

VEGETATED WETLAND

tree

VEGETATION TYPE 9

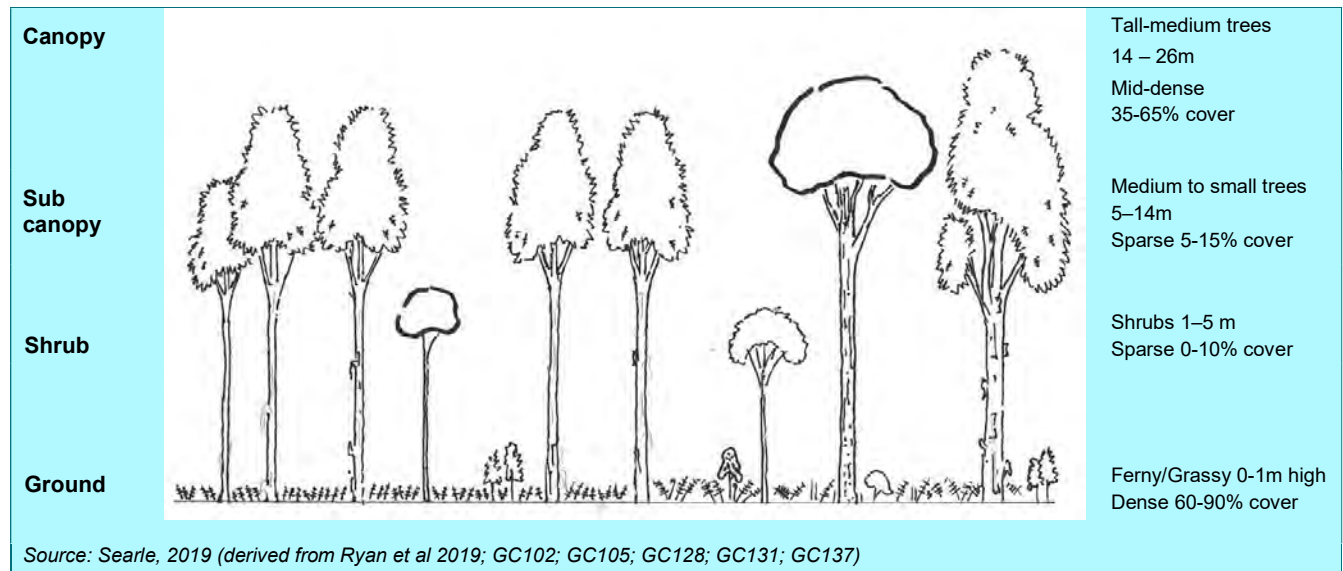
Regional Ecosystem: 12.3.5

Broad-leaved Paperbark (*Melaleuca quinquenervia*) Woodland to Open Forest on Alluvium



COMMUNITY STRUCTURE

This vegetation type is an woodland to open forest characterised by a canopy in which Broad-leaved Paperbark (*Melaleuca quinquenervia*) is the dominant species, 14m to 26m high. Low numbers of Swamp Box (*Lophostemon suaveolens*), Forest Red Gum (*Eucalyptus tereticornis*) and other species may also be present. This community occurs in low-lying areas which are often very wet, with standing water occurring for much of the year, and can be described as vegetated swamps.



The lower tree and shrub layers are typically sparse, and Broad-leaved Paperbark is often the most common tree, and often occurs as mono-specific stands, or nearly so. The ground cover is typically dense, often with Swamp Water Fern (*Blechnum indicum*) as the conspicuous component, although a variety of ferns, sedges, grasses and rushes often also occur.

Characteristic plant species

Approximately **90** native plants species have been recorded for this vegetation type. Characteristic plant species for this vegetation type are listed below. Dominant (most numerous) species are shaded. Plants in blue text are listed as [Wetland Indicator Species](#) in DES Flora Wetland Indicator Species List and are adapted to and dependent on wetlands.



