

**Supplementary material**

**Spatial variation and drivers of vegetation structure and composition in coastal freshwater wetlands of subtropical Australia**

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**Table S1. Species recorded during field surveys in South East Queensland Coastal Freshwater Wetlands (November 2018–March 2019)**

Nomenclature and Native status according to 2019 Census of Queensland Flora (Brown and Bostock 2019). Naturalised species highlighted are listed as invasive in *Biosecurity Act 2014* (Qld).

Lifespan and growth habit aligns with PlantNET (see <http://plantnet.rbgsyd.nsw.gov.au/>). Wetland indicator status according to Flora of Wetland Indicator Species (WIS) List (see <https://wetlandinfo.des.qld.gov.au/wetlands/ecology/components/flora/flora-indicator-species-list.html>). Strata categories denotes which vegetation layer species was observed. Trees > 3 m, Shrubs 1.5–3 m, Groundcover < 1.5 m

Species scientific name	Scientific authority	Species common name	Native status	Family	Wetland status	NCA status	Lifespan	Growth habit	Number of sites	Trees	Shrubs	Ground cover
<i>Acrostichum speciosum</i>	Willd.	Mangrove Fern	Native	Pteridaceae	WIS		Perennial	Fern	2			X
<i>Baeckea frutescens</i>	L.	Weeping Baeckea	Native	Myrtaceae	WIS		Perennial	Small shrub	2			X
<i>Baloskion pallens</i>	(R.Br.) B.G.Briggs & L.A.S.Johnson		Native	Restionaceae	WIS		Perennial	Herb	2			X
<i>Banksia robur</i>	Cav.	Swamp Banksia	Native	Proteaceae	WIS		Perennial	Shrub	5		X	
<i>Baumea articulata</i>	(R.Br.) S.T.Blake	Jointed Twigrush	Native	Cyperaceae	WIS		Perennial	Sedge	2			X
<i>Baumea muelleri</i>	(C.B.Clarke) S.T.Blake		Native	Cyperaceae	WIS		Perennial	Sedge	1			X
<i>Blechnum indicum</i>	Burm.f.	Swamp Water Fern	Native	Blechnaceae	WIS		Perennial	Fern	9			X
<i>Boronia falcifolia</i>	A.Cunn. Ex Endl.	Wallum Boronia	Native	Rutaceae	WIS		Perennial	Small shrub	2			X
<i>Casuarina glauca</i>	Sieber ex Spreng.	Swamp She-oak	Native	Casuarinaceae	WIS		Perennial	Tree	10	X		
<i>Chorizandra cymbaria</i>	R.Br.	Bristle Rush	Native	Cyperaceae	WIS		Perennial	Sedge	4			X
<i>Cyperus exaltatus</i>	Retz.	Tall Flatsedge	Native	Cyperaceae	WIS		Perennial	Sedge	10		X	X
<i>Cyperus polystachyos</i>	Rottb.	Bunchy Sedge	Native	Cyperaceae	WIS		Annual/Perennial	Sedge	13			X
<i>Drosera spatulata</i>	Labill.	Common Sundew	Native	Droseraceae	WIS		Perennial	Herb	2			X
<i>Eleocharis philippinensis</i>	Svenson		Native	Cyperaceae	WIS		Perennial	Sedge	1			X
<i>Empodisma minus</i>	(Hook.f.) L.A.S.Johnson & D.F.Cutler	Spreading Rope Rush	Native	Restionaceae	WIS		Perennial	Herb	6			X
<i>Gahnia sieberiana</i>	Kunth	Sword Grass	Native	Cyperaceae	WIS		Perennial	Sedge	3			X
<i>Juncus</i> sp.			Native	Juncaceae	WIS		Perennial	Sedge	11			X
<i>Leersia hexandra</i>	Sw.	Swamp Ricegrass	Native	Poaceae	WIS		Perennial	Grass	5			X
<i>Lepironia articulata</i>	(Retz.) Domin	Grey Sedge	Native	Cyperaceae	WIS		Perennial	Sedge	6			X
<i>Leptospermum liversidgei</i>	R.T.Baker & H.G.Sm.	Lemon-scented Tea Tree	Native	Myrtaceae	WIS		Perennial	Small shrub	5		X	X
<i>Lophostemon suaveolens</i>	(Sol. ex Gaertn.) Peter G.Wilson & J.T.Waterh.	Swamp Box	Native	Myrtaceae	WIS		Perennial	Tree	24	X		
<i>Lygodium microphyllum</i>	(Cav.) R.Br.	Climbing Maidenhair Fern	Native	Lygodiaceae	WIS		Perennial	Fern	5			X
<i>Marsilea hirsuta</i>	R.Br.	Hairy Nardoo	Native	Marsileaceae	WIS		Perennial	Herb	1			X
<i>Melaleuca linariifolia</i>	Sm.	Flax-leaved paperbark	Native	Myrtaceae	WIS		Perennial	Tree	8	X		
<i>Melaleuca quinquenervia</i>	(Cav.) S.T.Blake	Broad-leaved Paperbark	Native	Myrtaceae	WIS		Perennial	Tree	37	X		
<i>Melastoma malabathricum</i> subsp. <i>malabathricum</i>	L.	Native Lassiandra	Native	Melastomataceae	WIS		Perennial	Small shrub	4		X	X
<i>Persicaria decipiens</i>	(R.Br.) K.L.Wilson	Slender Knotweed	Native	Polygonaceae	WIS		Annual/Perennial	Herb	9			X

