

**Significant Species of Flora of the Coastal Belt (Quindalup and Spearwood Systems)
of the Swan Coastal Plain**

Greg Keighery

August 1992

Department of Conservation and Land Management

Within the Swan Coastal Plain attention has focused on the rare and or restricted species of the Bassendean, Guildford and Ridge Hill Shelf Systems It has been thought that most species of the Quindalup and Spearwood Systems were widespread in the South-west Botanical District (Marchant *et al.* 1987). Recent detailed flora survey on the Plain has established that there are a series of taxa that are confined to the Swan Coastal Plain and other taxa that are at their geographic limits on the Swan Coastal Plain, either on the Quindalup dunes or the adjacent Tamala limestone. This report lists the endemics of this area, and those species of geographical interest.

MONOCOTYLEDONS

Caladenia longicauda ssp *calcigena* ms

Habitat: Limestone hills and ridges.
 Range: Lancelin to Bunbury.
 Conservation Reserves: Yalgorup, Neerabup and Yanchep National Parks.
 Local Gov Reserves: Bold Park.
 Other: ?

Conostylis pauciflora Hopper ssp *pauciflora*

Habitat: Consolidated coastal dunes.
 Range: Yalgorup to Dawesville.
 Conservation Reserves: Yalgorup National Parks.
 Local Gov Reserves: ?
 Other: ?

Conostylis pauciflora Hopper ssp *euryrhipis* Hopper

Habitat: Consolidated coastal dunes.
 Range: Cervantes to Yanchep.
 Conservation Reserves: ?
 Local Gov Reserves: ?
 Other: ?

DICOTYLEDONS

Chenopodiaceae

Rhagadia baccata R.Br. ssp *dioica* P.G. Wilson

Habitat: Granitic sand, coastal dunes and limestone ridges.
 Range: Lancelin to ?Bunbury.
 Conservation Reserves: Yalgorup, Leeuwin-Naturalist National Parks.
 Local Gov Reserves: Bold Park.
 Other: Rottnest, Carnac and Garden Islands
 This taxon seems to merge into subspecies *baccata* ,along the Leeuwin -Naturaliste Ridge.

Proteaceae

Grevillea crithmifolia R.Br.

Habitat limestone ridges, calcareous sands
 Range Yalgorup to Dongara
 Conservation Reserves Nambung, Neerabup, Yanchep and Yalgorup National Parks. Beekeepers Reserve,

Local Govt. Reserves Trigg dunes,Bold Park,Point Walter.
Other Kings Park

Grevillea preissii Meisn.

Habitat limestone ridges
Range Yalgorup to Cervantes
Conservation Reserves Nambung,Neerabup,Yanchep and Yalgorup National
Parks.Beekeepers Reserve,
Local Govt. Reserves Trigg dunes,Bold Park,Point Walter.
Other Kings Park,M91

This species has been combined under *G.thelemanniana* as a subspecies by McGillivray but is sufficiently distinct to be re-instated. the northern populations of this species, from Jurien Bay to Geraldton,have shorter, hairy leaves and are considered a separate unnamed subspecies.

Hakea undulata R.Br.(Limestone Form)

Habitat Limestone hills
Range Yalgorup
Conservation Reserves Yalgorup
Local Gov Reserves ?
Other ?

Only one population of this taxon is known. Normally associated with lateritic or granitic soils of the Darling Range,this population requires taxonomic study.

Petrophile brevifolia Lindl.ssp. nov.

Habitat Limestone ridges
Range Jurien Bay to Lancelin
Conservation Reserves Mt. Leseur N.P.,Nambung N.P.
Local Govt.Reserves -
Other -

To be named as a separate sub species,has pink flowers compared to normal yellow. The yellow flowered subspecies has been recorded from Hepburn Height, Burns Beach and Alkimos in *Banksia* woodland. Surveys are needed between Lancelin and Burns Beach.

Petrophile serriurae R.Br. ssp.nov.

Habitat Limestone ridges
Range Cervantes to Bunbury(Hamelin Bay)
Conservation Reserves Nambung,Yanchep,Neerabup,Yalgorup and Leeuwin-
Naturaliste National Parks
Local Govt.Reserves Trigg Dunes,Bold Park
Other M91,92(C.T.R.C.)