Indicates species is a preferred koala food tree*



Indicates species is a Glossy Black-Cockatoo feed tree species



Indicates species is a City-wide significant species

* It is noted that in addition to preferred food trees, koalas utilise a range of eucalypt and non-eucalypt tree species for supplemental feeding and other uses such as shelter. These other species are also important and necessary features of koala habitat.

CANOPY

Upper layer of vegetation exposed to sunlight which creates a canopy that shades lower layers



Broad-leaved Paperbark
Melaleuca quinquenervia



Tera Ark ©



Swamp Box
Lophostemon suaveolens



Forest Red Gum / Queensland Blue Gum
Eucalyptus tereticornis

SUB-CANOPY

Tree layer below canopy



Broad-leaved Paperbark
Melaleuca quinquenervia



Swamp Box
Lophostemon suaveolens



Umbrella Cheese Tree
Glochidion sumatranum

SUB-CANOPY

Tree layer below canopy



Brush Cherry
Syzygium australe



Flax-leaved Paperbark
Melaleuca linariifolia



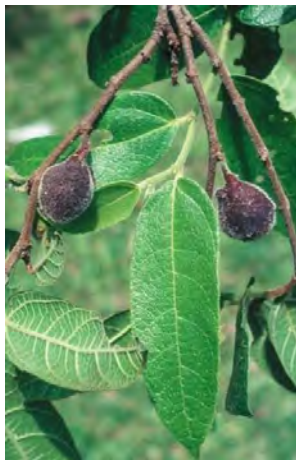
Pink Doughwood
Melicope elleryana



Lilly Pilly
Syzygium smithii
(also known as *Acmena smithii*)

SHRUB LAYER

Middle layer of vegetation usually made up of small trees and woody shrubs



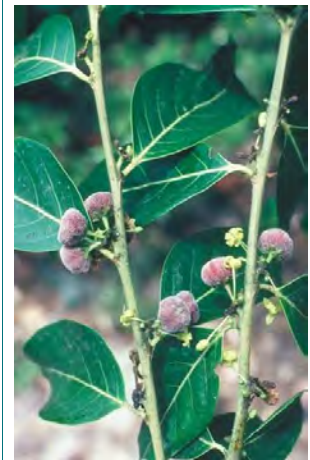
Creek Sandpaper Fig
Ficus coronata



Swamp Hibiscus
Hibiscus diversifolius



Broad-leaved Paperbark
Melaleuca quinquenervia



Umbrella Cheese Tree
Glochidion sumatranum

GROUND LAYER AND VINES

Lowest layer of vegetation. Plant types can include grasses; graminoids (non-woody plants with a grass-like morphology); ferns; forbs (non-woody, broad-leaved, flowering plants) and vines (where present) may extend upwards into the canopy.



Harsh Ground Fern
Hypolepis muelleri
FERN



A Smartweed
Persicaria dichotoma
FORB (CREEPING)



Common Reed
Phragmites australis
GRASS



Swamp Shield-fern
Cyclosorus interruptus
FERN



Swamp Ricegrass
Leersia hexandra
GRASS



Swamp Water Fern
Blechnum indicum
FERN



Jointed Twig-rush
Baumea articulata
GRAMINOID (SEDGE)



Narrow-leaved Cumbungi
Typha domingensis
GRAMINOID (RUSH)



Blady Grass
Imperata cylindrica
GRASS




Common Silkpod
Parsonsia straminea
VINE (CLIMBING)

City-wide significant plant species



The City of Gold Coast recognises species which are locally significant as City-wide significant (CWS) species. These species are important because they may be threatened, restricted to the Gold Coast, or at the edge of their geographic range. In addition to characteristic species identified above as CWS species, the following CWS plant species may also be present in this vegetation type.

	
<p>Palm Lily <i>Cordyline congesta</i> PALM</p>	<p>Cabbage Tree Palm <i>Livistona australis</i> PALM</p>

OCCURRENCE

Native plants occur in vegetation communities, which are consistently associated with a particular soil type, landform (shape of the land, e.g. hills or plains) aspect (position on a slope in relation to the sun) and climate.

