CITY-WIDE SIGNIFICANT PLANTS OF THE GOLD COAST

A GUIDE TO IDENTIFICATION AND CONSERVATION
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- Leaf structure
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City-wide significant plants – CWS

This booklet provides an introduction to plants classified by City of Gold Coast as having City-wide significance (CWS) – a formal criteria allowing for the recognition of regionally significant plants whose presence in the city contribute to the region being a national biodiversity hotspot. It forms a companion booklet to the previously published *Threatened rainforest plants of the Gold Coast: A guide to identification and conservation* by City of Gold Coast and focuses primarily on CWS plants occurring within the boundaries of the urban footprint (as of 2019). It focuses on areas associated with the coastal lowlands and the hilly ranges below 500 metres altitude.

How to use this booklet

This book has been developed to help landholders identify 50 CWS species that may occur in native vegetation within the Gold Coast’s urban footprint, either on their property, within local conservation areas or in native vegetation. Plants have been ordered alphabetically by their botanical name and growth form i.e. trees, shrubs, groundcovers and vines. Diagrams describing the leaf type, arrangement and margin, and flower arrangement have been included for each species with a more detailed description provided below each of them.

However, it’s worth noting that leaves can vary widely within a species due to the growth stage of the leaf, amount of sun/shade the particular leaf is exposed to and the altitude the plant is growing at. This is relevant to some species more than others. Therefore, the diagrams may not represent all possible leaf variations for the species. In instances where this is the case, the diagram will depict the most common adult form of the leaf, with further details of its other forms in the description below. An index of all species included, can be found at the back of this booklet.

YOUR PROPERTY

Does your property have a patch of native vegetation or remnant trees somewhere within its boundaries?

No matter how small or disturbed, these patches can be a treasure trove of CWS species. However, the ongoing survival of these species is at risk if property owners are not aware of their significance and/or, do not take action to protect them. With the help of this booklet, we encourage you to investigate the special plants on your property, learn how to recognise and deal with threats to CWS plants and start restoring your property’s native vegetation back to its former healthy state to help your CWS thrive.
Introduction

Our Hotspot: A Legacy of Change

The Gold Coast lies within Australia’s third most biodiverse region, referred to as the ‘Border Ranges North and South (Queensland and New South Wales) Biodiversity Hotspot’. The foundations of the hotspot are linked to evolutionary origins associated with the breakup of Gondwana and the establishment of circumpolar currents between Australia and Antarctica, 40 million years ago. As Australia pushed northward towards New Guinea, it brought climatic changes that affected plants and animals originating in Gondwana.

By the time central Australia straddled 30 degrees south latitude, around 15 million years ago, much of the continent’s interior was drying out while northern and southern parts shifted towards seasonally wet and dry climates. Reliable rainfall afforded by mountainous elevation and moist oceanic winds buffered the east coast from a similar fate at this time. These coastal protections were disrupted during a series of glaciation events between 1.6 million and 10,000 years ago, which saw oscillations of warm wet periods give way to cool dry periods.

Overall, the gradual trend was towards a drying continent. Importantly, this brought with it an increase in the prevalence of fire. The combination of aridity and fire worked as an environmental sieve driving animals and plants to extinction, adaptation or retreat.

Environments supporting conditions reminiscent of Gondwana became refugia for ancestral species during difficult times. These refugia sheltered an important source stock for future speciation and allowed expansion of populations as climatic/environmental conditions became more favourable.

Within the time period of Australia’s split from Antarctica, to the more recent glacial events, immense geological changes took place within the Gold Coast and its surrounds. These events shaped the region into a complex series of land forms, with highly variable topography and elevation. Huge tracts of sedimentary rock originating in Gondwana were eroded, buried by successive lava flows, and re-eroded to form a complex of mountain ranges, subcoastal hills and coastal headlands. At the seaward boundary of this terrain, an extensive coastal plain developed. This plain was blanketeted in a patchwork of sand, silt and clay – the result of multiple sea level changes and depositional events between 1.6 million and 10,000 years ago, as the area shifted between wave exposed embayments, estuarine deltas, lagoons and infilled lagoons. The more recent impoundment of estuarine deltas by extensive coastal dune systems has played a major role in the shift towards the development of a terrestrial landscape.
A plethora of habitats and species from summit to sea

The legacy of the enormous changes from Gondwanic times to the present is a regional geography and climate that supports incredible animal and plant diversity with many species unique to the region. Examples can be readily found in the high altitude habitats and sheltered headwater gullies of the border ranges such as within Springbrook and Lamington National Parks. Every catchment associated with the drainage of water off these plateaus supports biota of regional significance. In many cases, these catchments support regionally significant plants across the full spectrum of their topographic profile, from mountains to coast. In terms of the Gold Coast’s local native plants this means that significant species occupy landscapes from the hinterland, all the way to the coastal dunes. This is important because much botanical enquiry has been focused on the aesthetically pleasing rainforests of the hinterland, at the expense of vegetation occurring on the subcoastal hills and coastal plain – areas subject to intense urbanisation and habitat loss.

Human induced changes to hotspot vegetation and plants

Prior to European settlement, the most pervasive impact on the Gold Coast’s plant life by people would have been through the use of fire by Aboriginal people – essentially maintaining rainforest boundaries and promoting vegetation that needed to be burnt for long-term survival. In contrast, the arrival of Europeans marked a dramatic transition towards exploitation of plant resources for commercial gain. Selective logging of rainforests for prized timbers commenced in the 1840’s, followed by broad scale clearing for cropping and pasture establishment. By the early 1900’s, a network of drains connecting major rivers to huge treeless swamps had been excavated throughout the coastal plain, initiating the demise of some of south east Queensland’s most significant coastal wetlands. The 1950’s onwards saw canal development for residential purposes transforming large areas of the coastal plain, previously under freshwater influence, into a tidal ecosystem devoid of pre-European vegetation. Coastal dune and beach ridge vegetation was largely intact until the 1920’s when seaside residential estates started to become popular. From 1940 onwards, major losses of uncleared remnants of this vegetation occurred along the coast as a result of commercial sand mining operations. By 2000, the beachside suburbs on sand between The Spit and the NSW/QLD border contained less than 0.2% of their pre-clearing vegetation.

