

# RAINFOREST

littoral

## VEGETATION TYPE 28a

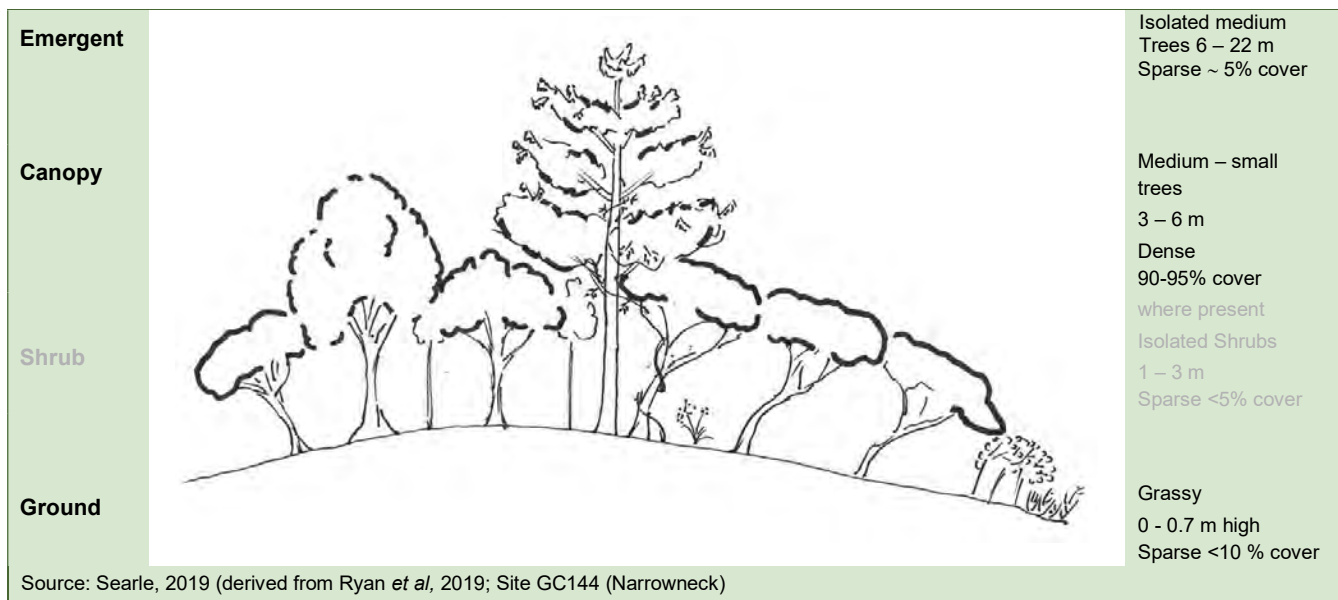
Regional Ecosystem: 12.2.2

Littoral Vine Forest on Coastal Sand



## COMMUNITY STRUCTURE

Littoral rainforest on coastal sand has a low dense closed canopy which is often sheered or distorted by wind on the seaward side. Isolated emergent trees (*Flindersia schottiana*) to 20m rise from the uniform canopy which is from 3m to 6m in height. Tuckeroo (*Cupaniopsis anacardioides*) dominates the canopy which includes other trees (including *Elaeocarpus obovatus*, *Alectryon coriaceus*, *Acronychia imperforata*) and provides 90-95% canopy cover, or shade to underlying plants.



The shrub and ground cover layers are sparse to absent and often restricted to forest margins. Diversity of vine species is relatively low compared to other vine forest vegetation types although vines form thickets in some areas.

## Characteristic plant species

Approximately **55 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.



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.