This vegetation type occurs on broad lower floodplains close to the coast. Previously occurring over large tracts of the coastal lowlands including Staplyton, Alberton, Gilberton, Norwell, Pimpama, East Coomera, Hope Island Coombabah, Southport, Labrador, Ashmore, Carrara, Varsity Lakes, Burleigh Waters and Tugun, it has now been extensively cleared for growing sugar cane, canals and other urban development. It typically occurs on deep fertile, sandy to clay soils with good moisture and organic content. This vegetation type forms swamps on the lowest-lying portions of the coastal floodplain, and often occurs as a mosaic with VT8 (Broad-leaved Paperbark/Forest Red Gum/Swamp Box open forest), which occurs on slightly higher areas of the coastal floodplain.

Historic distribution of Vegetation Type 9



LEGEND

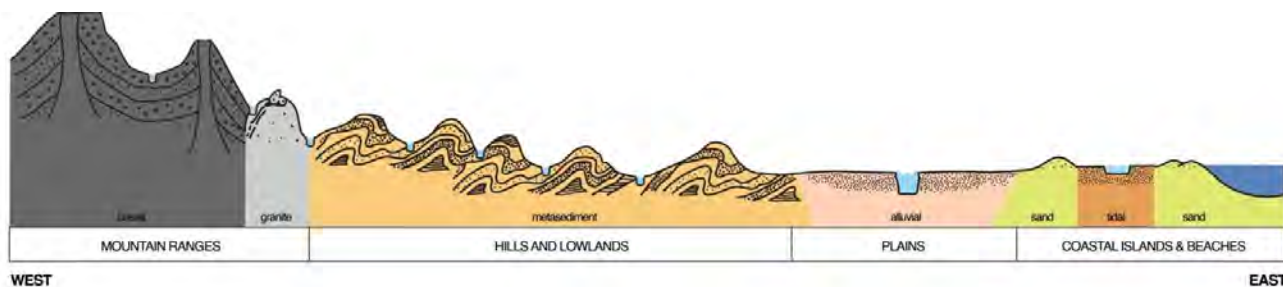
Vegetation Type 9 Ocean Major Waterways

COMMON LANDFORMS AND GEOLOGY OF THE GOLD COAST

	LAND FORM	GEOLOGY (soils and rocks)	AGE
	Tidal flats and beaches (subject to tidal inundation)	Water logged, saline muds, clays and sands	Youngest
	Coastal dunes (not subject to tidal inundation)	Dunes and beach ridges (sands)	
	Flood plains, river and creek flats	Alluvial soils (soils moved or shaped by water)	
	Level or gently undulating plains	Sandy or loamy soils	
	Mountain ranges, hills, lowlands and coastal headlands	Basalt (volcanic) rocks	
	Undulating	Sedimentary rocks	
	Mountain ranges, hills and lowlands	Metasediment rocks*	
	Mountain ranges, hills, lowlands and coastal headlands	Granite (volcanic) rocks	Oldest

Conceptual cross section of Gold Coast

Showing typical location of most common geology and land forms (concept only, not to scale)



* Metasediment rocks

The most common underlying geology on the Gold Coast is metasediment rocks. Metasediment rocks are a type of metamorphic rock (rock transformed by heat and pressure). Originally these rocks were sedimentary rocks which were formed on the ocean floor through the deposition and solidification of sediment. These sedimentary rocks were subsequently buried underneath other rocks and subjected to high pressures and temperatures, causing the rock to recrystallize. This recrystallization process is known as metamorphism, hence the term metamorphic rocks. About 300 million years ago these metamorphic rocks were pushed upward by geologic processes, creating much of the ranges, hills and lowlands on the Gold Coast.

