

RIVERINE

riparian

VEGETATION TYPE 20a

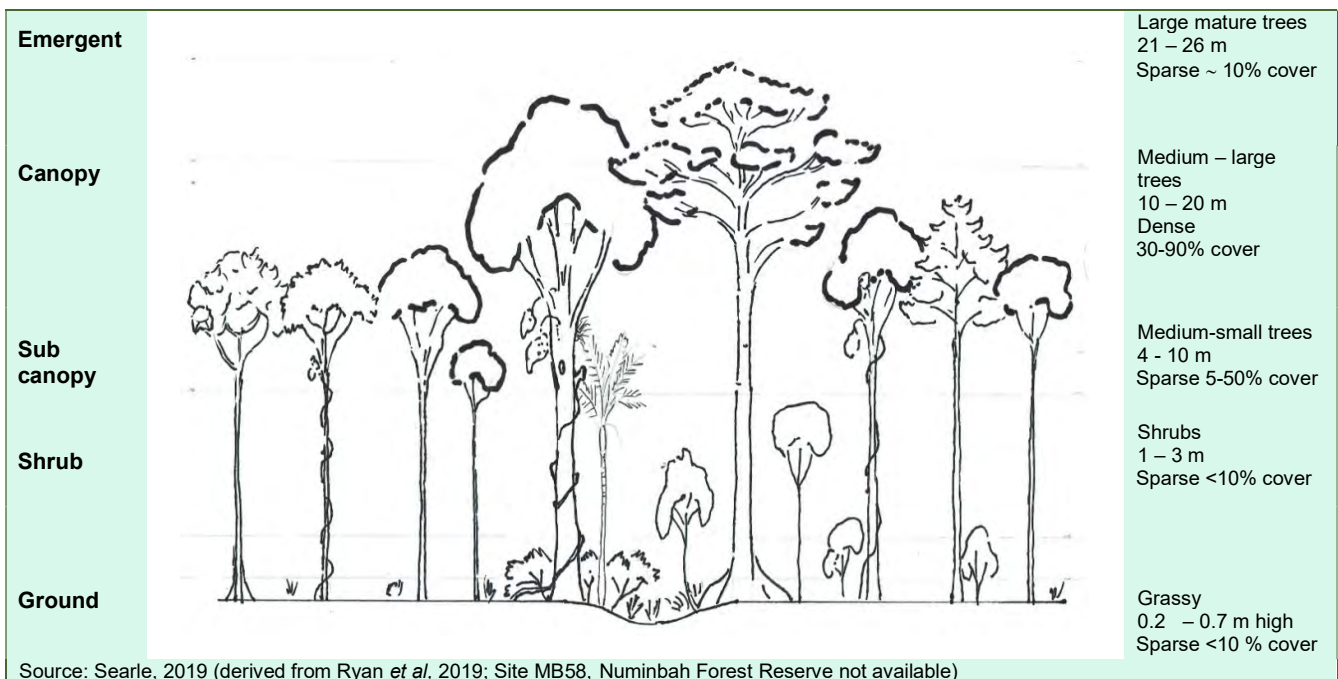
Regional Ecosystem: 12.3.16

Vine Forest on Alluvium



COMMUNITY STRUCTURE

Vegetation Type (VT) 20a is a gallery rainforest (narrow band of closed forest fringing waterways) in gullies and on adjoining creek and river flats, with a dense, closed canopy ranging from 4m- 20m in height, and comprising a diverse mix of rainforest species. Black Bean, Hard Quandong, Brush Box, Native Elm, Turpentine, and Silky Oak (*Castanospermum australe*, *Elaeocarpus obovatus*, *Lophostemon confertus*, *Aphananthe philippinensis* *Syncarpia glomulifera* and *Grevillea robusta*) are common in taller areas, while Grey Myrtle (*Backhousia myrtifolia*) can be dense and dominate the sub-canopy in places. Bangalow Palm (*Archontophoenix cunninghamiana*) can also be locally common. Emergent trees to 25m or more, particularly Blue Quandong (*Elaeocarpus grandis*) and Forest Red Gum (*Eucalyptus tereticornis*) are infrequent except along creek banks. The tree layers typically combine to form a gallery rainforest and provide 90% canopy cover (% shade to underlying plants).