An urban footprint and the need for knowledge

As the urban footprint of the Gold Coast continues to expand into remnant bushland, knowledge of the identity, habitat requirements, distribution and conservation status of regionally significant plant species has become an important focus of the City, as well as land managers and conservation organisations. This information allows stakeholders to prioritise the provision of resources towards preventing the extinction of these species and assists the general public in their recognition throughout the city.
What are species of City-wide significance?

City-wide significant species are a recognised group of animals and plants occurring within the Gold Coast boundaries that possess outstanding conservation values. These values have been measured and scored using four major assessment criteria and related sub-criteria to establish the status of ‘significance’. The major criteria include (1) conservation status under State and Federal legislation, (2) number of records within the city boundaries, (3) distribution based on niche requirements and geographical range limits; and (4) endemism – the degree to which species are uniquely associated with the region at different geographical scales.

A base list of the 1952 vascular, and legislatively significant non-vascular, local native plant species was screened using the above criteria to determine the number of CWS plants within the city. The CWS scoring system has recognised 572 plant species that meet the requirements for significance status. This represents 29 per cent of the local native plant species known to occur within the city (taken from the base list).

The high proportion of CWS plants is the product of a several factors including the regions naturally high levels of biodiversity associated with hotspot evolution, endemism, latitudinal range limits and natural rarity. An overarching influence on the establishment of CWS status is the loss of habitat associated with native vegetation clearing for urban development. As a result of this, many CWS species restricted to the coastal plain in the city are bordering on local extinction.
Conservation status of CWS plants on the Gold Coast

CWS species include any species listed as special least concern, vulnerable, threatened, near threatened, endangered or critically endangered under relevant Queensland and Federal legislation. Additional species have been included in the CWS list which are considered significant to the Gold Coast. An expert panel assessed each plant species within the city. Using scientific criteria and expert knowledge, species were added to the CWS list if they were considered uncommon on the Gold Coast, or if the species distribution was considered significant (e.g. if they were at the start or end of their distribution in the region).

The City Plan is a planning instrument that guides development outcomes on the Gold Coast and assists in achieving conservation outcomes, including the protection of CWS species. In the City Plan, CWS plants are identified as matters of local environmental significance (MLES). Recorded locations of species of City-wide significance are used to inform the development of the Environmental significance – priority species overlay map.

Where development is proposed, the priority species overlay map is used to identify and protect MLES and ensure that any development is consistent with, and contributes to, the achievement of the conservation objectives of the City Plan and the Our Natural City Strategy.

Where are species of City-wide significance?

CWS species occur in a range of habitats across the city between the elevated extremes of high mountain summits and the low lying sandy beaches of the coastal plain. Within these environments lay a plethora of niches shaped by variations in climate, drainage, soil type, soil depth, geology, aspect, solar radiation exposure and importantly, fire frequency.

For CWS plants, this translates into opportunities to grow, reproduce and establish populations in different locations, some restricted, some widespread. These distributional outcomes are displayed across the landscape in the 75 native vegetation types that form the Gold Coast’s green behind the gold.

Ten vegetation groups commonly associated with CWS plants are outlined on the following pages.

Although CWS species are generally found in natural areas away from suburbia, numerous species also occur within the urban footprint in small pockets of vegetation or as single specimens. The City of Gold Coast have identified that at least 265 species grow within this boundary. In some cases, CWS species have shown up in suburban properties through long distance dispersal of their propagules, long after suburbs have been cleared of native vegetation. For example, Cryptocarya foetida at Burleigh Heads and Amorphospermum antilogum at Surfers Paradise.
Dunes

- Vegetation dominated by salt and wind tolerant species
- Occurs on mobile beach sands subject to wind and wave erosion
- Shows strong zonation from the shore line inland
- Historically merged with wind–shorn littoral rainforest thickets and sclerophyll scrub along parts of the Gold Coast.

Tidal Wetlands
(Saltmarsh and Mangrove)

- Vegetation forming a mosaic of treed and treeless areas
- Mangrove vegetation rainforest-like often with closed canopy
- Under saline tidal influence
- Soils are heavy marine muds sometimes capped in sand
- Occur within lower reaches of estuaries
- Succulents and mangroves rarely burnt.
Coastal Heath (Wallum)

- Vegetation no greater than two metres tall, dominated by wildflower shrubs
- Occurs on the coastal plain on heavily leached sand, peaty sand and silty sand
- Often has a dune-swale series topography or a mosaic of low sandy rises and intervening depressions
- Topography reflected in wet heath (in swales) and dry heath (on rises)
- Fire dependent ecology (requires fire to maintain diversity)
- Nutrient poor soils.

Coastal Woodland

- Coastal woodland may include subformations of dry eucalypt forest
- Very open canopy of sclerophyll trees, mostly eucalypts
- Shrubby understoreys of heathy plants on sand, shifting towards grass on more fertile soils over rock
- Occurs on coastal plain on deep sands or loamy soils
- Fire dependent ecology (requires relatively frequent fires to maintain diversity)
- Nutrient poor soils.
Swamp forest

- Vegetation dominated by sclerophyll trees, (often *Melaleuca quinquenervia*) with an open or closed canopy
- Ground layer variable either ferns, sedges, grasses or a mix of all
- Shrubs and vines often present
- Rainforest trees present if left for long periods without fire
- Occurs on floodplains and dune deposits of the coastal plain in depressions and low lying areas where waterlogging is common
- Occurs on alluvium and peaty silty sands
- Variable nutrient fertility depending on origin of sediment but often low
- Structure of understorey layers regulated by fire.