Species scientific name	Scientific authority	Species common name	Native status	Family	Wetland status	NCA status	Lifespan	Growth habit	Number of sites	Trees	Shrubs	Ground cover
<i>Persicaria strigosa</i>	(R.Br.) H.Gross	Spotted Knotweed	Native	Polygonaceae	WIS		Perennial	Herb	5			X
<i>Philydrum lanuginosum</i>	Banks & Sol. ex Gaertn.	Wooly Frogsmouth	Native	Philydraceae	WIS		Perennial	Herb	3			X
<i>Phragmites australis</i>	(Cav.) Trin. ex Steud.	Common reed	Native	Poaceae	WIS		Perennial	Grass	3			X
<i>Rhynchospora corymbosa</i>	(L.) Britton		Native	Cyperaceae	WIS		Perennial	Sedge	1			X
<i>Schoenus brevifolius</i>	R.Br.	Spikey Sedge	Native	Cyperaceae	WIS		Perennial	Sedge	2			X
<i>Sporadanthus interruptus</i>	(F.Muell.) B.G.Briggs & L.A.S.Johnson		Native	Restionaceae	WIS		Perennial	Herb	2			X
<i>Sporobolus virginicus</i>	(L.) Kunth	Salt/Sand Couch	Native	Poaceae	WIS		Perennial	Grass	4			X
<i>Sprengelia sprengelioides</i>	(R.Br.) Druce	Sprengelia	Native	Ericaceae	WIS		Perennial	Small shrub	5			X
<i>Typha orientalis</i>	C.Presl	Broad-leaved Cumbungi	Native	Typhaceae	WIS		Perennial	Herb	5		X	X
<i>Xanthorrhoea fulva</i>	(A.T.Lee) D.J.Bedford	Swamp Grass-tree	Native	Xanthorrhoeaceae	WIS		Perennial	Rosette Tree	5			X
<i>Acacia complanata</i>	A.Cunn. ex Benth.	Flat-stemmed Wattle	Native	Fabaceae			Perennial	Tree	1	X		
<i>Acacia concurrens</i>	Pedley	Curracabah	Native	Fabaceae			Perennial	Tree	6	X		
<i>Acacia melanoxylon</i>	R.Br.	Blackwood	Native	Fabaceae			Perennial	Tree	2	X		
<i>Allocasuarina littoralis</i>	(Sailsb.) L.A.S.Johnson	Black She-oak	Native	Casuarinaceae			Perennial	Tree	1	X		
<i>Alphitonia excelsa</i>	(Fenzl) Benth.	Reh Ash	Native	Rhamnaceae			Perennial	Tree	11	X		
<i>Alpinia caerulea</i>	(R.Br.) Benth.	Native Ginger	Native	Zingiberaceae			Perennial	Herb	2		X	
<i>Alternanthera denticulata</i>	R.Br.	Joy Weed	Native	Amaranthaceae			Annual	Herb	11			X
<i>Alyxia ruscifolia</i>	R.Br.	Chain Fruit	Native	Apocynaceae			Perennial	Small shrub	2			X
<i>Angophora leiocarpa</i>	(L.A.S.Johnson ex G.J.Leach) K.R.Thiele & Ladiges	Rusty Gum	Native	Myrtaceae			Perennial	Tree	4	X		
<i>Archontophoenix cunninghamiana</i>	(H.Wendl.) H.Wendl. & Drude	Piccabeen Palm	Native	Arecaceae			Perennial	Rosette Tree	2	X		
<i>Artanema fimbriatum</i>	D.Don	Bearded flower shrub	Native	Linderniaceae			Perennial	Herb	1			X
<i>Banksia oblongifolia</i>	Cav.	Dwarf Banksia	Native	Proteaceae			Perennial	Small shrub	3		X	X
<i>Bauera capitata</i>	Ser. ex DC.	Dog Rose	Native	Cunoniaceae			Perennial	Small shrub	1			X
<i>Calochlaena dubia</i>	(R.Br.) M.D.Turner & R.A.White	Soft Bracken Fern	Native	Dicksoniaceae			Perennial	Fern	6			X
<i>Cassytha filiformis</i>	L.	Downy Dodder	Native	Lauraceae			Perennial	Parasite/Vine	7			X
<i>Caustis recurvata</i>	Spreng.	Curly Sedge	Native	Cyperaceae			Perennial	Sedge	1			X
<i>Centella asiatica</i>	(L.) Urb.	Centella	Native	Apiaceae			Perennial	Herb	5			X
<i>Corymbia citriodora</i>	(Hook.) K.D.Hill & L.A.S.Johnson	Lemon-scented Gum	Native	Myrtaceae			Perennial	Tree	1	X		
<i>Cupaniopsis anacardioides</i>	(A.Rich.) Radlk.	Tuckeroo	Native	Sapindaceae			Perennial	Tree	1	X		
<i>Cyathea</i> sp.		Tree fern	Native	Cyatheaceae			Perennial	Rosette Tree	1	X		
<i>Cymbopogon refractus</i>	(R.Br.) A.Camus	Barbed Wire Grass	Native	Poaceae			Perennial	Grass	2			X
<i>Daucus glochidiatus</i>	(Labill.) Fisch., C.A.Mey. & Ave-Lall.	Austral Carrot	Native	Apiaceae			Annual	Herb	2			X