This is another pink flowered variant of a normally yellow flowered species of the Darling Range. This subspecies is apparently disjunct between Bunbury and Hamelin Bay,a pattern also found in *Trachymene caerulea*.

Santalaceae

Leptomeria empetrifomis Miq.

Habitat Limestone ridges
Range Dongarra to Mandurah

Conservation Reserves	Nambung, Yanchep and Yalgorup National Parks and
Beekeepers Reserves	
Local Govt. Reserves	?
Other	?

This is the type form of the species, which has been confused with *Leptomeria cunninghamii*.

Aizoaceae

Carpobrotus sp (GK 11,518)

Habitat	Sandy soils at the margins of limestone outcrops
Range	Wanneroo to Yanchep
Conservation Reserves	Not recorded from any
Local Govt. Reserves	Ditto
Other	Ditto

First recorded by Keighery (1991), this species is not mentioned in any of the two published taxonomic studies of the family. It requires urgent further survey and creation of a secure reserve. Also found in the Burns Beach area (Keighery, 1992).

Fabaceae

Chorizema varium Benth.

Habitat	Limestone ridges
Range	Fremantle to Seabird
Conservation Reserves	Not recorded from any
Local Govt. Reserves	Ditto
Other	Ditto

Considered extinct until rediscovered by E.A. Griffin at Breton Bay in 1990, another 5 populations were located by Keighery and Gibson south of Seabird in 1992. This species is extinct in the area (Kwinana to Burns Beach) from where it was first described. A reserve should be created to conserve this rare species

Nemcia reticulatum (coastal form)

Habitat	Coastal Dunes
Range	Yalgorup to Grey
Conservation Reserves	Nambung National Park
Local Govt. Reserves	
Other	

Dilleniaceae

Hibbertia spicata ssp. *leptotheca* J.R. Wheeler

Habitat	Limestone ridges
Range	Yalgorup to Lancelin
Conservation Reserves	
Other	Burns Beach coastal reserve

The form occurring at Burns Beach is distinctive (Keighery 1992) It has a low, almost prostrate growth form, shiny, short succulent leaves and small pale yellow flowers with reflexed petals.

Euphorbiaceae

Beyeria cygnorum

Habitat	Limestone ridges
Range	?Fremantle to Yanchep

Conservation Reserves Yanchep National Park
Local Govt. Reserves Bold Park
Other
Taxonomically confused, probably a subspecies of *Beyeria cinerea*.

Malvaceae

Alogyne huegelii var *glabrata* Benth.

Habitat Limestone ridges
Range Yalgorup to Dongara
Conservation Reserves Nambung, Yanchep and Yalgorup National
Parks, Beekeepers and Nilgen Nature Reserves.
Local Govt. Reserves Point Walter
Other M 91

Rhamnaceae

Trymalium albicans Reissek.

Habitat Limestone ridges
Range Yalgorup to Lancelin
Conservation Reserves Yanchep, Neerabup and Yalgorup National Parks.
Local Govt. Reserves Bold park, Trigg Dunes
Other Kings Park, Lake Walyungup

Sapindaceae

Diplopeltis huegelii Endl. var *huegelii*

Habitat Limestone ridges
Range Perth to Dongara
Conservation Reserves Nambung, Yanchep and Neerabup National Parks
Local Govt. Reserves Bold Park
Other Kings Park, M91
The Darling Range form of this species has been named *D. lehmanii* Miq., and will be combined as a separate subspecies of *D. huegelii*.

Rutaceae

Diplolaena angustifolia Hook.

Range Yanchep to Leeman
Habitat Limestone ridges
Conservation Reserves Nambung and Yanchep National Parks
Local Govt. Reserves ?
Other ?

Thymeleaceae

Pimelea calcicola Rye

Range Yalgorup to Lancelin
Habitat Limestone ridges
Conservation Reserves Yanchep, Neerabup and Yalgorup National Parks
Local Govt. Reserves Hepburn Heights
Other M 91

Myrtaceae

Baeckea robusta Benth. ? ssp. nov.

Habitat Limestone ridges

Range	?
Conservation Reserves	Neerabup National Park
Local Govt. Reserves	?
Other	?