Freshwater Wetlands

- Vegetation associated with areas subject to freshwater inundation either permanent or temporary, flowing or still standing
- Often dominated by aquatic or semi-aquatic species e.g. Cyperaceae and Juncaceae
- Typically includes one or more of either submerged, floating or emergent plants
- May include scattered trees especially *Melaleuca* species
- Waterlogged soils lacking oxygen
- Includes river and creek banks, floodplain swamps and billabongs, depressions between sand dunes
- Nutrient poor to moderately fertile soils.
Eucalypt forest and woodland

- Vegetation dominated by eucalypts
- Dominant tree canopy not closed
- Ground layer often grassy
- Structure of understorey layers regulated by fire
- Occurs on subcoastal hills, mountain ranges and coastal plain
- Occurs on a range of soil and rock types, moderate to poor nutrient soils
- Fire dependent ecology (requires relatively frequent fires to maintain diversity).

Wet eucalypt forest

- Vegetation dominated by eucalypts
- Dominant tree canopy not closed
- Rainforest plants common in understorey and may be represented in the canopy
- Grass generally absent, often replaced by ferns
- Often occurs in mountain plateau areas, sheltered gullies and valley bottoms in upper reaches of creeks
- Occurs on more fertile loams
- Associated with moist areas
- Infrequent fires allow for recruitment of sclerophyll species in the understorey.
Rainforest

- Vegetation generally with a closed canopy
- At least 50% local native, rainforest species represented in the canopy
- Canopy trees can be overtopped by emergent eucalypt trees
- Can have one to several layers of vegetation under the canopy
- Can contain a mixture of life forms including vines, ferns, epiphytes, palms, trees, shrubs
- Occurs on a range of rock and soil types
- Occurs across a range of landforms e.g. volcanic plateaus, sedimentary hillsides, coastal dunes, floodplains and river banks
- Includes subtropical, warm temperate, riparian, cool temperate, littoral (coastal) and dry rainforest types.

Montane heaths and scrubs

- Vegetation is grassy or shrubby heathlands and scrubs
- Often wind exposed and wind-shorn
- Occur on shallow nutrient poor loams on escarpment edges
- Occur on rocky surfaces on mountain plateaus within sclerophyll forest
- Canopy structure and overall plant diversity regulated by fire
- Rock pavements afford greater protection against fire.
Threats to CWS plants

Many CWS plants struggle to survive in small, isolated patches, where they are particularly vulnerable to various forms of disturbance and inbreeding. The threats listed here will be applicable, in various combinations, to most of the species described in this booklet.

Weeds

In the same way our city supports a great diversity of native species, it also supports a huge array of introduced species. Weeds can be an insidious threat not readily apparent to a casual observer who may not recognise them as weeds or understand their capacity to damage an ecosystem. Some weeds are so destructive they have been termed ‘transformer weeds’, because they transform an area’s landscape. Weeds are considered one of the biggest threats to our city’s biodiversity.

The great news is that we can all play a role in the control and reduction of weeds. First and foremost, avoid interfering with the canopy, understorey or groundcover of intact, native forests. If you open up the canopy by cutting down trees, or ‘clear out’ or ‘clean up’ your understorey, you will let in more light and disturb the soil, creating the very conditions in which weeds thrive.

Secondly, obtain a copy of the City’s free *Environmental Weeds* booklet so you can get to know the common weeds, look out for them and share your knowledge with friends and neighbours. Research plants before you introduce them to your property and guard against inadvertent introduction or spread of weeds on vehicles, clothing, livestock and machinery.

Thirdly, when you identify weeds on your property, get stuck in and control them. There’s often a great native seed stock in the soil below, eager to establish and transform your property from a weedy mess to bushland paradise. The City understands such a task can be overwhelming and that you may not have the knowledge, skills or confidence to undertake such an effort. That’s why we created the Conservation Partnerships Program. Our team of skilled officers provide advice and support to landholders wanting to restore their property’s native habitat. Environmental volunteer opportunities are available through Bushcare and Beachcare programs and workshops, events and activities through the NaturallyGC program.

Clearing

Native vegetation is protected by Federal, State and Local legislation and planning instruments. However, with increasing population growth in the region, Southeast Queensland is experiencing large amounts of vegetation clearing, particularly in areas designated for urban development. This highlights the important role private landholders play in restoring native habitat and protecting our threatened species.
Fire
Fire plays a key role in maintaining the diversity of plants within most native vegetation types across the city (with the exception of rainforest). Plants of fire tolerant vegetation are dominated by species that have developed strategies to survive (and even depend on) fire for regeneration, unlike rainforests which can be damaged or destroyed by fire. Rainforests should not be deliberately burnt and, where possible, be protected from fire spreading from adjoining areas. In contrast, CWS species reliant on fire should be burnt at suitable intervals where possible by local fire authorities. In suburban areas where this cannot be achieved, an effort should be made to occasionally mimic the effects of fire e.g. raking leaf litter build up to expose bare mineral soil for germination of seeds or selectively pruning trees to prevent the shading out of light demanding plants.

Grazing
Grazing animals including cattle, horses and goats can trample or eat native seedlings and compact soil, preventing natural regeneration. Fencing vegetation off from these animals can provide a solution to promote regeneration. You can get advice on wildlife friendly fencing, ecological restoration and weed management from the City’s Conservation Partnerships Program.

Collecting
Unethical and illegal collection of plant specimens in the wild poses a serious threat to some species. Native plants should be purchased from an accredited and reputable nursery.

Climate Change
Changes in temperature and rainfall can have significant effects on our city’s CWS species. For example, without consistent rain, species associated with wetter environments such as rainforests may become exposed to drier conditions and more frequent fire which they cannot tolerate. Peaty soils supporting wet heath can dry out and burn below the depth of lignotubers and regenerative organs wiping out perennial plants and making it impossible for future recovery. Drier conditions can also leave gully rainforest species prone to death and consequently our gullies become susceptible to erosion. Mountain-top species are particularly vulnerable as conditions warm because they’re unable to migrate to cooler altitudes and are often dependent on cloud moisture. Warmer conditions may also provide the right habitat for a greater variety of weeds.

