

Our Ref: SATCAT18

## Threatened and Priority Flora Summary Table

Species	Description	Reliability to Locate in November (e.g. High, Moderate, Low)	Likelihood of Occurrence
<b>Threatened Flora</b>			
<i>Calectasia cyanea</i> (Blue Tinsel Lily)	Rhizomatous, clump forming, woody perennial, herb, 0.1-0.6 m high, to 0.3 m wide. Fl. blue/purple, Jun to Oct. White, grey or yellow sand, gravel.	A revision of the genus <i>Calectasia</i> was undertaken by Barrett and Dixon in 2001. Prior to this revision several of the new species were included in <i>C. cyanea</i> . Two collections recorded in the WAHerb collections recorded from this area are included under <i>C. cyanea</i> . These are i). E.D. Kabay 322 was confirmed in 1994 by R. Cranfield in 1994 prior to the revision being published and ii) B. Evan 469 has not been confirmed. Identification of these specimens needs to be verified that they are <i>C.cyanea</i> and not <i>C. narragara</i> .	No <i>Calectasia</i> species were recorded during this survey
<i>Melaleuca sp.</i> Wanneroo (G.J. Keighery 16705)	<i>Melaleuca sp.</i> Wanneroo (G.J. Keighery 16705) is known to co-occur often as a dominant, in dense patches with other <i>Melaleuca</i> species, predominantly <i>M. systema</i> , when growing on very shallow soils over limestone 'caprock' on ridges.	High, as was flowering at the time of the survey. The plant is taller and has a yellow flower when compared to the commoner <i>M. systema</i> which has a white or cream flower. <i>M. systema</i> Low Open Shrubland was recorded but all the shrubs were up to 80cm tall.	Known occurrences located in Nowergup over 6km north east of this site. Soils in Nowergup are mainly Spearwood Dunes, with the western edge only in Quindalup Dunes. Species appears unlikely to be present onsite.

Species	Description	Reliability to Locate in November (e.g. High, Moderate, Low)	Likelihood of Occurrence
<b>Priority Flora</b>			
<i>Acacia benthamii</i> (P2)	Shrub, ca 1 m high. Fl. yellow, Aug to Sep. Sand. Typically on limestone breakaways.	High, as would have been identified if only in vegetative state as it has characteristic phyllodes. This was included in the November search.	This species appears to occur over 3-4 km from the coast in this area. This site is located less than 1km from the coast. Based on this location and that this shrub was not identified during the previous survey, the species appears unlikely to be present.
<i>Astroloma microcalyx</i> (P3)	Florabase says now called <i>Styphelia microcalyx</i> which is no longer listed as a threatened flora	High, as a Shrub it would have been recorded	Closest record is Nowegrup. Also occurs at Preston Beach area.
<i>Austrostipa mundula</i> (P3)	Perennial grass up to 50cm high	Dr Bennett collected this species from Bold Park in 2016 where it was observed to be distinct from <i>A. flavescens</i>	Not likely as site at City Beach was inland from the coast.
<i>Baeckea</i> sp. Limestone (N. Gibson & M.N. Lyons 1425) (P1)	A woody shrub which occurs on grey sand on limestone breakaways. Baeckea sps are generally conspicuous.	High as soil and associated species are correct	No Baeckea species were identified onsite during the vegetation and flora survey.
<i>Conostylis bracteata</i> (P3)	Rhizomatous, tufted or shortly proliferous perennial, grass-like or herb, 0.2-0.45 m high. Fl. yellow, Aug to Sep. Sand, limestone. Consolidated sand dunes.	High, this taxon is readily distinguished by the leaves which are 4-10mm wide with dense flexible hairs along the leaf margins	This species has the potential to occur in the more eastern area surveyed but was not recorded.
<i>Conostylis pauciflora</i> subsp. <i>euryrhipis</i> (P4)	Rhizomatous, stoloniferous perennial, grass-like or herb, 0.06-0.18 m high. Fl. yellow, Aug to Oct. White, grey or yellow sand. Consolidated dunes.	High, leaves are narrow up to 1-2.5 mm wide with bristles or hairs on the leaf margin. Readily distinguished from species recorded.	Has been recorded from Alkimos and Two Rocks but not in the vicinity of the survey site.

Species	Description	Reliability to Locate in November (e.g. High, Moderate, Low)	Likelihood of Occurrence
<i>Fabronia hampeana</i> (P2)	Moss which grows on trucks of plants including <i>Macrozamia riedlei</i> . Plant distinctly silvery green. Leaves imbricate, linear-lanceolate, 0.8–1.0 mm long, 0.11– 0.19 mm wide; apex a long hairpoint; margins plane and covered with very long single -celled wavy cilia (to 150 cm long); Endemic to W.A.	Moderate depending on the presence and density of <i>Macrozamia riedlei</i>	No <i>Macrozamia riedlei</i> plants were observed onsite during the survey.
<i>Grevillea sp. Ocean Reef</i> (D. Pike Joon 4) (P1)	Shrub to 1.5m tall.	High as plant would have been in flower. Occurs associated with limestone.	No <i>Grevillea</i> species recorded. This species only recorded from Ocean Reef.
<i>Hibbertia spicata</i> subsp. <i>leptotheca</i> (P3)	Erect or spreading shrub, 0.2-0.5 m high. Fl. yellow, Jul to Oct. Sand. Near-coastal limestone ridges, outcrops & cliffs.	Now called <i>Hibbertia leptotheca</i> . Occurs on limestone ridges. High	No <i>Hibbertia</i> species recorded during survey.
<i>Jacksonia gracillima</i> (P3)	Spreading shrub up to 1.5m high and 2m high occurring in damp soil. Flowers orange with an eye and keel red	High. Has an obvious habit.	No <i>Jacksonia</i> plants observed onsite during the survey.
<i>Jacksonia sericea</i> (Waldjumi) (P4)	Low spreading shrub, to 0.6 m high. Fl. orange, usually Dec or Jan to Feb. Calcareous & sandy soils.	High. This is a prostrate <i>Jacksonia</i> and would have been recognised even if vegetative.	No <i>Jacksonia</i> plants observed onsite during the survey.
<i>Lasiopetalum membranaceum</i> (P3)	Multi-stemmed shrub, 0.2-1 m high. Fl. pink-blue-purple, Sep to Dec. Sand over limestone.	High, as it is a shrub and the flowering period was during the survey timeframe.	Survey timing would have found this species if present.
<i>Lecania turicensis</i> var. <i>turicensis</i> (P2)	A lichenised fungus occurring on coastal limestone rocks.	High, would have been visible on rocks	No limestone rocks at the site. Only recorded from 2 locations both north of the site