The understorey is generally sparse and heavily shaded, except for vines and patchy shrubs, while Mat-rushes (*Lomandra hystrix*) are often dense along creek channels and banks

Characteristic plant species

Approximately **44 native plants species** have been recorded for this vegetation type. Characteristic plant species 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.

EMERGENT

Isolated Tallest trees, visible above the canopy. Infrequent except along creek banks.



Blue Quandong

Elaeocarpus grandis



Forest Red Gum / Queensland Blue Gum

Eucalyptus tereticornis



CANOPY

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



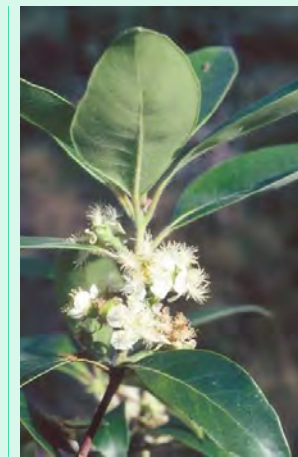
Black Bean

Castanospermum australe



Hard Quandong

Elaeocarpus obovatus



Brush Box

Lophostemon confertus



Rough-leaved Elm

Aphananthe philippinensis

CANOPY

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



Water Gum
Tristaniopsis laurina



Satinwood
Vitex lignum-vitae



Silky Oak
Grevillea robusta



Turpentine
Syncarpia glomulifera

SUB-CANOPY

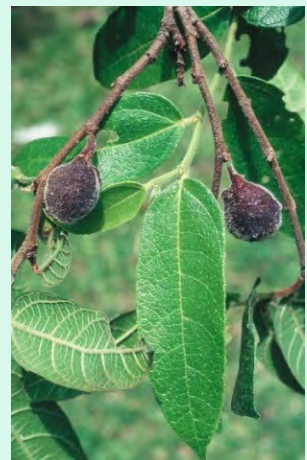
Tree layer below canopy



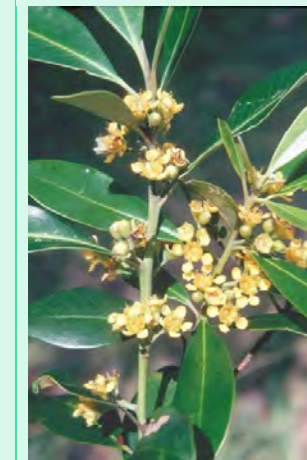
Grey Myrtle
Backhousia myrtifolia



Bangalow Palm
Archontophoenix cunninghamiana



Creek Sandpaper Fig
Ficus coronata



Water Gum
Tristaniopsis laurina

SUB-CANOPY

Tree layer below canopy



Three-veined Cryptocarya

Cryptocarya triplinervis



Cheese Tree

Glochidion ferdinandi



Willow Bottlebrush

Callistemon salignus
(Formerly *Melaleuca salicina*)



White Bolly Gum

Neolitsea dealbata



Celerywood

Polyscias elegans



Sweet Pittosporum

Pittosporum undulatum



Murrogun

Cryptocarya microneura



Brush Cherry

Syzygium australe



Lilly Pilly

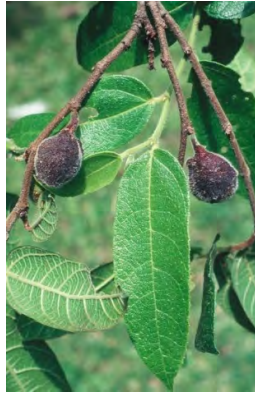
Syzygium smithii
(also known as *Acmena smithii*)

SHRUB LAYER

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



Glossy Laurel
Cryptocarya laevigata



Creek Sandpaper Fig
Ficus coronata



Spiny Phyllanthus
Phyllanthus microcladus



Bolwarra
Eupomatia laurina



Whalebone Tree
Streblus brunonianus



Crabapple
Schizomeria ovata

GROUND LAYER

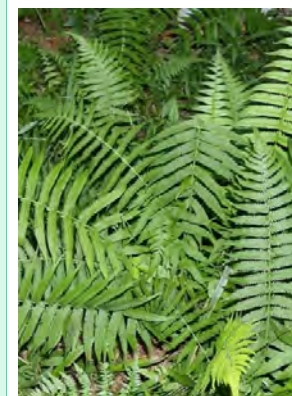
Lowest layer of vegetation. Plant types can include grasses; graminoids (non-woody plants with a grass-like morphology); ferns; forbs (non-woody, broad-leaved, flowering plants).