It’s crucial we reduce threats to our wildlife now, such as those posed by weeds, to build more resilience in our natural systems so they can better cope with the changing climate.
Growing CWS plants

Growing CWS plants is an exciting and rewarding activity that can contribute to maintaining the Gold Coast’s incredible biodiversity. Our local native nurseries and community groups grow many CWS species, and your requests for particular species will encourage them to grow more.

Collecting plants and plant material for propagation from the wild requires a permit for threatened and special least concern species, as well as the permission of the landowner. Illegal or unethical collection of plant material poses a threat to some species. So, purchase your plants from a reputable local native nursery or community group.

Species descriptions

The plants described in this booklet have been included because they are recognised as CWS species and are known or thought to still occur in the Gold Coast area. A total of 50 species have been included in this booklet. Not all CWS species have been included. You can find information about some of the local native rainforest plants in our Threatened rainforest plants of the Gold Coast booklet. Many additional rainforest species, though not listed as threatened, are considered to be City-wide significant (CWS) because they are uncommon in the city.

You will find a comprehensive listing of these and all other plant species recorded on the Gold Coast at www.goldcoastflorafauna.com.au

Occasionally, we have included locations just outside the city, where these are regionally significant and provide a good example of the plant’s natural habitat.
Leaf types and terminology

Simple leaf structure (general)

- lamina
- midvein
- lateral veins
- reticulate veins
- intramarginal veins
- axillary bud
- petiole
- pulvinus

Simple leaf structure (sheathing)

- lamina
- longitudinal veins
- sheath
- stem

Compound leaf structure

- leaflet or pinna
- rachis tip
- rachis
- pulvinule
- petiole
- pulvinus

Leaf composition

Leaf type

- SIMPLE
- COMPOUND
- 1-FOLIOLATE
- SHEATHING

Leaf arrangement

- OPPOSITE
- ALTERNATE
- WHORLED

Leaf/leaflet margin

- ENTIRE
- LOBED
- TOOTHED
- CRENATE

Inflorescence

- SINGULAR
- SPIKES
- RACEMES
- CYME
- PANICLES
- CLUSTERS

City-wide significant plants of the Gold Coast
TREES

Trees are woody perennial plants greater than two metres tall, usually with a clear trunk that branches well above ground level, the branches generally forming a crown.

Scented Acronychia

Acronychia littoralis

Family

Rutaceae

Habitat

Rainforest (littoral rainforest) or long unburnt Coastal woodland on deep sand e.g. Palm Beach, Currumbin, Cobaki.

Description

Habit: Small tree up to 8m tall with smooth greyish bark.

Leaves: 1-foliolate, opposite with entire margins. Broad, blunt at the tips, or with a notch, hairless, up to 16cm long, pleasant aroma when crushed.

Flowers: Yellowish, up to 1.5cm wide, panicles up to 5.5cm long with few to several flowers; flowering period summer.

Fruit: Creamy lemon coloured, up to 20mm wide, fleshy, with 4 swollen lobes separated by shallow fissures.

Note: This species is listed as Endangered under State and Federal legislation. Similarities between this species and its relatives can make identification difficult.
Brown Pearwood
Amorphospermum antilogum

Family
Sapotaceae

Habitat
Rainforest (subtropical rainforest and dry rainforest) on stony slopes occasionally on deep sand e.g. Wongawallan, Surfers Paradise.

Description
Habit: Shrub to large tree up to 30m tall with milky sap and a silver brown coloured crown when observed from beneath, smooth greyish brown bark (sometimes slightly fissured).

Leaves: Simple, alternate, entire up to 12cm long, discolorous, undersurface covered in rust coloured hairs, smooth and green above.

Flowers: Whitish-green with rusty-hairy sepals, 5-petalled and up to 2mm long, arranged in axillary clusters or arising from the stem, throughout the year.

Fruit: Black globose berry up to 5cm long and pointed at the base.

Note: Easily confused with the introduced Chrysophyllum oliforme. Formerly Niemeyera antiloga. Photo of fruit on page 26-27.

White Lace Flower
Archidendron hendersonii

Family
Fabaceae (Subfamily Mimosoideae)

Habitat
Rainforest (subtropical rainforest, littoral rainforest and riparian rainforest) on loams and deep sand e.g. Burleigh Heads National Park, Tallebudgera Valley, Palm Beach, lower reaches of Tweed River.

Description
Habit: Shrub to medium tree up to 18m tall with light brown trunk.

Leaves: Compound, alternate and usually divided into a pair of leaf stalks each with 4–6 opposite leaflets up to 3cm long.

Flowers: Creamy-white, arranged in cluster-like heads up to 8cm wide. Each with 10 or more flowers, spring–summer.

Fruit: Curved pod up to 12cm wide, red inside, orange outside.

Note: First collected in the region by C.T. White on 20 October 1917 at, ‘Meyers Ferry, Nerang River (Southport)’. Where he referred to it as being, ‘very common and in full flower’.
Wallum Banksia  
*Banksia aemula* 

**Family**  
Proteaceae  

**Habitat**  
Coastal heath and Coastal woodland on well drained deep sand within the coastal plain, generally associated with sandy rises e.g. Bilinga, Miami, Hollywell, Jacobs Well.  

**Description**  
**Habit:** Shrub to small tree up to 8m tall with orange to brown warty bark.  
**Leaves:** Simple, alternate with toothed margins. Narrow, up to 20cm long and 30mm wide with V-shaped notches between teeth, young leaves rusty coloured and hairy on both sides.  
**Flowers:** Spectacular yellow dense cylindrical spikes consisting of numerous slender flowers, spring–summer.  
**Fruit:** Large woody follicles up to 4.5cm long arranged on a central axis.  

Note: This species is the floral and arboreal emblem of City of Gold Coast and a primary nectar resource for coastal fauna during flowering events. Photo of plant on inside front cover and pages 6 and 7.  

Crown of Gold  
*Barklya syringifolia* 

**Family**  
Fabaceae (Subfamily Caesalpinioideae)  

**Habitat**  
Rainforest (dry rainforest) on ridge tops or sheltered hinterland gullies e.g. Ormeau and Mount Tamborine.  

**Description**  
**Habit:** Medium tree up to 20m tall with slightly rough, greyish-brown bark.  
**Leaves:** Simple, alternate with entire margins, broad, glossy and heart-shaped up to 9cm long.  
**Flowers:** Small, orange-yellow arranged on racemes up to 10cm long, late spring–early summer.  
**Fruit:** A brown pod, curved and flat up to 4.5cm long.  