2017 EXTENT AND CONSERVATION STATUS

Gold Coast

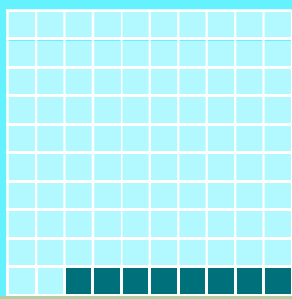
Historically, a wide spread swamp forest but little (8%) of it remains. The 2017 extent* of this vegetation type on the Gold Coast was 329 hectares.

1 HECTARE (HA) = 2.46 ACRES \approx THE SIZE OF AN INTERNATIONAL RUGBY FIELD

EXTENT (ha)

Historic
4,083ha

2017*
329ha
8% of
historical
extent



* Extent as mapped in 2017. Includes remnant vegetation only. Does not include disturbed remnant or regrowth.

Queensland

The conservation status of vegetation in Queensland is specified under the *Vegetation Management Act 1999*, which lists this regional ecosystem (RE 12.3.5) as being 'Least Concern'.

LIKELIHOOD OF BECOMING EXTINCT (in QLD) due to biodiversity loss/degradation

MOST LIKELY		LEAST LIKELY	
Endangered	Of Concern	Least Concern	

USEFUL RESOURCES

City of Gold Coast website: Environmental weeds and invasive plants.

Find out more about regional ecosystems at the Queensland Government Regional Ecosystems webpage.

CREDITS

Content – ngh Environmental and Jason Searle.
Vegetation Type Photo – Lui Weber ©
Unless otherwise noted all other photos – Glenn Leiper ©

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THREATS

This vegetation type previously widespread vegetation type that has been extensively cleared, and is subject to ongoing pressure for clearing for urban development, including ancillary uses such as road and infrastructure corridors, flood detention facilities and general residential and commercial development. It is also a productive and extremely well-watered vegetation type and weeds often infest it, especially in areas where disturbance or fragmentation has opened up the canopy layer. Invasive weeds, including Lantana, Pepper Bush, Camphor Laurel, Groundsel, Bitou Bush and Guinea Grass are common.

Common threats to all vegetation types:

Clearing

Native vegetation is protected by Federal, State and local legislation. However, with increasing population growth in the region, Southeast Queensland is experiencing large amounts of vegetation clearing, particularly in areas designated for urban development. Protecting native vegetation on your property is one of the most beneficial things you can do to protect wildlife and the natural environment.

Weeds

Environmental weeds are the second biggest threat to our natural environment after land clearing. Environmental weeds (introduced plants that have naturalised and are invading our bushland) degrade our natural environment by:

- out competing native plant species for available nutrients and light
- taking over and transforming native landscapes often leading to local plant or animal extinctions and loss of biodiversity
- reducing the availability of food and other resources for many native animals whilst sometimes benefiting pest animals
- increasing the risk of destructive wildfire
- often being toxic to people and animals.

Fire

Very broadly, vegetation types are either adapted to fire or fire sensitive. Fire can become a threat if:

- it extends into vegetation types which should not be burnt e.g. rainforest,
- the frequency and/or intensity of the fire is too high, and/or
- the area burnt is too large.

Grazing

The grazing of animals like cattle, horses, goats and feral animals such as deer can cause trampling or loss of diversity of seedlings and compact soil, preventing natural regeneration.

Collecting

Unethical and illegal collection of plant specimens in the wild poses a serious threat to some species, particularly orchids, grass trees and epiphytes.

Climate change

Changes in temperature and rainfall can have significant effects on our city's vegetation. For example, without consistent rainfall, areas become drier, potentially resulting in higher fire frequency and/or intensity, which some plants and vegetation communities won't be able to tolerate. Plants (and animals) need available space to migrate as conditions change, with high altitude species at the greatest risk as there is nowhere suitable for them to go. Warmer conditions may also provide the right habitat for a greater variety of weeds. As sea levels rise, salt water moves further upstream and vegetation also becomes inundated.