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<i>Dendrocnide excelsa</i>	(Wedd.) Chew	Giant Stinging Tree	Native	Urticaceae			Perennial	Tree	1	X		
<i>Dianella</i> sp.			Native	Phormiaceae			Perennial	Rosette Shrub	11			X
<i>Dichondra repens</i>	J.R.Forst. & G.Forst.	Kidney Weed	Native	Convolvulaceae			Perennial	Herb	2			X
<i>Dillwynia floribunda</i>	Sm.	Swampy Parrot Pea	Native	Fabaceae			Perennial	Shrub	1			X
<i>Elaeocarpus obovatus</i>	G.Don	Hard Quandong	Native	Elaeocarpaceae			Perennial	Tree	1	X		
<i>Epacris microphylla</i>	R.Br.	Wallum Heath	Native	Ericaceae			Perennial	Shrub	1			X
<i>Eragrostis brownii</i>	(Kunth) Nees ex Wight	Brown's Lovegrass	Native	Poaceae			Perennial	Grass	4			X
<i>Eucalyptus exserta</i>	F.Muell.	Messmate	Native	Myrtaceae			Perennial	Tree	1	X		
<i>Eucalyptus latisinensis</i>	K.D.Hill	White Mahogany	Native	Myrtaceae			Perennial	Tree	2	X		
<i>Eucalyptus racemosa</i>	Cav.	Narrow-leaved Scribbly Gum	Native	Myrtaceae			Perennial	Tree	2	X		
<i>Eucalyptus siderophloia</i>	Benth.	Ironbark	Native	Myrtaceae			Perennial	Tree	4	X		
<i>Eucalyptus tereticornis</i>	Sm.	Forest Red Gum	Native	Myrtaceae			Perennial	Tree	24	X		
<i>Eustrephus latifolius</i>	R.Br.	Wombat Berry	Native	Asparagaceae			Perennial	Vine	8			X
<i>Ficinia nodosa</i>	(Rottb.) Goetgh., Muasya, & D.A.Simpson	Knobby Club Rush	Native	Cyperaceae			Perennial	Sedge	2			X
<i>Ficus coronata</i>	Spin	Sandpaper Fig	Native	Moraceae			Perennial	Tree	1	X		X
<i>Ficus watkinsiana</i>	F.M.Bailey	Strangler Fig	Native	Moraceae			Perennial	Tree	1	X		
<i>Fimbristylis dichotoma</i>	(L.) Vahl	Common Fringe-sedge	Native	Cyperaceae			Perennial	Sedge	7			X
<i>Gahnia aspera</i>	(R.Br.) Spreng.	Red Saw Sedge	Native	Cyperaceae			Perennial	Sedge	4		X	X
<i>Geitonoplesium cymosum</i>	(R.Br.) A.Cunn. ex Hook.	Scrambling Lilly	Native	Hemerocallidaceae			Perennial	Vine	6			X
<i>Geranium solanderi</i>	Carolin.	Native Geranium	Native	Geraniaceae			Perennial	Herb	4			X
<i>Glochidion ferdinandi</i>	(Muell.Arg.) F.M.Bailey	Cheese Tree	Native	Phyllanthaceae			Perennial	Tree	8	X		
<i>Glochidion sumatranum</i>	Miq.	Umbrella Cheese Tree	Native	Phyllanthaceae			Perennial	Tree	2	X	X	
<i>Gompholobium pinnatum</i>	Sm.	Wedge Pea	Native	Fabaceae			Perennial	Herb	4			X
<i>Goodenia rotundifolia</i>	R.Br.	Star Goodenia	Native	Goodeniaceae			Perennial	Herb	6			X
<i>Hakea actites</i>	W.R.Barker	Mulloway Needle Bush	Native	Proteaceae			Perennial	Shrub	2		X	
<i>Hardenbergia violacea</i>	(Schneev.) Steam	False Sarsaparilla	Native	Fabaceae			Perennial	Herb	1			X
<i>Hibbertia acicularis</i>	(Labill.) F.Muell.	Prickly Guinea-Flower	Native	Dilleniaceae			Perennial	Herb	3			X
<i>Hibbertia salicifolia</i>	(DC.) F.Muell.	Guinea Flower	Native	Dilleniaceae			Perennial	Herb	4			X
<i>Hibiscus diversifolius</i>	Jacq.	Swamp Hibiscus	Native	Malvaceae			Perennial	Small shrub	2			X
<i>Hibiscus heterophyllus</i>	Vent.	Native Rosella	Native	Malvaceae			Perennial	Shrub	1	X	X	
<i>Hypericum gramineum</i>	G. Forst.	St. John's Wort	Native	Hypericaceae			Annual	Herb	1			X
<i>Imperata cylindrica</i>	(L.) Rausch.	Blady Grass	Native	Poaceae			Perennial	Grass	9			X
<i>Lepturus repens</i>	(G.Forst.) R.Br.	Stalky Grass	Native	Poaceae			Perennial	Grass	4			X
<i>Leucopogon margarodes</i>	R.Br.	Pink Beard Heath	Native	Ericaceae			Perennial	Shrub	4		X	X
<i>Lindsaea linearis</i>	Sw.	Screw Fern	Native	Lindsaeaceae			Perennial	Fern	1			X
<i>Livistona australis</i>	(R.Br.) Mart.	Cabbage tree palm	Native	Arecaceae			Perennial	Rosette Tree	3	X	X	X
<i>Lobelia anceps</i>	L.f.	Angled Lobelia	Native	Campanulaceae			Perennial	Herb	3			X
<i>Lobelia purpurascens</i>	R.Br.	White Root	Native	Campanulaceae			Perennial	Herb	6			X
<i>Lomandra filiformis</i>	(Thunb.) Britten	Wattle Mat Rush	Native	Asparagaceae			Perennial	Herb	6			X
<i>Lomandra longifolia</i>	Labill.	Spiny-head Mat-rush	Native	Asparagaceae			Perennial	Herb	19		X	X
<i>Maclura cochinchinensis</i>	(Lour.) Corner	Cockspur Thorn	Native	Moraceae			Perennial	Shrub	2		X	X