Note: Probably extinct in NSW. Gold Coast native populations now represent the only southern representatives outside of cultivation in Australia. This species exhibits spectacular floral displays. The front cover of this booklet is *Barklya syringifolia* flowers and page 90 shows the heart-shaped leaves.
Coastal Cypress Pine
*Callitris columellaris*

**Family**
Cupressaceae

**Habitat**
Coastal woodland and dry sclerophyll forest on deep sand e.g. Coombabah, Hollywell, Burleigh Heads, Mermaid Waters.

**Description**
- **Habit:** Medium to large coniferous tree up to 30m tall with a single trunk, erect spreading branches and tough furrowed greyish-black bark.
- **Leaves:** Whorled, reduced to scale-like structures 1–3mm long. Three scales per whorl, forming joint-like segments along slender grooved stems.
- **Flowers:** A non-flowering plant. Reproductive parts on woody scales within the cone.
- **Fruit:** Woody cone more or less globose up to 20mm wide.

Note: A tree sensitive to frequent fires and population fluctuation as a result.

Axebreaker
*Coatesia paniculata*

**Family**
Rutaceae

**Habitat**
Rainforest (dry rainforest) on shallow loamy soils e.g. Upper Ormeau.

**Description**
- **Habit:** Small to medium tree up to 20m tall with a dense crown and smooth, light grey bark, occasionally cratered.
- **Leaves:** Simple, alternate, entire, up to 10cm long, glossy, discolorous (dark green above paler below) with a grooved petiole.
- **Flowers:** White, 5-petalled, around 3mm wide arranged in compact panicles up to 9cm long, spring.
- **Fruit:** Small brown, ovoid capsules with a small beak, up to 9mm long.
Brown Tuckeroo  
*Cupaniopsis flagelliformis* var. *australis*

**Family**  
Sapindaceae

**Habitat**  
Rainforest (subtropical rainforest) in mountainous areas on loamy soils e.g. Border Ranges, Springbrook, Tweed Valley, possibly upper reaches of Tallebudgera and Currumbin Valleys.

**Description**  
**Habit:** Small tree mostly up to 5m (rarely to 12m) with smooth brownish-grey to black bark.

**Leaves:** Compound, alternate, with 8–16 toothed leaflets, leathery, glossy above, duller and Shortly hairy on undersides, new shoots rusty-hairy.

**Flowers:** Pink, 5-petalled, up to 8mm wide, arranged in panicles (on long whip-like branches) up to 50cm long.

**Fruit:** Pinkish-brown hairy capsule up to 25mm wide.

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Northern Rose Walnut  
*Endiandra muelleri* subsp. *bracteata*

**Family**  
Lauraceae

**Habitat**  
Rainforest (subtropical, littoral and riparian rainforest) on moderate fertility soils, narrow creek lines protected from fire e.g. Currumbin and Tallebudgera Valleys, Burleigh Head National Park, Neranwood.

**Description**  
**Habit:** Medium to large tree up to 30m tall with smooth, brown bark and a shortly buttressed trunk.

**Leaves:** Simple, alternate, entire up to 9cm long with a rusty-hairy undersurface (straight and crooked hairs), veins sunken above raised below, pits in vein angles (domatia) mostly absent.

**Flowers:** Small, yellowish and hairy up to 2mm long arranged on short, axillary panicles.

**Fruit:** Black ovoid drupe, 20mm long.

Note: Separation of the subspecies are generally based on hair shape, orientation and position.
**Tumbledown Gum**
*Eucalyptus bancroftii*

**Family**
Myrtaceae

**Habitat**
Coastal woodland and heath on deep sand e.g. Miami.

**Description**

**Habit:** Low branching medium tree up to 15m tall with spreading crown, smooth grey bark, bright orange when new.

**Leaves:** Simple, alternate, entire up to 25cm long, falcate (curved) and aromatic when crushed.

**Flowers:** Creamy white up to 25mm wide, cup-like and crowned with a rim of numerous stamens, arranged in axillary umbels (clusters).

**Fruit:** Woody, hemispheric capsule up to 10mm long either with an angled or ribbed surface and 3–4 valves (seed-bearing compartments).

Note: Natural populations of this species are all but extinct on the Gold Coast, with one tree remaining on the coastal plain. Historically, this plant was known to grow at Coolangatta and Miami. First discovered in the region in 1991.

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**Plunkett Mallee**
*Eucalyptus curtisii*

**Family**
Myrtaceae

**Habitat**
Dry sclerophyll forest on rocky ridge tops with sandy or stony soils e.g. Mudgeeraba, Willow Vale, Canungra, Coombabah.

**Description**

**Habit:** Small tree or mallee up to 7m tall with smooth silver grey bark shedding in curly flakes.

**Leaves:** Simple, alternate (sometimes opposite), entire, narrow and lance-like, or falcate (curved) up to 14cm long and discolored.

**Flowers:** White up to 20mm wide, cup-like and crowned with a rim of numerous stamens, arranged in terminal compound (many branched) panicles, spring.

**Fruit:** Woody, cup-shaped and wrinkled 10mm long with 4–5 valves.
Scribbly Gum
_Eucalyptus racemosa_ subsp. _racemosa_

**Family**
Myrtaceae

**Habitat**
Coastal woodland and heath on deep sand e.g. Tugun, Coolangatta Airport, Miami. Also found in hinterland open forest on loam e.g. Ships Stern and Numinbah Valley.

**Description**

**Habit:** Medium tree up to 20m tall (occasionally a mallee) with smooth white, grey to yellow powdery bark covered in scribbles.

**Leaves:** Simple, alternate, entire, narrow and lance-like, or falcate (curved) up to 20cm long.

**Flowers:** Creamy white up to 10mm wide, cup-like and crowned with a rim of numerous stamens, mostly arranged in axillary umbels (clusters).

