

# Estuarine Wetland

salt marsh



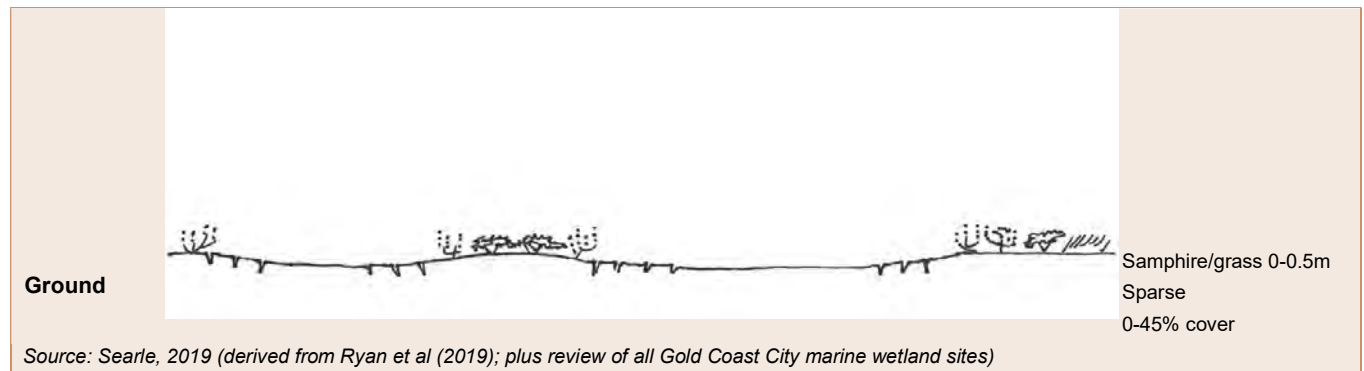
## VEGETATION TYPE 22d

Regional Ecosystem: 12.1.2

Claypan +/- Samphire on Marine Deposits

## COMMUNITY STRUCTURE

Vegetation type (VT) 22d is typically expansive areas of open clay in the intertidal zone, bordering mangroves and other low marine grassland and/or herb field. Small areas of samphire herbfields occur, although these are less than 50% of the total area, typically much less. Despite their low occurrence, small low patches of marine grasses and samphires (*Sporobolus virginicus*, *Sarcocornia quinqueflora*, *Suaeda australis*) may be present. Where present, mangroves are typically isolated and small in size.



# Characteristic plant species

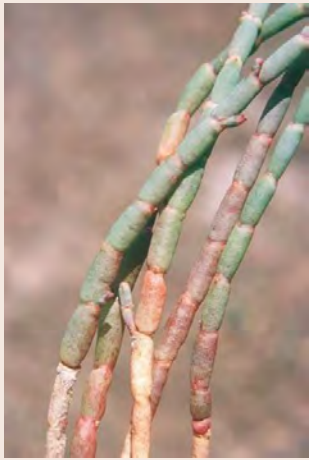
Approximately **32 native plants species** have been recorded for this vegetation type. Characteristic plant species for this vegetation type are listed below. Dominant (most numerous) species are shaded. Plants in blue text are listed as [Wetland Indicator Species](#) in DES Flora Wetland Indicator Species List and are adapted to and dependent on wetlands.



Indicates species is a City-wide significant species

## GROUND LAYER

Marine grasses, graminoids (non-woody plants with a grass-like morphology), forbs (non-woody, broad-leaved, flowering plants) and samphires (succulent, herbaceous plants that grows in high salinity environments).



**Beaded Samphire**  
*Sarcocornia quinqueflora*  
SAMPHIRE



**Saltwater Couch**  
*Sporobolus virginicus*  
GRASS (CREEPING)



**Mangrove Wax-flower Vine**  
*Vincetoxicum carnosum*  
(formerly *Cynanchum carnosum*)  
VINE (TWINING)



**Prickly Couch**  
*Zoysia macrantha*  
GRASS (CREEPING)



**Mangrove Fern**  
*Acrostichum speciosum*  
FERN



**Sea Celery**  
*Apium prostratum*  
FORB



**Bacopa**  
*Bacopa monnieri*  
FORB (CREEPING)



**Coastal Pigface**  
*Carpobrotus glaucescens*  
FORB (CREEPING)



## GROUND LAYER

Marine grasses, graminoids (non-woody plants with a grass-like morphology), forbs (non-woody, broad-leaved, flowering plants) and samphires (succulent, herbaceous plants that grows in high salinity environments).