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<i>Melaleuca irbyana</i>	R.T.Baker	Weeping Paperbark	Native	Myrtaceae		Endangered	Perennial	Shrub	3	X		
<i>Melaleuca salicina</i>	Craven	Willow Bottlebrush	Native	Myrtaceae			Perennial	Shrub	3	X		
<i>Melia azedarach</i>	L.	White Cedar	Native	Meliaceae			Perennial	Tree	1			X
<i>Murdammia graminea</i>	(R.Br.) G.Brueckn.	Grass Lilly	Native	Commelinaceae			Perennial	Herb	1			X
<i>Oplismenus aemulus</i>	(R.Br.) Roem. & Schult.	Australian Basket Grass	Native	Poaceae			Perennial	Grass	9			X
<i>Oxalis</i> sp.			Native	Oxalidaceae			Annual	Herb	10			X
<i>Panicum simile</i>	Domin	Two Colour Panic	Native	Poaceae			Perennial	Grass	9			X
<i>Parsonsia straminea</i>	(R.Br.) F.Muell.	Monkey Rope Vine	Native	Apocynaceae			Perennial	Vine	21		X	X
<i>Persoonia virgata</i>	R.Br.	Geebung	Native	Proteaceae			Perennial	Small shrub	5		X	X
<i>Philotheca queenslandica</i>	(C.T.White) P.I.Forst.	Queensland Wax Flower	Native	Rutaceae			Perennial	Shrub	3			X
<i>Pimelea linifolia subsp. linifolia</i>	Sm.	Slender Rice Flower	Native	Thymelaeaceae			Perennial	Shrub	4			X
<i>Pseuderanthemum variabile</i>	(R.Br.) Radlk.	Pastel Flower	Native	Acanthaceae			Perennial	Herb	3			X
<i>Rostellularia obtusa</i>	Nees	Pink Tongues	Native	Acanthaceae			Perennial	Herb	2			X
<i>Samadera bidwillii</i>	Hook.f.	Quassia	Native	Simaroubaceae		Vulnerable	Perennial	Tree	1	X		
<i>Schoenus apogon</i>	Roem. & Schult.	Common Bog-rush	Native	Cyperaceae			Annual	Sedge	2			X
<i>Smilax australis</i>	R.Br.	Lawyer Vine	Native	Smilacaceae			Perennial	Vine	4			X
<i>Solanum stelligerum</i>	Sm.	Devils Needles	Native	Solanaceae			Perennial	Shrub	4		X	
<i>Stephania japonica</i>	(Thunb.) Miers	Snake Vine	Native	Menispermaceae			Perennial	Vine	6			X
<i>Themeda triandra</i>	Forssk.	Kangaroo Grass	Native	Poaceae			Perennial	Grass	9			X
<i>Tricoryne anceps subsp. Pterocaulon</i>	(Baker) Thongp.	Rush Lily	Native	Hemerocallidaceae			Perennial	Herb	3			X
<i>Velleia spathulata</i>	R.Br.	Wild Pansies	Native	Goodeniaceae			Perennial	Herb	3			X
<i>Vigna marina</i>	(Burm.) Merr.	Dune Bean	Native	Fabaceae			Perennial	Vine	1			X
<i>Viola hederacea</i>	Labill.	Native Violet	Native	Violaceae			Perennial	Herb	13			X
<i>Westringia eremicola</i>	A.Cunn. ex Benth.	Slender Westringia	Native	Lamiaceae			Perennial	Shrub	1			X
<i>Xanthorrhoea johnsonii</i>	A.T.Lee	Johnson's Grasstree	Native	Xanthorrhoeaceae			Perennial	Rosette Tree	4			X
		Commelina sp	Native	Commelinaceae			Unknown	Herb	15			X
		Acacia	Native	Fabaceae			Unknown	Unknown	8	X		
		Acacia (big seedpod)	Native	Fabaceae			Unknown	Unknown	1	X		
		Acacia (curly seedpod)	Native	Fabaceae			Unknown	Unknown	1	X		
		Acacia (long leaf)	Native	Fabaceae			Unknown	Unknown	2	X		
<i>Eclipta prostrata</i>	(L.) L.	White Eclipta	Naturalised	Asteraceae	WIS		Annual/Perennial	Herb	5			X
<i>Eichhornia crassipes</i>	(Mart.) Solms	Water Hyacinth	Naturalised	Pontederiaceae	WIS		Perennial	Herb	1			X
<i>Enydra fluctuans</i>	Lour.		Naturalised	Asteraceae	WIS		Perennial	Herb	2			X
<i>Ludwigia longifolia</i>	(DC.) H. Hara	Long-leaved Willow Primrose	Naturalised	Onagraceae	WIS		Annual/Perennial	Shrub	3		X	X
<i>Paspalum distichum</i>	L.	Water Couch	Naturalised	Poaceae	WIS		Perennial	Grass	23			X
<i>Ageratum houstonianum</i>	Mill.	Billy Goat Weed	Naturalised	Asteraceae			Annual	Herb	17			X
<i>Ambrosia artemisiifolia</i>	L.	Annual Ragweed	Naturalised	Asteraceae			Annual	Herb	1			X
<i>Asclepias curassavica</i>	L.	Redhead Cotton Bush	Naturalised	Apocynaceae			Perennial	Small shrub	1			X
<i>Asparagus africanus</i>	Lam.	Asparagus Fern	Naturalised	Asparagaceae			Perennial	Herb	4			X
<i>Baccharis halimifolia</i>	L.	Groundsel	Naturalised	Asteraceae			Perennial	Small shrub	3		X	X
<i>Bidens pilosa</i>	L.	Cobblers Pegs	Naturalised	Asteraceae			Annual	Herb	8			X
<i>Calyptocarpus vialis</i>	Less.	Creeping Cinderella Weed	Naturalised	Asteraceae			Annual/Perennial	Herb	1			X
<i>Celtis sinensis</i>	Pers.	Chinese elm	Naturalised	Ulmaceae			Perennial	Tree	1	X		
<i>Colocasia esculenta</i>	(L.) Schott	Taro	Naturalised	Araceae			Perennial	Herb	1			X