**Fruit:** Woody, hemispheric capsule up to 6mm long, with 3–4 valves.
White Yiel-Yiel
Grevillea hilliana

Family
Proteaceae

Habitat
Rainforest (subtropical and littoral rainforest) on loam or deep sand e.g. Burleigh Head National Park, Currumbin Valley, lower reaches of Tweed River.

Description
Habit: Small to large tree up to 30m tall with mostly smooth, brownish grey bark, older trees rougher at base and slightly buttressed.

Leaves: Mature leaves up to 30cm long, mostly simple, entire and leathery, immature leaves deeply lobed, both discolorous, glossy dark green above, silver and hairy below.

Flowers: White, up to 10mm long in long racemes up to 20cm long, winter–autumn.

Fruit: Black, boat-shaped woody follicle up to 30mm long.

Cabbage Palm
Livistona australis

Family
Arecaceae

Habitat
Swamp forest and wet sclerophyll forest on a range of soils, coastal plain and foothills e.g. Tallebudgera Valley, South Stradbroke Island, Jacobs Well.

Description
Habit: Palm with a single trunk up to 30m tall, rough bark and prominent circular leaf scars.

Leaves: Compound, alternate, fan-shaped up to 4.5m long and clustered into a terminal crown, petioles with curved spines.

Flowers: Creamy-white up to 5mm wide, arranged in panicles up to 1m long, summer.

Fruit: Black (red when immature) and globose up to 18mm wide.

Note: New shoots reputedly eaten by Aboriginals and early settlers, fruit eaten by Top Knot Pigeons Lopholaimus antarcticus.
**Bush-house Paperbark**  
*Melaleuca irbyana*

**Family**  
Myrtaceae

**Habitat**  
Dry sclerophyll forest, and structural variants of this on a variety of soils but generally poorly drained soils of lower slopes and flats. Only occurrences within City of Gold Coast boundaries are at Yatala.

**Description**

**Habit:** Shrub or tree up to 12m tall with thick, spongy, papery bark.

**Leaves:** Simple, alternate and spirally arranged, appressed (hugging the stem), up to 5mm long.

**Flowers:** White brush-like flowers arranged in spikes 20mm long.

**Fruit:** Small, woody, globose capsule up to 4mm wide.

Note: This species was recognised as common in the Moreton region in 1986. It is now listed as Endangered in Queensland, following extensive clearing of its habitat. The photo on page 3 is a *Melaleuca irbyana* flower.

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**Satinwood**  
*Nematolepis squamea subsp. squamea*

**Family**  
Rutaceae

**Habitat**  
Dry sclerophyll forest and coastal woodland on deep sand, also shallow loams along escarpment crests in mountainous areas e.g. Coolangatta Airport, Tugun, Cobaki and Springbrook.

**Description**

**Habit:** Shrub or tree up to 12m tall with smooth, angled stems.

**Leaves:** Simple, alternate narrow up to 12cm long, discolorous with a silver-grey scaly undersurface and strongly aromatic when crushed.

**Flowers:** White, 5-petalled arranged in axillary clusters (cymes) of 3–20 flowers, spring.

**Fruit:** Small, woody, globose capsule up to 4mm wide.

Note: Coastal plain populations bordering on extinction.
Canary Beach
*Polyalthia nitidissima*

**Family**
Annonaceae

**Habitat**
Rainforest (subtropical, dry and littoral rainforest) on loams and deep sands e.g. Burleigh Head National Park, Nerang National Park. Previously common in the Surfers Paradise littoral rainforest.

**Description**

**Habit:** Shrub or medium tree, up to 20m tall with slightly rough blackish-grey to brown bark patterned with small horizontal fissures.

**Leaves:** Simple, alternate, entire, up to 13cm long, 2-ranked on zig-zagged stems, discolorous, glossy above paler below, distinctive hairy domatia in vein angles of undersurface, swellings from domatia obvious on uppersurface as well.

**Flowers:** Green to yellowish, 6-petalled up to 2cm long, arranged in axillary pairs or singular, spring–summer.

**Fruit:** Dark red, globose to ovoid berry, up to 10mm long.

**SHRUBS**

A shrub is a woody perennial plant up to 8 metres tall generally with many stems arising from ground level.

Much variation in form is typical ranging from ground hugging mat-like plants a few centimetres tall to large robust individuals that approach the appearance of trees. It is important to note that species which develop a tree habit in protected, less exposed, areas may become stunted shrubs in more exposed areas. This is especially the case on south facing slopes of mountain summits and coastal headlands where windshear and shallow soils combine to have a hedging effect on the vegetation.
Blunt-leaved Wattle
Acacia obtusifolia

Family
Fabaceae (Subfamily Mimosoideae)

Habitat
Coastal woodland associated with wallum on deep sand, also along crests of hinterland escarpments on volcanic loams e.g. Tugun, Cobaki and Springbrook.

Description
Habit: Medium shrub to low tree up to 10m tall; smallest branches somewhat angled, bark mostly smooth and grey.

Leaves: Simple, alternate with entire margins. Narrow, straight to slightly curved, up to 20cm long and 30mm wide, waxy when young, hairless with a few prominent longitudinal veins. New growth deep burgundy to reddish.

Flowers: Yellow, tiny, packed into spherical heads up to 13mm wide arranged in spike-like racemes up to 5cm long, late spring–summer.

Fruit: Slender pods, mostly straight and somewhat cylindrical, up to 15cm long. Not obviously constricted between seeds.

Note: Wallum populations nearly extinct on the Gold Coast.
Woolly Star Hair
Astrottricha umbrosa

Family
Araliaceae

Habitat
Coastal woodland and Dry sclerophyll forest on deep sand, especially those associated with wallum e.g. Coolangatta Airport, Cobaki.

Description
Habit: Shrub up to 2m tall with hairy stems and leaves.

Leaves: Simple, alternate with entire margins, narrow, discolorous (two-toned), dark green above, pale yellow below, up to 7cm long, leaf undersurface and petiole covered in tiny, star-shaped hairs.