Species	Description	Reliability to Locate in November (e.g. High, Moderate, Low)	Likelihood of Occurrence
<i>Leucopogon maritimus</i> (P1)	Occurs in deep, calcareous sands, on the mid to upper slopes of dunes or in shallow sand over limestone, but avoiding the thicker vegetation of the swales. It grows in low heathland communities often dominated by <i>Melaleuca systema</i> , <i>Acanthocarpus preissii</i> , <i>Acacia lasiocarpa</i> and <i>Olearia axillaris</i> , sometimes in close proximity to the common coastal epacrids <i>Leucopogon parviflorus</i> and <i>L. insularis</i> .  Flowering collections have been made between November and August, although in average seasonal conditions the peak is probably between April and June.	High, shrub would have been visible.	Recorded north of the site. No <i>Leucopogon</i> species recorded during survey
<i>Leucopogon</i> sp. Yanchep (M. Hislop 1986) (P3)	Erect shrub, 0.15-1 m high, to 0.6 m wide. Fl. white/pink, Apr to Jun or Sep. Light grey-yellow sand, brown loam, limestone, laterite, granite. Coastal plain, breakaways, valley slopes, low hills.	High as pendulous fruits would have been present.	Flowers are pendulous. At time of survey plants would have been recorded in fruit. No <i>Leucopogon</i> plants recorded during survey.
<i>Pimelea calcicola</i> (P3)	Erect to spreading shrub, 0.2-1 m high. Fl. pink, Sep to Nov. Sand. Coastal limestone ridges.	High, shrub flowering during survey.	Survey timing would have found this species, if present
<i>Poranthera moorokatta</i> (P2)	Small herb up to 1cm tall with white flowers and green or red fruits	Low. Would have completed flowering and possibly fruiting.	All records are from areas further away from the coast.
<i>Sarcozona bicarinata</i> (P3)	Spreading herbaceous shrub, ca 0.1 m high. Fl. white, Aug. White sand.	Moderate	Included in significant species search list. Not observed onsite.

Species	Description	Reliability to Locate in November (e.g. High, Moderate, Low)	Likelihood of Occurrence
<i>Stylidium maritimum</i> (P3)	Caespitose perennial, herb, 0.3-0.7 m high, Leaves tufted, linear to narrowly oblanceolate, 10-40 cm long, 1-5.5 mm wide, apex acute to mucronate, margin involute, glabrous. Membraneous scale leaves present at base of mature leaves. Scape glandular throughout. Inflorescence paniculate. Fl. white/purple, Sep to Nov. Sand over limestone. Dune slopes and flats. Coastal heath and shrubland, open Banksia woodland.	High as perennial plant and would have been in fruit.	Survey timing would have found this species, if present
<i>Stylidium paludicola</i> (P3)	Reed-like perennial, herb, 0.35-1 m high, Leaves tufted, linear or subulate or narrowly oblanceolate, 0.5-4 cm long, 0.5-1.5 mm wide, apex acute, margin entire, glabrous. Scape mostly glabrous, inflorescence axis glandular. Inflorescence racemose. Fl. pink, Oct to Dec. Peaty sand over clay. Winter wet habitats. Marri and Melaleuca woodland, Melaleuca shrubland.	High as would have been flowering or fruiting.	Suitable habitat not present onsite and survey timing would have found this species, if present.
<i>Tetraria</i> sp. Chandala (G.J. Keighery 17055) (P2)	A sedge which grows in grey sand along the margins of winter-wet samples, depressions.	High, due to specific habitat requirement.	Unlikely to be present onsite based on lack of suitable habitat.

Information Sources:

- Florabase (DBC) <https://florabase.dpaw.wa.gov.au/>
- NatureMap (DBC) <https://naturemap.dbca.wa.gov.au/>
- Conservation Advice: Melaleuca sp. Wanneroo (G.J. Keighery 16705) <http://www.environment.gov.au/biodiversity/threatened/species/pubs/89456-conservation-advice-04072019.pdf>
- New, locally endemic taxa in *Leucopogon* (Ericaceae: Styphelioideae: Styphelieae) from the Perth and midwest regions of Western Australia. <https://florabase.dpaw.wa.gov.au/science/nytsia/606.pdf>
- Scott. L. Gilmore [http://www.anbg.gov.au/abrs/Mosses\\_online/03\\_Fabroniace](http://www.anbg.gov.au/abrs/Mosses_online/03_Fabroniace) as referenced by Dr Eleanor Bennett.