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<i>Corymbia torelliana</i>	(F.Muell.) K.D.Hill & L.A.S.Johnson	Cadaghi	Naturalised	Myrtaceae			Perennial	Tree	1	X		
<i>Cyperus brevifolius</i>	(Rottb.) Endl. ex Hassk.	Mullumbimby couch	Naturalised	Cyperaceae			Perennial	Sedge	1			X
<i>Cyperus compressus</i>	L.	Cyperus compressus	Naturalised	Cyperaceae			Annual	Sedge	4			X
<i>Digitaria ciliaris</i>	(Retz.) Koeler	Summer Grass	Naturalised	Poaceae			Annual	Grass	3			X
<i>Digitaria didactyla</i>	Willd.	Queensland Blue Couch	Naturalised	Poaceae			Perennial	Grass	1			X
<i>Dyschoriste depressa</i>	(L.) Nees	Dyschoriste	Naturalised	Acanthaceae			Perennial	Herb	3			X
<i>Eragrostis mexicana</i>	(Hornem.) Link	Mexican Lovegrass	Naturalised	Poaceae			Annual	Grass	1			X
<i>Euphorbia prostrata</i>	Aiton	Red Caustic Weed	Naturalised	Euphorbiaceae			Annual	Herb	1			X
<i>Gamochaeta pensylvanica</i>	(Willd.) Cabrera	Cudweed	Naturalised	Asteraceae			Annual	Herb	1			X
<i>Gomphocarpus physocarpus</i>	E.Mey.	BallOon Cotton Vine	Naturalised	Apocynaceae			Perennial	Small shrub	7		X	X
<i>Ipomoea cairica</i>	(L.) Sweet	Mile-a-minute	Naturalised	Convolvulaceae			Perennial	Vine	17			X
<i>Lantana camara</i>	L.	Lantana	Naturalised	Verbenaceae			Perennial	Shrub	14		X	X
<i>Lotononis bainesii</i>	Baker	Lotononis	Naturalised	Fabaceae			Perennial	Herb	1			X
<i>Ochna serrulata</i>	(Hochst.) Walp.	Ochna	Naturalised	Ochnaceae			Perennial	Shrub	2		X	
<i>Paspalum conjugatum</i>	P.J.Bergius	2 pronged grass	Naturalised	Poaceae			Perennial	Grass	1			X
<i>Passiflora suberosa</i>	L.	Corky Passionflower	Naturalised	Passifloraceae			Perennial	Vine	4			X
<i>Polygala paniculata</i>	L.		Naturalised	Polygalaceae			Annual	Herb	3			X
<i>Rivina humilis</i>	L.	Coral Berry	Naturalised	Phytolaccaceae			Perennial	Herb	2			X
<i>Rumex sp.</i>		Dock	Naturalised	Polygonaceae			Annual/Perennial	Herb	1			X
<i>Schefflera actinophylla</i>	(Endl.) Harms	Umbrella Tree	Naturalised	Araliaceae			Perennial	Tree	1	X		
<i>Schinus terebinthifolius</i>	Raddi	Broad-leaved Pepper	Naturalised	Anacardiaceae			Perennial	Tree	2	X		
<i>Senecio madagascariensis</i>	Poir.	Fireweed	Naturalised	Asteraceae			Annual	Herb	7			X
<i>Senecio sp.</i>			Naturalised	Asteraceae			Annual/Perennial	Herb	3			X
<i>Senna pendula var. glabrata</i>	(Vogel) H.S.Irwin & Barneby	Easter Cassia	Naturalised	Caesalpiaceae			Perennial	Shrub	5	X	X	
<i>Sida cordifolia</i>	L.	Flannel Weed	Naturalised	Malvaceae			Perennial	Herb	1			X
<i>Solanum chrysotrichum</i>	Schlttdl.	Devils Fig	Naturalised	Solanaceae			Perennial	Shrub	1	X		
<i>Solanum lycopersicum var. cerasiforme</i>	(Alef.) Voss	Cherry Tomatoes	Naturalised	Solanaceae			Annual/Perennial	Herb	1			X
<i>Solanum pseudocapsicum</i>	L.	Maderia Winter	Naturalised	Solanaceae			Perennial	Small shrub	1			X
<i>Solanum seafortianum</i>	Andrews	Brazilian Nightshade	Naturalised	Solanaceae			Perennial	Vine	7		X	X
<i>Sorghum halepense</i>	(L.) Pers.	Johnson grass	Naturalised	Poaceae			Perennial	Grass	3			X
<i>Sphagneticola trilobata</i>	(L.) Pruski	Singapore Daisy	Naturalised	Asteraceae			Perennial	Herb	2			X
<i>Verbena bonariensis</i>	L.	Purple Top	Naturalised	Verbenaceae			Perennial	Herb	3			X
		asteraceae	Unknown	Asteraceae			Unknown	Unknown	2			X
		Fern	Unknown				Unknown	Fern	4		X	X
		Rats tail grass	Unknown				Unknown	Grass	4			X
		grass 1	Unknown				Unknown	Grass	3			X
		Paspalum	Unknown				Unknown	Grass	3			X
		unknown forb	Unknown				Unknown	Herb	3			X
		sedge 1	Unknown				Unknown	Sedge	3			X
		Moustache	Unknown				Unknown	Unknown	3			X
		two Leaf	Unknown				Unknown	Unknown	3			X
		grass 2	Unknown				Unknown	Grass	2			X
		3 leaf creeper	Unknown				Unknown	Herb	2			X
		daisy	Unknown				Unknown	Herb	2			X