Flowers: White to pinkish, 5mm wide, outer surface mostly covered in star shaped hairs, arranged in panicles up to 30cm long mostly at the ends of branches; flowering spring.

Fruit: Small, brown and somewhat globose up 4.5mm wide, dry and splitting into two parts.

Dwarf Banksia
Banksia oblongifolia

Family
Proteaceae

Habitat
Coastal heath and woodland on well drained deep sand within the coastal plain generally associated with depressions between sandy rises e.g. Bilinga, Miami, Hollywell, Jacobs Well.

Description
Habit: Spreading shrub mostly up to 2m tall.

Leaves: Simple, alternate with toothed margins. Narrow, up to 8cm long and 2cm wide with U-shaped notches between teeth, young stems and leaves red and hairy (velvet-like).

Flowers: Spectacular yellow dense cylindrical spikes consisting of numerous slender flowers, autumn.

Fruit: Woody follicles up to 1.8cm long, arranged on a central axis.

Note: This species is a primary nectar resource for coastal fauna during flowering events. The life cycle of this plant is strongly linked to fire. The photo on page 48 is Banksia oblongifolia.
**Safrole Boronia**  
*Boronia safrolifera*

**Family**  
Rutaceae

**Habitat**  
Swamp forests (coastal) associated with Wallum generally in drainage depressions with peaty sand e.g. Pine Ridge Conservation Park

**Description**

**Habit:** Shrub up to 2m tall.

**Leaves:** Compound, opposite with 2–8 pairs of small, narrow, entire leaflets up to 15mm long and 3mm wide.

**Flowers:** Pink up to 1cm wide, arranged on terminal or axillary cymes (see glossary), spring–late summer.

**Fruit:** Small, 4-lobed, 4mm long and separating at maturity.

Note: Strongly aromatic. Fewer than 50 plants remain in the wild on the Gold Coast. Plants are known for their spectacular floral displays.

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**Finger Lime**  
*Citrus australasica subsp. australasica*

**Family**  
Rutaceae

**Habitat**  
Rainforest (subtropical, dry and littoral rainforest) on loamy soils e.g. Nerang, Currumbin, Numinbah Valley, Tomewin, Springbrook.

**Description**

**Habit:** Thorny shrub up to 6m tall with dense foliage and smooth greenish-grey bark.

**Leaves:** 1-foliolate (appearing simple), alternate, entire or toothed, narrow up to 4cm long. Tough spines up to 25mm long emerging from the leaf axils.

**Flowers:** White to pink 3 to 4-petalled up to 18mm wide, singular or arranged in axillary clusters, throughout the year.

**Fruit:** Green, blackish or yellow berry, cylindrical to curved up to 8cm long.

Note: Fruits of this plant are edible and are now commercially grown and harvested.
**Mangrove Lollybush**  
*Claroendron inerme*

**Family**  
Lamiaceae

**Habitat**  
Rainforest (littoral and riparian rainforest) and vegetation associated with estuaries at inland edge of high tide zone on loamy soils especially behind mangroves, Burleigh Head National Park, Stotts Island, Tweed River.

**Description**  
**Habit:** Scrambling (semi-climbing) shrub up to 6m tall with arching branches.

**Leaves:** Simple, opposite, glossy up to 14cm long with entire margins.

**Flowers:** White, fragrant, 5-petalled and tubular up 4cm long arranged on axillary panicles, summer and autumn.

**Fruit:** Black, ovoid up to 15mm long.

Note: Very few regional records of this plant exist.

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**Palm Lily**  
*Cordyline congesta*

**Family**  
Astelliaceae

**Habitat**  
Rainforest (subtropical rainforest) and Wet sclerophyll forest on loamy soils e.g. Nerang National Park, Currumbin Hill Conservation Park, Nicholls Scrub National Park.

**Description**  
**Habit:** Palm-like shrub up to 4m tall with tufted leaves at the end of woody stems.

**Leaves:** Simple, strappy, sheathing at the base, linear and lance-like, up to 40cm long, margins of lower third irregularly toothed.

**Flowers:** Cream, bluish to purplish, small up to 10mm long, arranged in panicles at the end of long stalks, spring.

**Fruit:** Red, shiny berry 15mm wide.
Heathy Parrot Pea
*Dillwynia retorta*

**Family**
Fabaceae (Subfamily Faboideae)

**Habitat**
Coastal woodlands and heath on deep sand. e.g. Bilinga, Miami, Pine Ridge Conservation Park.

**Description**

**Habit:** Shrub up to 1.5m tall.

**Leaves:** Simple, alternate, linear, spirally twisted and entire up to 12mm long, pungent pointed.

**Flowers:** Yellow and red, small, 2-winged, 12mm wide arranged variously (e.g. clusters, racemes or singular), early spring.

**Fruit:** Small brown, beaked pod up to 7mm long.

Note: Collected in region by C.T. White in 1912 (Currumbin) and 1933 (Southport). Descriptive notes included, ‘sandy land’ and ‘common in sandy soil edge of large peat swamp’.

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Hop Bush
*Dodonaea megazyga*

**Family**
Sapindaceae

**Habitat**
Wet sclerophyll forest near rainforest margins on loamy soils e.g. Burleigh Heads, Springbrook, Currumbin and Tallebudgera Valleys.

**Description**

**Habit:** Shrub to small tree up to 6m tall.

**Leaves:** Compound, alternate, sticky, up to 15cm long with winged stem (rachis) and 19–31 leaflets.

**Flowers:** Tiny up to 2.7mm long arranged in panicles or clusters, spring–autumn.

**Fruit:** Fragile 3-winged capsule up to 23mm wide.
**Wallum Grevillea**  
*Grevillea leiophylla*

**Family**  
Proteaceae

**Habitat**  
Dry sclerophyll forest on deep sand e.g. Jacobs Well.

**Description**

**Habit:** Small shrub to 1m tall with weak stems and angular branches when young.

**Leaves:** Simple, alternate, narrow, linear, up to 6cm long with a pungent tip and three prominent longitudinal veins.

**Flowers:** Pink, small and spider-like, arranged into a short terminal raceme 1.5cm long, spring to autumn.

**Fruit:** Brown, boat-shaped follicle up to 9mm long.

Note: Only one known Gold Coast record for this species.