According to the Perth Regional Flora this is a distinct local variant of a widespread species, however, M.E. Trudgen who is revising the genus is not certain that this form is sufficiently distinct to warrant recognition as a separate subspecies.

Eucalyptus argutifolia Grayling et Brooker

Habitat	Limestone ridges and hills
Range	Wanneroo to Seabird
Conservation Reserves	Yanchep National Park
Local Govt. Reserves	?
Other	State Forest 65 (Carrabin)

Eucalyptus foecunda Shau.

Habitat	Limestone ridges
Range	Yalgorup to Lancelin
Conservation Reserves	Neerabup
Local Govt. Reserves	Bold Park
Other	M 91

Eucalyptus petrensis Brooker et Hopper

Habitat	Limestone ridges and hills
Range	Yalgorup to Lancelin
Conservation Reserves	Yanchep and Yalgorup National Parks
Local Govt. Reserves	?
Other	Mindarrie area

Melaleuca aff acerosa (GK 11,242)

Habitat	Limestone ridges
Range	Parrot Ridge
Conservation Reserves	Yanchep National Park
Local Govt. Reserves	?
Other	?

A summer flowering shrub that grows with *Melaleuca acerosa* on Parrot Ridge. Urgently requires further survey.

Epacridaceae

Astroloma microcalyx Sond.

Habitat	Limestone ridges
Range	Fremantle to Leeman
Conservation Reserves	?Mt. Leseur, Nambung, Neerabup, and Yanchep National Parks
Local Govt. Reserves	Bold Park
Other	?

Leucopogon sp A (Perth Flora)

Range	Wanneroo to Lancelin
Habitat	Limestone ridges

Conservation Reserves ?
Local Govt. Reserves ?
Other ?

Lamiaceae

Hemiandra pungens (Dune form,GK 12,794)

Habitat Coastal dunes
Range Wanneroo to Seabird
Conservation Reserves ?
Local Govt. Reserves ?
Other ?

This is a prostrate glabrous plant,with short ovate pungent leaves.

Hemigenia barbata Bartl.

Habitat Limestone ridges and hills
Range Kwinana to Green Head
Conservation Reserves Mt. Lesueur National Park
Local Govt. Reserves ?
Other M92/ Mt. Wabbling(State Forest 65)

Members of this species have been variously placed under *Hemigenia sericea* and *H.saligna*. True *H.barbata* appears to be a coastal limestone endemic.

Scrophulariaceae

Veronica stolonifera Lehm.

Habitat Limestone ridges and flats
Range Yalgorup to Yanchep
Conservation Reserves Yanchep and Yalgorup National Parks
Local Govt. Reserves ?
Other ?

Usually placed under *Veronica calycina*, but appears closer to *V.distans* (a south coast species)

Stylidiaceae

Stylidium bulbiferum Benth.

Habitat Limestone ridges
Range Yalgorup to Yanchep
Conservation Reserves Yanchep and Yalgorup National Parks
Local Govt. Reserves ?
Other M92

The type collection of this species is from the Swan Coastal Plain, not the Darling Range,as assumed previously.

Stylidium maritimum Coates

Habitat Coastal dunes and limestone ridges
Range Yalgorup to Cervantes
Conservation Reserves Nambung,Yanchep,Neerabup and Yalgorup National Parks
Local Govt. Reserves Bold Park
Other ?

Stylidium junceum (limestone variant)

Habitat	Limestone ridges
Range	Yalgorup to Cervantes
Conservation Reserves	Nambung, Yanchep, Neerabup and Yalgorup national Parks
Local Govt. Reserves	Bold Park and Trigg Dunes
Other	?

An annotated list of range ends of the near coastal section of the Swan Coastal Plain

Actites megalocarpa

Range N = Garden Island and N = Mindarie

Anthocercis ilicifolia

Range S = Mandurah

Agonis flexuosa

Range N = Bold Park

Allocasuarina lehmanniana

Range S = M 46/ Bold Park

Acacia cochlearis

Range N = Leeman

Acacia cyclops

Range N = Leeman

Acacia littorea

Range N = Busselton and Rottnest (disjunct)

Acacia truncata

Range S = Bunbury N = Leeman

Andersonia lehmanniana

A Limestone form of this species has been found during surveys of Neerabup National Park. Taxonomic status requires study.