Green Mat-rush
Lomandra hystrix
GRAMINOID



Rough Maidenhair Fern
Adiantum hispidulum
FERN



Binung
Christella dentata
FERN



Native Violet
Viola hederacea
FORB (CREEPING)

GROUND LAYER

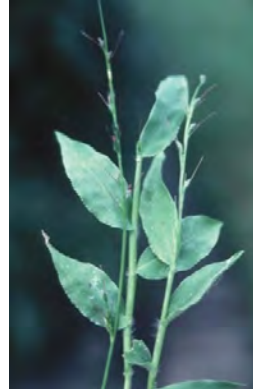
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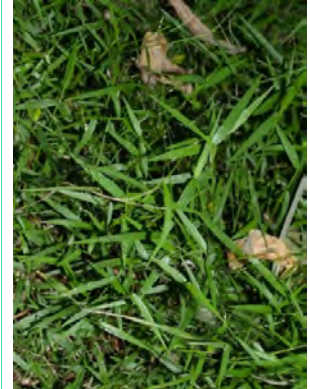
Giant Maidenhair Fern
Adiantum formosum
FERN



Love Flower
Pseuderanthemum variabile
FORB



Beard Grasses
Oplismenus spp.
GRASS (CREEPING)



Graceful/Pademelon Grass
Ottochloa gracillima
GRASS (CREEPING)

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



Blood Vine
Austrosteenisia blackii
VINE (CLIMBING)



Wonga Vine
Pandorea pandorana
VINE (CLIMBING)



Morinda
Gynochthodes jasminoides (Formerly *Morinda jasminoides*)
VINE (CLIMBING)



Molucca Bramble
Rubus moluccanus
VINE (SCAMBLING)



Scrambling Lily
Geitonoplesium cymosum
VINE (SCAMBLING)



Barbed Wire Vine
Smilax australis
VINE (SCAMBLING)



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.



Byron Bay Acronychia

Acronychia baeuerlenii
TREE (SMALL)



Brisbane Silkpod

Parsonsia brisbanensis
VINE (CLIMBING)