### EMERGENT

Tallest trees, visible above the canopy



**Cudgerie**

*Flindersia schottiana*

### CANOPY

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



**Tuckeroo**

*Cupaniopsis anacardioides*



**Hard Quandong**

*Elaeocarpus obovatus*



**Coast Canthium**

*Cyclophyllum coprosmoides*



**Beach Acronychia**

*Acronychia imperforata*

## CANOPY

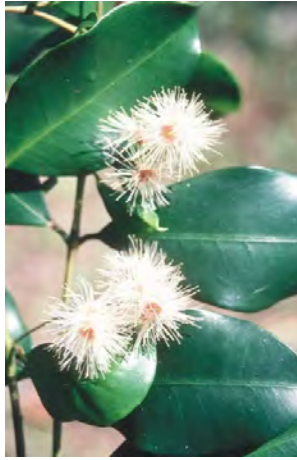
Upper layer of trees exposed to sunlight which creates a canopy that shades lower layers



**Queensland Ebony**  
*Diospyros geminata*



**Beach Alecayon**  
*Alectryon coriaceus*



**Blue Lilly Pilly**  
*Syzygium oleosum*



**Broad-leaved Cherry**  
*Exocarpos latifolius*

## SHRUB LAYER

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



**Sandfly Zieria**  
*Zieria smithii*



**Coffee Bush**  
*Breynia oblongifolia*

## GROUND LAYER

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).



**Queensland Wandering Sailor**  
*Commelina lanceolata*  
FORB (CREEPING)



**Beach Flax Lily**  
*Dianella congesta*  
FORB (CLUMPING)



**a Sedge**  
*Cyperus eglobosus*  
GRAMINOID (SEDGE)



**Graceful / Pademelon Grass**  
*Ottochloa gracillima*  
GRASS

## VINES AND CLIMBERS

Plant species which grow from the ground but use trees or other features for support and often extend upwards into the canopy



**Barbed-wire Vine**  
*Smilax australis*



**Scrambling Lily**  
*Geitonoplesium cymosum*



**Tape Vine**  
*Stephania japonica*

## 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. The following CWS plant species may also be present in this vegetation type.



**Canary Beech**  
*Polyalthia nitidissima*



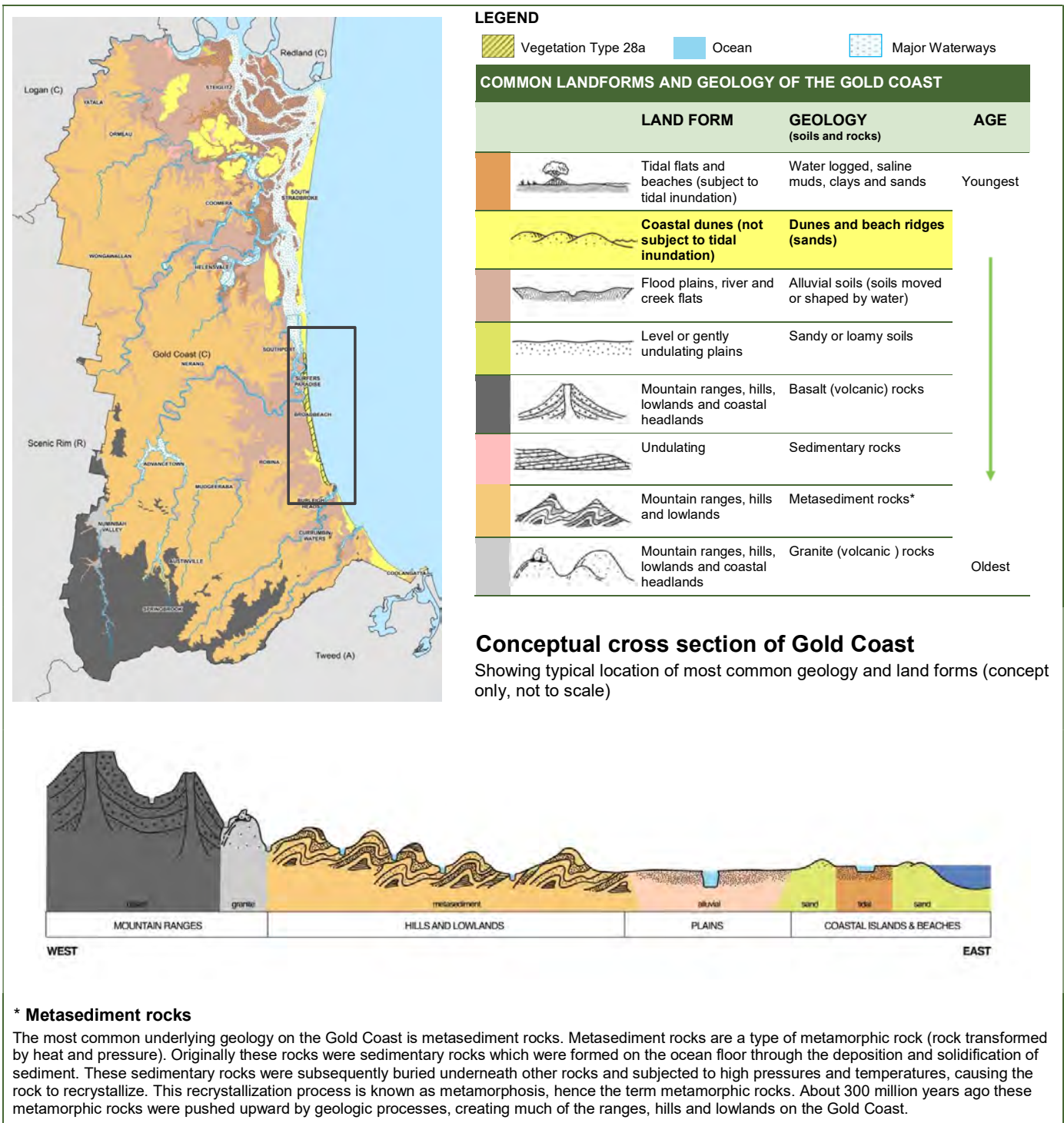
**Scented Acronychia**  
*Acronychia littoralis*

