RAINFOREST

dry

VEGETATION TYPE 29

Regional Ecosystem: 12.11.10

Sub-tropical to Warm Temperate Vine Forest on Metasediments

COMMUNITY STRUCTURE

Vegetation type (VT) 29 has of a dense canopy (up to 75% cover shading understorey plants) from 15-28m high, with isolated emergent trees, often including *Vitex lignum-vitae* (Lignum-Vitae/Satinwood)*, Araucaria cunninghamii* (Hoop Pine) to 38m high. Lancewood *(Dissiliaria baloghioides*) is typically the dominant and diagnostic canopy tree, while other characteristic canopy species include White Booyong (*Argyrodendron trifoliolatum*), Yellow Carabeen (*Sloanea woollsii*), Native Olive (*Olea paniculata*) and stinging trees (*Dendrocnide spp.*), along with the presence of a diversity of other canopy and smaller trees.

Emergent		Very tall Isolated trees 30-38m, Sparse 5-15% cover
Canopy		Large trees 15-28m Dense 55-75% cover
Sub canopy		Medium trees 4-15m Sparse-mid-dense 15-50% cover
Shrub		Shrubs and small trees 1-4m Sparse-mid-dense 5-40% cover
Ground		Grasses/Ferns 0 - 0.5 m high Sparse -mid-dense 5-35% cover

Source: Searle, 2019 (derived from Ryan et al, 2019; plus 12 detailed sites reviewed (TA03; TA04; TA05 (Darlington Range, Jankowski's Scrub); TA05; TA06; TA07 (Bahr's Scrub); TA09 (Edgeley's, Wongawallan) ; TA10 (Wilkies Scrub, Wongawallan); TA20 (Cliff Barron Rd, Ormeau); TA21 Readimix Quarry Ormeau); TA24 (Schmit Rd, Shaw's Pocket), MB51 (Canungra)

The shrub layer is sparse to mid-dense and comprises a mix of rainforest plants, whilst the ground cover is sparse to mid-dense and comprised of grasses (*Oplismenus hirtellus*), herbaceous plants (*Pseuderanthemum variabile*) and ferns (*Pellaea nana, Lastreopsis munita*). Vines and epiphytes are common and conspicuous.

Characteristic plant species

Approximately **236 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*

GBC — Indicates species is a Glossy Black-Cockatoo feed tree species

CWS — Indicates species is a City-wide significant species

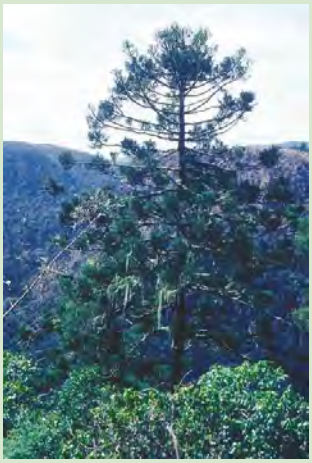
* It is noted that in addition to preferred food trees, koalas utilise a range of eucalypt and non-eucalypt tree species for supplemental feeding and other uses such as shelter. These other species are also important and necessary features of koala habitat.

EMERGENT

Tallest trees, visible above the canopy

Lignum-Vitae
Vitex lignum-vitae

Long Jack
Flindersia xanthoxyla



Hoop Pine
Araucaria cunninghamii

Crow's Ash
Flindersia australis

Marblewood
Acacia bakeri

Moreton Bay Fig
Ficus macrophylla

CITY OF GOLDCOAST.

