.
<i>Dodonaea bursariifolia</i> Behr. & F. Muell.	* <i>Isopogon</i> sp.
<i>Dryandra ferruginea</i> Kipp.	* <i>Lambertia ilicifolia</i> Hook.
<i>Dryandra nivea</i> R.Br.	<i>Laxmannia</i> sp.
<i>Dryandra vestita</i> (Kipp.) Meisn.	<i>Lepidosperma</i> sp.
* <i>Dryandra</i> spp. (3)	<i>Leptospermum</i> sp.
<i>Eremophila woollisiana</i> F. Muell.	<i>Lomandra effusa</i> (Lindl.) Ewart
<i>Eucalyptus albida</i> Maiden & Blakely	<i>Loxocarya</i> sp.
<i>Eucalyptus astringens</i> Maiden	<i>Melaleuca uncinata</i> R.Br.
<i>Eucalyptus eremophila</i> (Diels) Maiden	* <i>Melaleuca</i> spp. (2+)
<i>Eucalyptus longicornis</i> F. Muell.	<i>Olearia muelleri</i> (Sond.) Benth.
<i>Eucalyptus loxophleba</i> Benth.	<i>Olearia</i> sp.
<i>Eucalyptus macrocarpa</i> F. Muell.	

* represented by voucher specimen in the Western Australian Herbarium (PERTH).

Oxylobium parviflorum Benth.
Persoonia spp. (2)
Petrophile circinata Kipp.
Petrophile ericifolia R.Br.
Petrophile media R.Br.
Petrophile trifida R.Br.
**Pultenaea* sp.
Stipa sp.
Templetonia sulcata (Meisn.) Benth.

Thomasia sp.
Thryptomene racemulosa Turcz.
Verticordia chrysantha Endl.
Verticordia grandiflora Endl.
Verticordia insignis Endl.
Verticordia ovalifolia Meisn.
Verticordia serrata (Lindl.) Schau.
Xanthorrhoea nana Herbert

REFERENCES

- Specht, R.L., Roe, E.M., and Boughton, V.H. 1974. Conservation of major plant communities in Australia and Papua New Guinea. *Australian Journal of Botany Supplementary Series No. 7.*