Species scientific name	Scientific authority	Species common name	Native status	Family	Wetland status	NCA status	Lifespan	Growth habit	Number of sites	Trees	Shrubs	Ground cover
		purple asteraceae	Unknown				Unknown	Herb	2			X
		Yellow daisy	Unknown				Unknown	Herb	2			X
		red stem	Unknown				Unknown	Small shrub	2			X
		sml spiky leaf	Unknown				Unknown	Small shrub	2			X
		Thick sml leaf	Unknown				Unknown	Small shrub	2			X
		paddle leaf	Unknown				Unknown	Unknown	2			X
		lobed fern	Unknown				Unknown	Fern	1			X
		rounded fern	Unknown				Unknown	Fern	1			X
		3 spike grass	Unknown				Unknown	Grass	1			X
		fluffy stem grass	Unknown				Unknown	Grass	1			X
		grass (sml groundcover)	Unknown				Unknown	Grass	1			X
		puffball grass	Unknown				Unknown	Grass	1			X
		purple grass	Unknown				Unknown	Grass	1			X
		Sword grass	Unknown				Unknown	Grass	1			X
		tall 3 spike grass	Unknown				Unknown	Grass	1			X
		tall grass	Unknown				Unknown	Grass	1			X
		3 leaf forb	Unknown				Unknown	Herb	1			X
		3 leaf hairy stem	Unknown				Unknown	Herb	1			X
		Pink flower	Unknown				Unknown	Herb	1			X
		prickly pea	Unknown				Unknown	Herb	1			X
		Purple weed	Unknown				Unknown	Herb	1			X
		queen of hearts	Unknown				Unknown	Herb	1			X
		weed 1	Unknown				Unknown	Herb	1			X
		weed flower	Unknown				Unknown	Herb	1			X
		white flower spiky daisy	Unknown				Unknown	Herb	1			X
		Yellow guinea	Unknown				Unknown	Herb	1			X
		big seed sedge	Unknown				Unknown	Sedge	1			X
		flat sedge	Unknown				Unknown	Sedge	1			X
		sml rice sedge	Unknown				Unknown	Sedge	1			X
		five leaf vine	Unknown				Unknown	Vine	1			X
		rubarb vine	Unknown				Unknown	Vine	1			X
		moss	Unknown				Unknown	Unknown	1			X
		purple flower shrub	Unknown				Unknown	Unknown	1			X
		tri leaf	Unknown				Unknown	Unknown	1			X
		tri spade vine	Unknown				Unknown	Unknown	1			X
		Myrtle long leaf	Unknown				Unknown	Tree	1	X		
		rainforest tree	Unknown				Unknown	Tree	1	X		
		red stem (yellow flower)	Unknown				Unknown	Unknown			X	
		skinny leaf	Unknown				Unknown	Tree	1	X		
		smooth brown bark	Unknown				Unknown	Tree	1	X		
		Snake skin bark gumnut	Unknown				Unknown	Unknown	3	X		
		spiky bark	Unknown				Unknown	Unknown	1	X		
		stringy bark	Unknown				Unknown	Unknown	3	X		
		UID tree	Unknown				Unknown	Tree	1	X		
		pig tailed sedge	Unknown				Unknown	Sedge	1		X	
		shagy pea vine	Unknown				Unknown	Vine	1		X	
		Euc sp	Unknown				Unknown	Tree	5	X		
		flakey gum	Unknown				Unknown	Tree	2	X		
		Black trunk	Unknown				Unknown	Tree	1	X		
		Cheap leather	Unknown				Unknown	Tree	1	X		
		Euc (brown stringy bark)	Unknown				Unknown	Tree	1	X		
		Euc (cragy brown)	Unknown				Unknown	Tree	1	X		
		Euc (dark rough bark)	Unknown				Unknown	Tree	1	X		