CANOPY

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

Lancewood

Dissiliaria baloghioides

White Booyong

Argyrodendron trifoliolatum

Yellow Carrabeen

Sloanea woollsii

Native Olive

Olea paniculata

Giant Stinging Tree

Dendrocnide excelsa

Shining-leaved Stinging Tree

Dendrocnide photinophylla

Tulipwood

Harpullia pendula

Scrub Poison Tree

Excoecaria dallachyana

Rough-leaved Elm

Aphananthe philippinensis

Yellow Tulip

Drypetes deplanchei

Rose Marrara

Pseudoweinmannia lachnocarpa

SUB-CANOPY

Tree layer below canopy

Lancewood

Dissiliaria baloghioides

Thick-leaved Croton

Croton acronychioides

Yellow Laurel

Cryptocarya bidwillii

Whalebone Tree

Streblus brunonianus

Pinkheart

Medicosma cunninghamii

Hodgkinsonia

Hodgkinsonia ovataflora

Ferny-leaf Bonewood

Bosistoa pentacocca

Cleistanthus

Cleistanthus cunninghamii

SHRUB LAYER

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

Native Holly

Alchornea ilicifolia

Glossy Laurel

Cryptocarya laevigata

Green Bolly Gum

Neolitsea australiensis

Hairy-leaved Bolly Gum

Neolitsea dealbata

Myrtle Ebony

Diospyros pentamera

Brush Bloodwood

Baloghia inophylla

Veiny Pear Fruit

Mischocarpus anodontus

Spiny Gardenia

Randia moorei

Cleistanthus

Cleistanthus cunninghamii

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).

Dwarf Sickle Fern

Pellaea nana

FERN

Basket Grass

Oplismenus hirtellus subsp. imbecillis

GRASS

Love Flower, Pastel Flower

Pseuderanthemum variabile

FORB

Naked Shield Fern

Lastreopsis munita

FERN

Tall Aneilema

Aneilema acuminatum

FORB

Don't Panic

Panicum lachnophyllum

GRASS

Straggling Nightshade

Solanum corifolium

FORB

Rough Maidenhair Fern

Adiantum hispidulum

FERN

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

Burny Vine
Trophis scandens subsp. scandens

Blood Vine
Austrosteenisia blackii

Kangaroo Vine
Cissus antarctica

Barbed-wire Vine
Smilax australis

Native Grape
Tetrastigma nitens

Scrambling Caper
Capparis sarmentosa

Hairy Water Vine
Cayratia acris

Veinless Silkpod
Parsonsia rotata

Wiry Grape
Pleogyne australis

EPIPHYTES

Species – ferns and orchids - that grow on the surface of other plants

Tree Spider Orchid

Dendrobium tetragonum

Beetle Orchid

Peristeranthus hillii

Robber Fern

Pyrrosia confluens

Raspy Root Orchid

Rhinerrhiza divitiflora

City-wide significant plant species

CWS

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.