Boronia alata

Range N = Garden Island/Rottnest

Cryptandra mutila

Range S = Point Peron

Chamelaucium uncinatum

Range S = M 46/Bold Park

Diplolaena dampieri

Range N = Garden Is/Rottnest

Eucalyptus gomphocephala

Range S = Ludlow N = Cervantes, outlier at Jurien

<i>Hibbertia cuneiformis</i>	
Range	N = Beecher Point
<i>Lasiopetalum oppositifolium</i>	
Range	S = Garden Island(disjunct from Green Head)
<i>Lavatera plebeia</i> var. <i>tomentosa</i>	
Range	Only on offshore islands, Rottnest, Green, and Shag Rock.
<i>Lepidium puberulum</i>	
Range	Only on the offshore islands (Rottnest)
<i>Lechenaultia linarioides</i>	
Range	S = Coogee
<i>Logania vaginalis</i>	
Range	N = Dongara
<i>Leptomeria lehmanii</i>	
Range	N = Yalgorup
<i>Leptomeria preissiana</i>	
Range	S = Yalgorup
<i>Melaleuca acerosa</i>	
Range	N = Dongara
<i>Melaleuca cardiophylla</i>	
Range	S = Burns Beach
<i>Plantago exilis</i>	
Range	S = Garden Is/Rottnest and Burns Beach
<i>Poa poiformis</i>	
Range	N = Trigg Dunes(on coast)Abrolhos Islands
<i>Poa porphyroclados</i>	
Range	N = Woodmans Point
<i>Pimelea ferruginea</i>	
Range	N = Dongara
<i>Pimelea rosea</i>	
Range	N = Yanchep
<i>Pimelea villifera</i>	
Range	S = Mindarie
<i>Schoenus lanatus</i>	
Range	N = Leeman

Trachymene coerulea

Range S = Capel (disjunct to Hamelin Bay)
N = Lancelin

Zygophyllum fruticosum

Range S = Cottesloe

References

Keighery, G.J. (1991) Floristics of System Six Reserves and Bushland. IV: Vegetation and Flora of Hepburn Heights. W.A, Wildflower Society Publication, p33-38.

Keighery, G.J. (1992) Flora of Burns Beach Coastal Reserve. Internal Report
Dept. Conservation and Land Management

Marchant, N.G., Wheeler, J.R., Rye, B.L., Bennet, E.M., Lander, N.S. and Macfarlane, T.D. (1987) Flora of the Perth Region Dept. Agriculture, Perth.

Notes on the Flora of the Port Kennedy- Point area

G.J. Keighery, September 1992

Flora values

The "values" of an area are, of course a subjective assessment, since only humans make such judgements. However this discussion paper will attempt to list the particular flora attributes which this area contains.

a) Size and condition of the vegetation:

This area is the largest uncleared remnant of coastal (Quindalup) vegetation remaining in the Metropolitan Region, and the largest area which is in public ownership. The area has simple boundaries, which reduces management input and costs. Most of the vegetation is in good to excellent condition, eg: Beecher point area 100 square metre quadrats average 27 species per site, with 2-3 of these records being weeds, compared to this quadrats in the Beeliar Regional Park average 41 species with 18 weed species per site.

While areas near the settlement do possess significant weed problems in the form of *Euphorbia terracina* (Geraldton Carnation Weed), Quindalup dune heath is renowned for its resilience to disturbance, since it is naturally disturbed, and is one of the few plant communities which can be readily re-established after sand mining. The weedy grasses mentioned in previous reports appear to be miss-identified native species, as the Quindalup is one of the few areas on the coastal plain where grasses are prevalent, especially after fires.

b) Vegetation communities present:

The major feature of the area is the presence of ephemeral and permanent wetlands. These are diverse in size and contain a range of plant communities. As well as this direct effect

they influence the occurrence of many other plant species which are not a normal feature of the Quindalup dunes, hence the wetlands probably give the area unusual species occurrences, and unusual vegetation communities. Considering these in more detail:
Unusual species occurrences: We have recorded 223 species of vascular plants in the area, which is a very rich list for a coastal site. Species diversity is raised by the presence of the wetlands which provide increased habitat diversity, both in