Small-leaved Phyllanthus

Phyllanthus microcladus
SHRUB



Toothed Kamala

Mallotus megadontus
FORB



Broad-leaved Palm Lily

Cordyline congesta
PALM LILY



Stinging Nettle

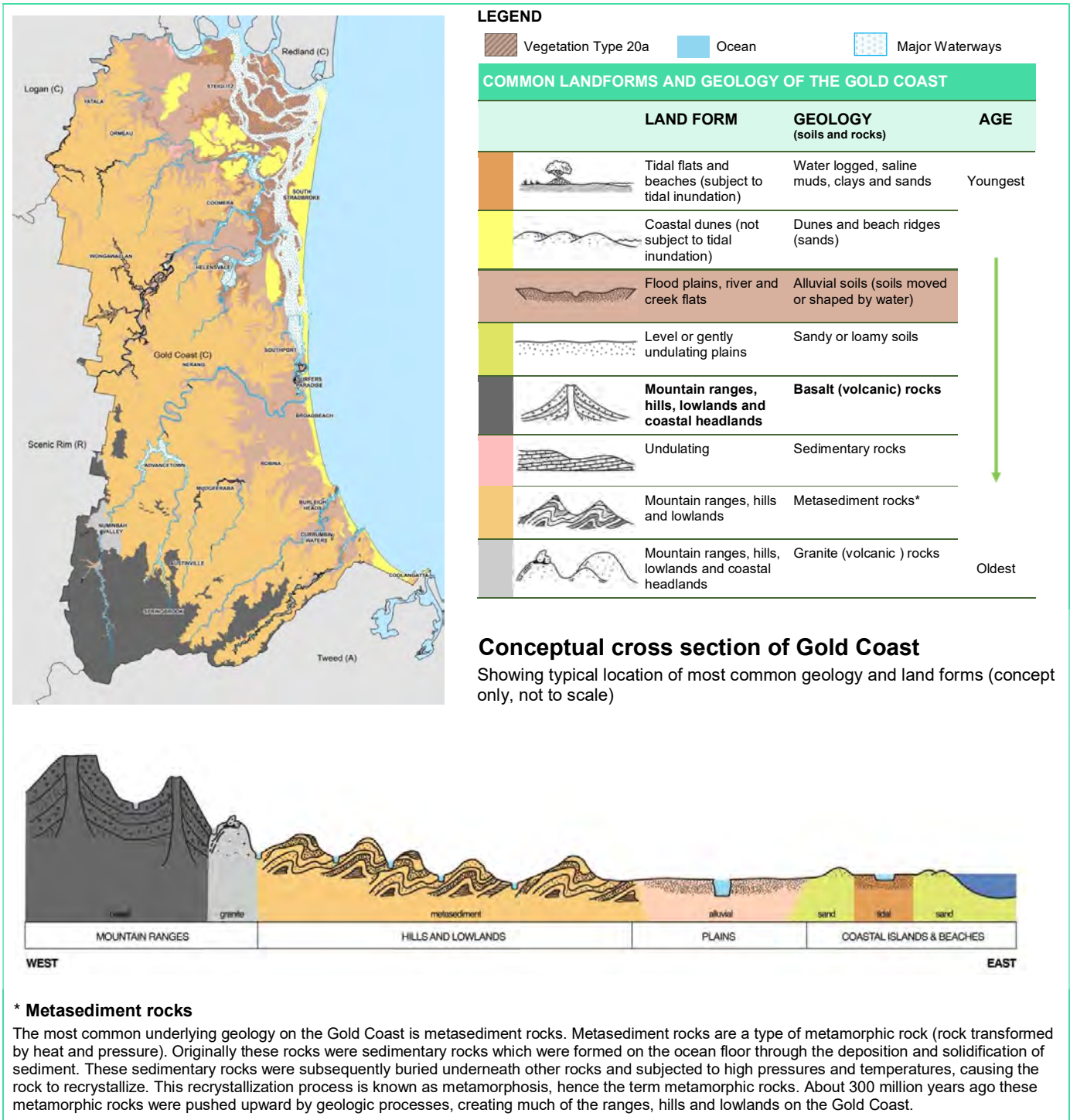
Urtica incisa
SHRUB

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.

Vegetation type 20a occurs in gullies and valleys of hilly terrain, particularly on narrow river flats at the base of the western escarpment of the Gold Coast. It occurs in areas with high combined rainfall and run-off, typically on deep grey to black soils with high soil moisture and deep organic matter. Common localities include upstream valleys in the Pimpama and Coomera River catchments in the central part of the city, and similar locations in the Currumbin, Tallebudgera, Numinbah and Mudgeeraba valleys in the southern part of the city, where these gallery vine forests often occur as a mosaic with VT2a (Flooded Gum tall open forest on alluvium) in these southern valleys.

Historic distribution of Vegetation Type 20a



2017 EXTENT AND CONSERVATION STATUS

Gold Coast

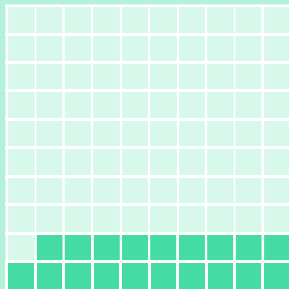
Historically, this vegetation type did not extend over large areas of the Gold Coast. As of 2017, this vegetation type covered 259 hectares of the Gold Coast which is 19% of its historical extent.

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

EXTENT (ha)

Historic
1,378ha

2017*
259 ha
19% 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 12.3.16) as being 'Endangered'.

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 ©

Version 3, November 2020

THREATS

Vine forest on alluvium is a highly productive and well-watered vegetation type, and relies on a relatively closed and intact canopy layer to maintain shade and the relatively open nature of the ground layer. Fragmentation and tree clearing opens this canopy and facilitates the introduction of invasive weeds, particularly Lantana, Camphor Laurel and several vine weed species (Cats-claw Creeper, Madeira Vine, Tradescantia), which establish and grow quickly in the productive soils and form a major threat to this vegetation type. This vegetation type relies on the exclusion of fire, and should be protected from fire to maintain habitat quality and plant species richness.

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.