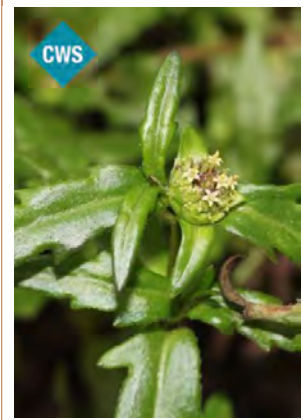
**River Lily**  
*Crinum pedunculatum*  
FORB



**Red Crumbweed**  
*Dysphania littoralis*  
FORB



**Yellow Eclipta**  
*Eclipta platyglossa*  
FORB



**Enydra**  
*Enydra woollsii*  
FORB



**Fuzzy Rush**  
*Fimbristylis polytrichoides*  
GRAMINOID (SEDGE)



**Shield Pennywort**  
*Hydrocotyle verticillata*  
FORB (CREEPING)



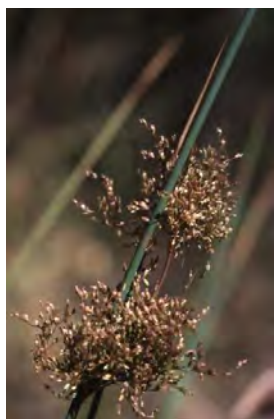
**Goat's Foot Morning Glory Vine**  
*Ipomoea pes-caprae* subsp.  
*brasiliensis*  
VINE (SCAMBLING)



**Swamp Club-rush**  
*Isolepis inundata*  
GRAMINOID (SEDGE)



**Sea Rush**  
*Juncus kraussii*  
GRAMINOID (RUSH)



**Common Rush**  
*Juncus usitatus*  
GRAMINOID (RUSH)



**Common Reed**  
*Phragmites australis*  
GRAMINOID (REED)



**Carpet Weed**  
*Phyla nodiflora*  
FORB

## GROUND LAYER

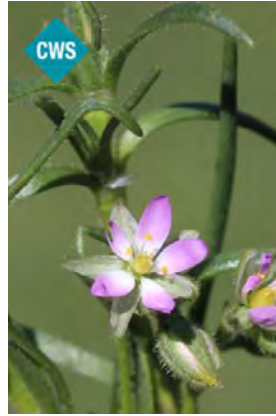
Marine grasses, graminoids (non-woody plants with a grass-like morphology), forbs (non-woody, broad-leaved, flowering plants) and samphires (succulent, herbaceous plants that grows in high salinity environments).



**Creeping Brookweed**  
*Samolus repens*  
FORB



**Sea Purslane**  
*Sesuvium portulacastrum*  
FORB



**Lesser Sea-Spurrey**  
*Spergularia marina*  
FORB



**New Zealand Spinach**  
*Tetragonia tetragonioides*  
FORB

## TREES

Where present: Isolated, generally small growth form



**Swamp Oak**  
*Casuarina glauca*



**Cottonwood**  
*Hibiscus tiliaceus*



**Broad-leaved Paperbark**  
*Melaleuca quinquenervia*



**Coastal Boobialla**  
*Myoporum acuminatum*



## SHRUBS

Where present: Isolated, generally small growth form



**Mangrove Daisy**  
*Wollastonia uniflora*



**Mangrove Boobialla**  
*Myoporum boninense subsp. australe*



**Coastal Vitex**  
*Vitex trifolia var. trifolia*

## 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. Characteristic species which are CWS species are identified above. The following City Wide Significant plant species may be present in this vegetation type.



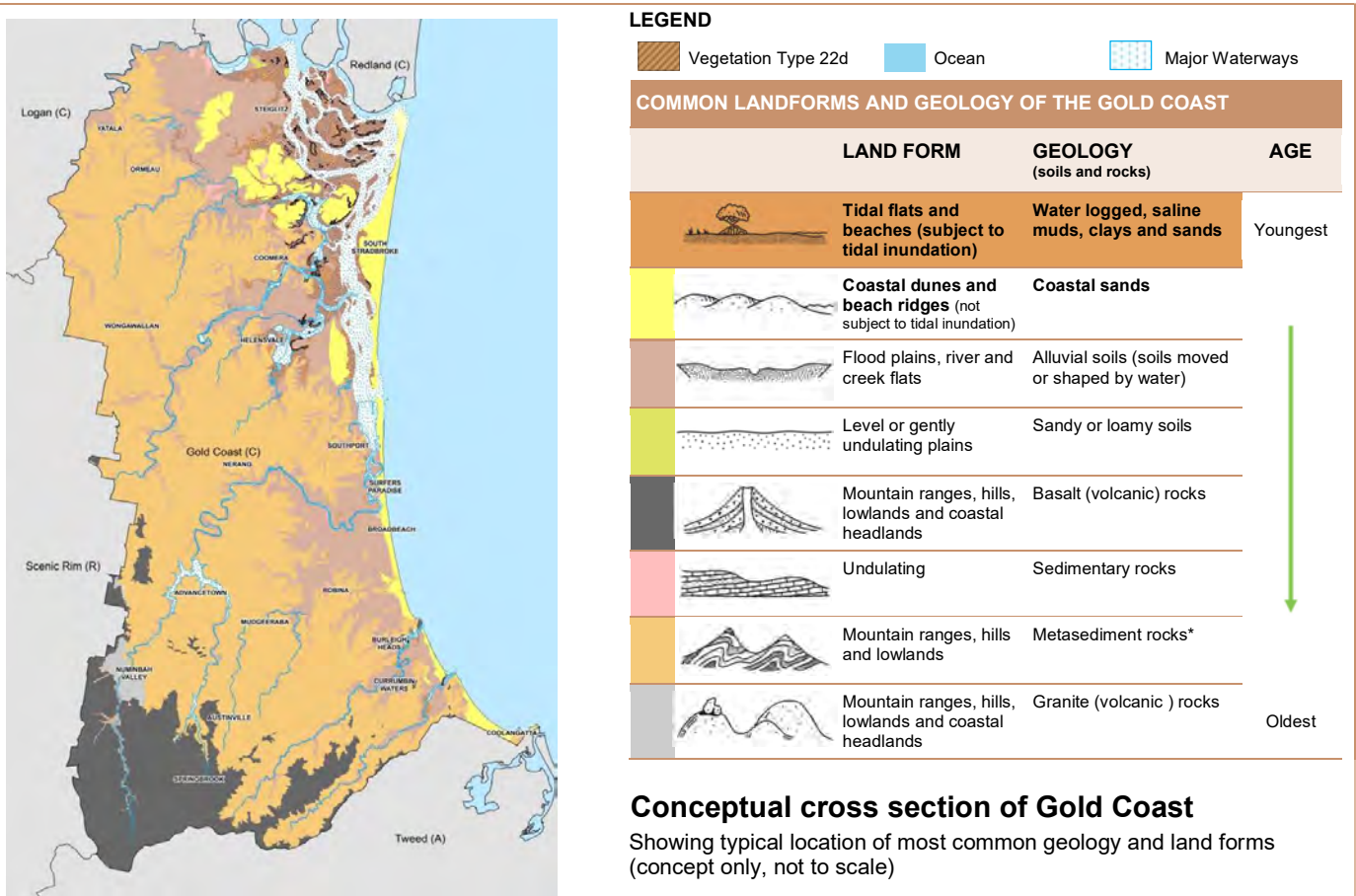
**Pencil Orchid**  
*Dockrillia teretifolia*  
EPIPHYTE