## 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.

Littoral rainforest on coastal sand is restricted to the zone adjoining the shore and occurs on the ridges of coastal sand dunes. This vegetation type previously occurred along much of coastal sand between Burleigh Heads and Southport and is now almost totally cleared for development within the Gold Coast. The largest remaining patch of this vegetation within the Gold Coast is only 0.2 hectares in area and adjoins the coastal walking path at Narrowneck. Isolated vine forest trees also remain along the coastal strip.

## Historic distribution of Vegetation Type 28a



### \* 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

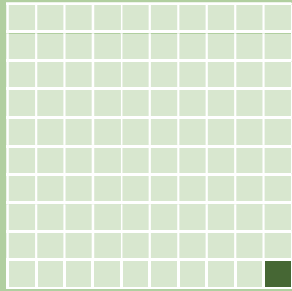
Historically, one of the least common types of rainforest within the Gold Coast. There is very little of this vegetation type remaining. The 2017 extent\* of this vegetation type on the Gold Coast was 4 hectares which means that almost all Littoral Vine Forest on Coastal Sand has been lost on the Gold Coast.

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

#### EXTENT (ha)

Historic  
366ha

2017\*  
4ha  
1% of  
historical  
extent

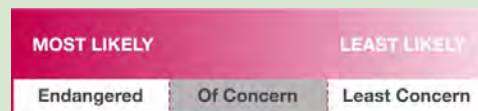


\* Extent as mapped in 2017. Includes remnant vegetation only. Does not include disturbed remnant or regrowth.

### Queensland

The conservation status of vegetation in Queensland is specified under the *Vegetation Management Act 1999*, which lists this regional ecosystem (RE 12.2.2) as being 'Of 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

Littoral vine forest has been largely lost due to land clearing of the coastal strip. Remaining patches and isolated trees remaining for this vegetation occur in a highly developed urban environment and are at continual risk from clearing. This vegetation type is also threatened by fragmentation, exposure to drying winds, fire and weed invasion, and small patches that remain or are replanted require exclusion of these impacts.

### About common threats

#### 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 and creek areas
- the frequency and/or intensity of the fire is too high
- 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.