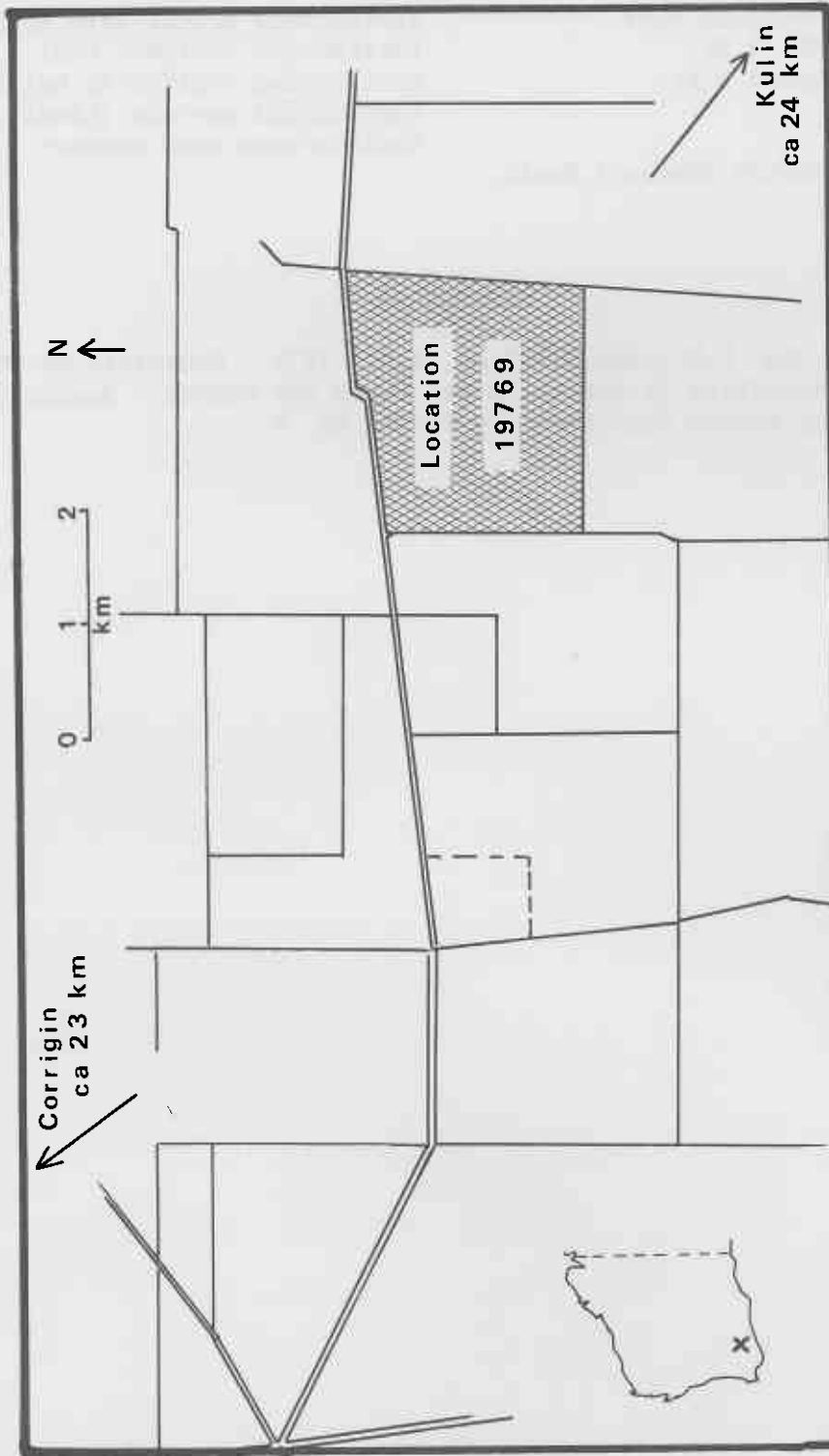


Fig. 1. Map showing Avon Location 19769



Fig. 2. Woodland with *Eucalyptus wandoo*. Understorey of *Casuarina campestris*. Ground cover - *Borya*, ? *Loxocarya*.



Fig. 3. Regeneration after rolling - *Eucalyptus loxophleba*, *Casuarina campestris*, *Lepidosperma* sp.



Fig. 4. Foreground - regeneration of *Eucalyptus eremophila* (mallee).
Behind - *Eucalyptus salmonophloia*.



Fig. 5. Woodland - *Eucalyptus salmonophloia* (left), *Eucalyptus longicornis*
(right).
Shrubs - *Olearia muelleri*, *Dodonaea*, *Helichrysum*, etc.



Fig. 6. *Eucalyptus macrocarpa* and heath - *Hakea*, *Melaleuca*, *Dryandra*, *Petrophile*, *Verticordia*, etc.



Fig. 7. Low woodland dominated by *Eucalyptus astringens*, little understorey.



Fig. 8. Regeneration after fire - *Casuarina campestris*, *Melaleuca* spp., *Lepidosperma*, *Dryandra*, etc.
Trees - *Eucalyptus wandoo*.



Fig. 9. *Leptospermum ? erubescens* (foreground), *Eucalyptus eremophila* (right), *Casuarina campestris* (left rear).



Fig. 10. Edge of *Eucalyptus macrocarpa* - heath, with emergent *Acacia lasiocalyx* and *E. macrocarpa*.



Fig. 11. View of edge of lateritic ridge with tall *Eucalyptus redunca*, *Casuarina campestris*, *C. acutivalvis*, etc. on the ridge. Exposed pallid zone of lateritic soil profile in middle ground.