## 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.

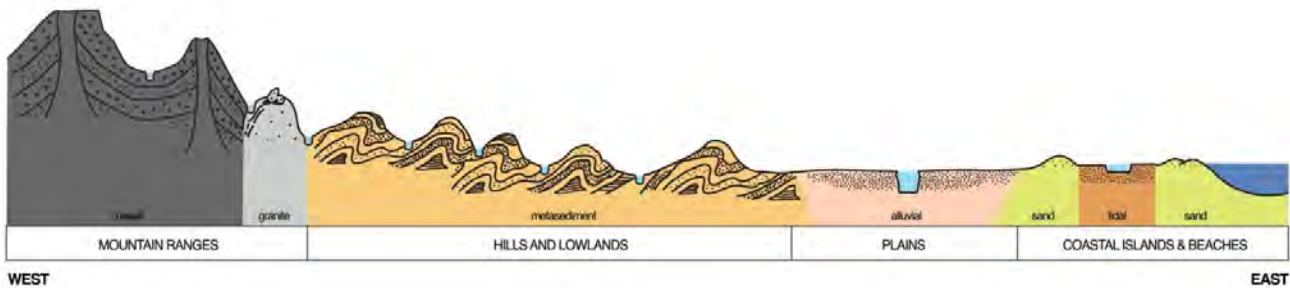
Claypan and/or Samphire vegetation typically occurs on hypersaline areas behind mangroves and below more elevated areas of the marine plain supporting *Sporobolus virginicus* grassland. Not all areas of this mapping unit are mapped, with many areas too small to be differentiated at the scale of vegetation mapping, or otherwise incorporated into the surrounding mangrove and grassland communities. Areas of this mapping unit within the Gold Coast sufficiently large and homogenous to map occur at the Coomera River, Pimpama, Jacobs Well, Rocky Point, and on the Southern Moreton Bay Islands.

## Historic distribution of Vegetation Type 22d



### 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 metamorphosis, 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

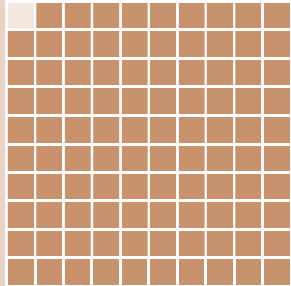
The 2017 extent\* of this vegetation type on the Gold Coast was 495 hectares.

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

#### EXTENT (ha)

Historic  
496a

2017\*  
495 ha  
>99% of  
historical  
extent

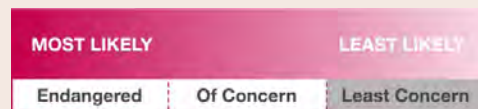


\* Extent as mapped in 2017. Includes remnant vegetation only. Does not include disturbed remnant or regrowth.

### Queensland

The conservation status of vegetation in Queensland is specified under the *Vegetation Management Act 1999*, which lists this regional ecosystem (RE 12.1.2) as being 'Least Concern'.

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



## 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

Claypan and/or Samphire vegetation occurs on marine plains within the upper tidal area of low islands, rivers and estuaries, and is subject to disturbance from storms and other seasonal weather events. Consequently, sea level rise and potential increased erosion associated with increasing and extreme weather events suggests that Climate Change has the potential to significantly impact on this vegetation community. Weeds are generally a low threat to this community, as it occurs in tidal areas.

### 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 is 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.