Species scientific name	Scientific authority	Species common name	Native status	Family	Wetland status	NCA status	Lifespan	Growth habit	Number of sites	Trees	Shrubs	Ground cover
		Eucalyptus	Unknown				Unknown	Tree	1	X		
		Patchwork tree	Unknown				Unknown	Tree	1	X		

**Table S2. Summary table of explanatory variables used for redundancy analysis showing data summary (mean, minimum, maximum and standard deviation) for continuous variables, interset correlation to each significant axis and the amount of variation explained by each variable ( $r^2$ )**

Variables in bold are significantly correlated with the ordination distribution at  $\alpha = 0.05$ . Where cells are empty, variable not used to describe the ordination distribution

Variable	Mean	Minimum	Maximum	s.d.	Structural Variables PCA			Explained variation ( $r^2$ )	P-value
					Correlation				
					Axis 1	Axis 2	Axis 3		
Longitude	153.02	152.66	153.26	0.19	-0.09	0.126	0.105	.	.
Latitude	-26.83	-27.78	-25.34	0.96	0.242	0.024	-0.022	.	.
Annual rainfall (mm)	1194.52	872.1	1676.6	261.85	<b>0.505</b>	<b>0.231</b>	<b>0.167</b>	<b>0.044</b>	<b>0.002</b>
Elevation (m)	9.16	1.15	27.87	7.93	0.16	-0.241	-0.147	.	.
Soil pH	4.85	3.78	7.51	0.58	<b>0.147</b>	<b>-0.33</b>	<b>-0.018</b>	<b>0.163</b>	<b>0.01</b>
Soil salinity (EC)	275.06	15.59	1490	2.26	<b>-0.26</b>	<b>-0.528</b>	<b>-0.178</b>	<b>0.144</b>	<b>0.002</b>
Conservation area (percentage area within 100-m buffer)	50.93	0	100	41.82	0.299	-0.026	0.269	.	.
Intensive land use area (percentage area within 100-m buffer)	22.68	0	100	33.7	-0.093	-0.048	0.002	.	.
Agricultural production area (percentage area within 100-m buffer)	13.22	0	100	27.89	-0.152	0.01	-0.089	.	.
<b>SLR 1</b>	.	.	.	.	<b>-0.453</b>	<b>0.362</b>	<b>0.093</b>	<b>0.088</b>	<b>0.002</b>
Fire disturbance 1	.	.	.	.	-0.006	0.141	-0.47	.	.
Fire disturbance 2	.	.	.	.	0.027	0.052	-0.072	.	.
Other disturbance 1	.	.	.	.	0.0377	-0.331	0.044	.	.
<b>Dry soil</b>	.	.	.	.	<b>0.024</b>	<b>-0.083</b>	<b>-0.392</b>	<b>0.12</b>	<b>0.004</b>
<b>Inundated soil</b>	.	.	.	.	<b>-0.054</b>	<b>0.176</b>	<b>0.526</b>	.	.
<b>Waterlogged soil</b>	.	.	.	.	<b>0.157</b>	<b>0.084</b>	<b>0.123</b>	.	.
Surface GDE	.	.	.	.	0.121	0.26	0.218	.	.
Terrestrial GDE	.	.	.	.	-0.173	-0.152	0.011	.	.
Other disturbance 2	.	.	.	.	-0.048	-0.052	-0.073	.	.
Average height (m)	8.94	3.42	20.71	2.91	.	.	.	.	.
<b>Stem density (stems ha<sup>-1</sup>)</b>	1708.33	0	3600	963.27	.	.	.	.	.
<b>Basal area</b>	118.37	0	540	113.22	.	.	.	.	.
Shrubiness	36.63	0	404.2	60.52	.	.	.	.	.
Canopy cover (%)	62.9	0.05	98.96	35.01	.	.	.	.	.
<i>Melaleuca quinquenervia</i>	6.27	0	31	7.86	.	.	.	.	.
<i>Lophostemon suaveolens</i>	1.83	0	12	3.11	.	.	.	.	.
<i>Casuarina glauca</i>	1.13	0	21	3.86	.	.	.	.	.
<i>Melaleuca linariifolia</i>	1.08	0	18	3.43	.	.	.	.	.
<i>Eucalyptus tereticornis</i>	0.77	0	5	1.16	.	.	.	.	.
<i>Alphitonia excelsa</i>	0.67	0	14	2.06	.	.	.	.	.
<i>Melaleuca irbyana</i>	0.58	0	18	2.77	.	.	.	.	.
Acacia spp.	0.52	0	11	1.86	.	.	.	.	.
Dead trees	0.48	0	7	1.31	.	.	.	.	.
<i>Acacia concurrens</i>	0.48	0	13	1.93	.	.	.	.	.