Scrub Red Jacket

Alectryon connatus

Blunt Wisteria

Callerya australis

Finger Lime

Citrus australasica

Lily of The Valley Orchid

Dendrobium monophyllum

White Yiel Yiel

Grevillea hilliana

Macadamia Nut

Macadamia integrifolia

Birdwing Butterfly Vine

Pararistolochia praevenosa

Shirley's Nightshade

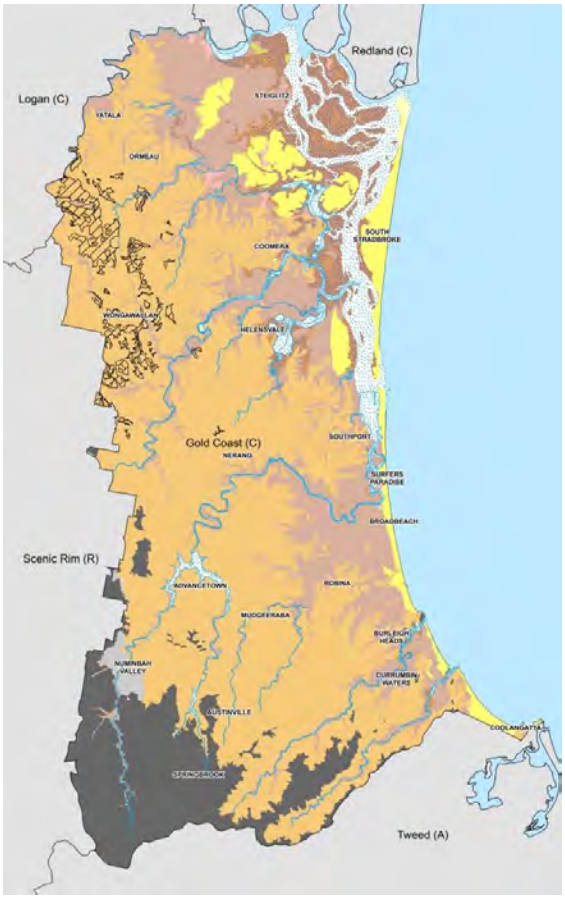
Solanum shirleyanum

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 hillslopes and gullies adjoining creeks on sediment-derived soils (shalestone, mudstone, etc.). Similar to VT29a (Gully Vine Forest on metasediments), but generally occurs in drier areas with moderate rainfall and on moderately fertile with high content of leaf litter and organic material. This community is largely restricted to hillslope areas between Shaw's Pocket and Lower Beechmont in the central hinterland of Gold Coast city, including the localities of Darlington Range, Ormeau, Pimpama, Wongawallan, Eagle Heights and Maudsland.

Historic distribution of Vegetation Type 29



LEGEND

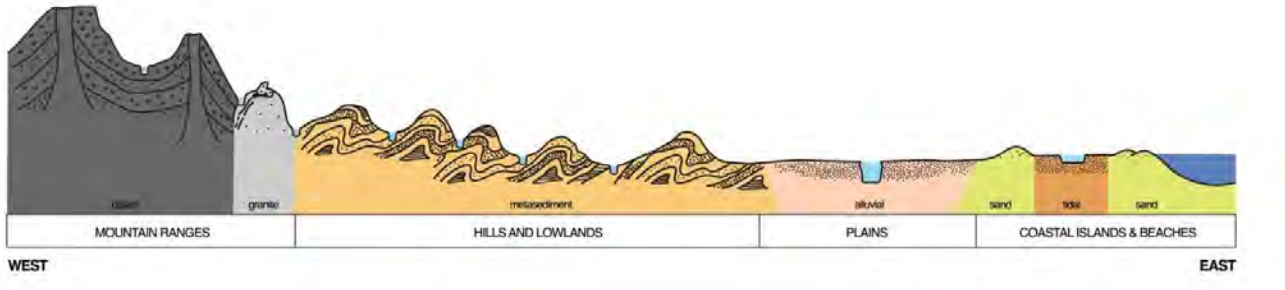
Vegetation Type 29 | Ocean | Major Waterways

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**

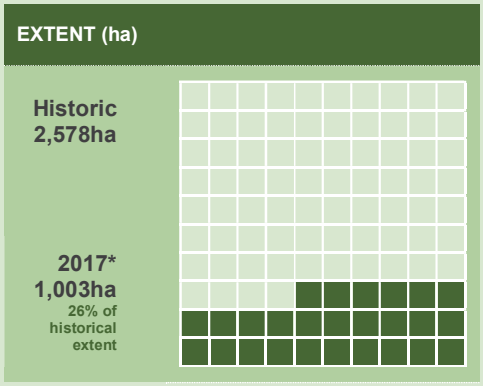
The most common underlying geology on the Gold Coast is metasediment rocks. Metasediment rocks are a type of metamorphic rock (rock transformed by heat and pressure). Originally these rocks were sedimentary rocks which were formed on the ocean floor through the deposition and solidification of sediment. 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 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, this vegetation type was the second most common type of rainforest on the Gold Coast but only 39% of its historical extent remains. The 2017 extent* of this vegetation type on the Gold Coast was 1,003 hectares.

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



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

Queensland

The conservation status of vegetation in

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

Sub-tropical vine forest is sensitive to fire, particularly where it adjoins tall open forest in which eucalypts or Brush Box occur, and should be managed to exclude fire, or at least limit frequency of fire events to maintain an appropriate mosaic with these adjoining forest communities. Invasion by exotic weeds, particularly Lantana and exotic vines (including Corky Passionflower and Cat's-claw Creeper) and understorey weeds (including *Solanum torvum, S. hispidulum, Rivina humilis*) represent a secondary threat to this vegetation, and appropriate fire and weed management are critical to maintaining the integrity of this community, especially in fragmented areas and near forest edges and clearings.

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