Variable	Understorey Species Cover PCA				Explained variation ( $r^2$ )	P-value	Tree species abundance PCA		Explained variation ( $r^2$ )	P-value
	Correlation coefficient						Correlation coefficient			
	Axis 1	Axis 2	Axis 3	Axis 4			Axis 1	Axis 2		
Longitude	<b>-0.179</b>	<b>0.141</b>	<b>0.584</b>	<b>0.128</b>	<b>0.089</b>	<b>0.002</b>	-0.08	-0.12	.	.
Latitude	0.017	-0.319	-0.527	-0.156			-0.13	-0.02	.	.
Annual rainfall (mm)	-0.4	-0.53	0.161	0.162			<b>-0.46</b>	<b>-0.21</b>	<b>0.134</b>	<b>0.002</b>
Elevation (m)	0.384	-0.045	0.216	0.093			<b>0.34</b>	<b>-0.16</b>	<b>0.147</b>	<b>0.026</b>
Soil pH	0.188	0.05	-0.121	-0.029			0.24	0.08	.	.
Soil salinity (EC)	<b>0.503</b>	<b>0.463</b>	<b>0.11</b>	<b>0.209</b>	<b>0.029</b>	<b>0.002</b>	<b>0.49</b>	<b>0.13</b>	.	.
Conservation area (percentage area within 100-m buffer)	-0.11	-0.228	-0.266	-0.17			-0.13	-0.03	.	.
Intensive land use area (percentage area within 100-m buffer)	0.007	0.259	0.189	0.17			0.004	-0.007	.	.
Agricultural production area (percentage area within 100-m buffer)	0.041	0.162	0.179	-0.095			-0.029	0.001	.	.
<b>SLR 1</b>	<b>-0.335</b>	<b>0.317</b>	<b>0.077</b>	<b>-0.346</b>	<b>0.074</b>	<b>0.002</b>	-0.34	0.13	.	.
Fire disturbance 1	0.172	-0.037	-0.227	-0.283	.	.	-0.008	-0.21	.	.
Fire disturbance 2	-0.163	-0.11	-0.163	-0.094	.	.	-0.31	0.09	.	.
Other disturbance 1	0.093	0.122	0.063	-0.041	.	.	<b>0.13</b>	<b>-0.11</b>	<b>0.117</b>	<b>0.028</b>
<b>Dry soil</b>	0.415	-0.043	0.301	0.059	.	.	<b>0.48</b>	<b>-0.05</b>	<b>0.099</b>	<b>0.04</b>
<b>Inundated soil</b>	-0.318	0.069	0.046	0.069	.	.	-0.25	0.09	.	.
<b>Waterlogged soil</b>	-0.257	-0.101	-0.117	0.165	.	.	-0.08	0.08	.	.
Surface GDE	<b>-0.533</b>	<b>-0.214</b>	<b>-0.048</b>	<b>-0.087</b>	<b>0.145</b>	<b>0.04</b>	<b>-0.58</b>	<b>0.17</b>	<b>0.079</b>	<b>0.002</b>
Terrestrial GDE	<b>0.148</b>	<b>0.274</b>	<b>0.259</b>	<b>0.146</b>	.	.	0.11	-0.01	.	.
Other disturbance 2	<b>0.239</b>	<b>0.086</b>	<b>0.34</b>	<b>-0.037</b>	.	.	0.13	-0.31	.	.
Average height (m)	-0.052	0.052	0.163	0.052	.	.	.	.	.	.
<b>Stem density (stems ha<sup>-1</sup>)</b>	<b>0.231</b>	<b>0.543</b>	<b>-0.213</b>	<b>0.105</b>	<b>0.116</b>	<b>0.002</b>	.	.	.	.
<b>Basal area</b>	-0.155	0.342	0.127	-0.255	.	.	.	.	.	.
Shrubiness	0.029	-0.153	-0.249	0.288	.	.	.	.	.	.
Canopy Cover (%)	0.198	0.001	0.048	-0.097	.	.	.	.	.	.
<b>Melaleuca quinquenervia</b>	<b>-0.512</b>	<b>0.337</b>	<b>-0.226</b>	<b>-0.025</b>	<b>0.101</b>	<b>0.002</b>	.	.	.	.
<i>Lophostemon suaveolens</i>	<b>-0.056</b>	<b>0.303</b>	<b>-0.017</b>	<b>0.465</b>	<b>0.127</b>	<b>0.002</b>	.	.	.	.
<i>Casuarina glauca</i>	0.249	0.074	0.074	0.032	.	.	.	.	.	.
<i>Melaleuca linariifolia</i>	<b>0.011</b>	<b>0.203</b>	<b>-0.153</b>	<b>0.1</b>	<b>0.137</b>	<b>0.01</b>	.	.	.	.
<i>Eucalyptus tereticornis</i>	0.283	0.351	-0.083	0.193	.	.	.	.	.	.
<i>Alphitonia excelsa</i>	0.479	-0.011	-0.243	-0.023	.	.	.	.	.	.
<i>Melaleuca irbyana</i>	0.377	0.0172	-0.117	-0.192	.	.	.	.	.	.
Acacia spp.	0.179	0.115	0.021	0.054	.	.	.	.	.	.
Dead trees	0.204	-0.009	-0.334	0.124	.	.	.	.	.	.
<i>Acacia concurrens</i>	0.327	0.053	0.139	-0.037	.	.	.	.	.	.

## Reference

Brown, G. K., and Bostock, P. D. (2019). Census of the Queensland flora 2019. (Queensland Department of Environment and Science: Brisbane, Qld, Australia.) Available at <https://www.data.qld.gov.au/dataset/census-of-the-queensland-flora-2019>