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**Wallum Hakea**  
*Hakea actites*

**Family**  
Proteaceae

**Habitat**  
Swamp forest and Dry sclerophyll forest on coastal sands especially with Melaleuca quinquenervia e.g. Russell Island and historically Harbour Town.

**Description**

**Habit:** Shrub up to 3m tall, occasionally 5m.

**Leaves:** Simple, alternate, entire, needle-like, up to 6cm long with a pungent tip.

**Flowers:** White, spider-like up to 4.3mm long arranged in axillary clusters, winter–spring.

**Fruit:** Tough, woody follicles up to 3.5cm long that persist on the shrub after seed release.

Note: There are no confirmed recent sightings of this species within its only known habitat on the Gold Coast. It is currently presumed extinct in the wild within the City of Gold Coast boundaries.
**Shining Burrawang**  
*Lepidozamia peroffskyana*

**Family**  
Zamiaceae

**Habitat**  
Wet sclerophyll forest on hillsides and gullies occasionally  
Dry sclerophyll forest on deep sand e.g. Springbrook,  
Tallebudgera, Currumbin and Austinville Valleys, Cobaki.

**Description**  
**Habit:** Palm-like shrub (a cycad) up to 7m tall with an erect trunk covered in persistent (old, remaining) leaf bases.  
**Leaves:** Compound, alternate, arranged in a spiralled pattern around upper portion of stem, dark green and glossy, 2–3m long each with around 200 leaflets.  
**Flowers:** Non-flowering, separate male and female plants, reproductive structures arranged into spike-like cones up to 60cm (male) and 80cm (female). Male cones cylindrical, female cones egg–shaped, both terminal and singular.  
**Fruit:** Cones producing large seeds with a fleshy outer layer.

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**White’s Tea Tree**  
*Leptospermum whitei*

**Family**  
Myrtaceae

**Habitat**  
Coastal heath and woodland and swamp forest on deep sand e.g. Coolangatta Airport, Tugun, Miami, Burleigh Knoll Conservation Park and Pine Ridge Conservation Park.

**Description**  
**Habit:** Multi–stemmed shrub or small tree with a single trunk, up to 6m tall with fibrous bark that can be peeled off in strips.  
**Leaves:** Simple, alternate, entire, up to 3cm long with an acute blunt point, immature leaves hairy.  
**Flowers:** White 5-petalled, 10mm wide, arranged in terminal clusters (becoming axillary as shoots lengthen), spring.  
**Fruit:** A small non-woody capsule 3–4mm wide with a silky undersurface.
Tall Rice Flower
*Pimelea ligustrina* subsp. *ligustrina*

**Family**
Thymelaeaceae

**Habitat**
Subtropical rainforest (especially in disturbed areas with canopy gaps and exposed soil) and wet sclerophyll forest and on loamy soils e.g. Springbrook and Austinville.

**Description**
- **Habit:** Shrub up to 3m tall with tough bark.
- **Leaves:** Simple, opposite, entire, narrow up to 90mm long, variable in shape with distinct veins on undersurface.
- **Flowers:** White, tubular, up to 17mm long, arranged in terminal clusters (heads) of up to 150 flowers, spring–summer.
- **Fruit:** Small, green ovoid drupe up to 5mm long enclosed in spent flower bases.

Smooth Scrub Turpentine
*Rhodamnia maideniana*

**Family**
Myrtaceae

**Habitat**
Subtropical rainforest and Wet sclerophyll forest on loamy soils often amongst rocks and boulders e.g. Mudgeeraba, Currumbin, Burleigh Heads, Hinze Dam.

**Description**
- **Habit:** Shrub up to 3m tall with flaky-fibrous, reddish-brown bark.
- **Leaves:** Simple, opposite, entire, up to 12cm long, discolored, glossy green above, dull and paler below, 3-veined from base, leaf tip gradually tapered into a point.
- **Flowers:** Pinkish to white, 4-petalled up to 7mm long, arranged in axillary clusters, spring.
- **Fruit:** Black globose berry up to 10mm long, crowned with persistent sepals.

Note: This species was first collected in the Tallebudgera Valley vicinity by Reverend B. Scortechini around 1881. The long term viability of *R. maideniana* populations are threatened by the introduced fungus, Myrtle rust.
Strangea
*Strangea linearis*

**Family**
Proteaceae

**Habitat**
Coastal heath and woodlands on deep sand e.g. Coolangatta Airport, Cobaki, Pine Ridge Conservation Park.

**Description**

**Habit:** Low multi-stemmed shrub up to 1m tall, occasionally larger.

**Leaves:** Simple, ascending, alternate, more or less linear, entire up to up to 6cm long, attached in a spiral pattern around the stem, tipped with a fine point.

**Flowers:** White, 4-tepalled, spider-like up to 4mm long and arranged in axillary clusters.

**Fruit:** A slender, woody follicle up to 4cm long with a small beak at the tip.

Green Five Fingers
*Styphelia viridis subsp. breviflora*

**Family**
Ericaceae

**Habitat**
Coastal heath and woodlands on deep sand e.g. Coolangatta Airport, Cobaki, Pine Ridge Conservation Park.

**Description**

**Habit:** Shrub up to 2m tall

**Leaves:** Simple, alternate, entire, up to 3.5cm long, attached in a spiralled pattern around the stem, gradually narrowed towards the base and sharply pointed.

**Flowers:** Translucent green, 5-petalled, slender and up to 5cm long, singular, axillary, distinctive curly petal lobes and long filaments exerted from throat of flower, spring.

**Fruit:** Green, ovoid drupe, up to 6mm long, 5-angled with a flat top.
GROUNDCOVERS AND VINES

Groundcovers are herbaceous or slightly woody plants that represent the lowest layer of vegetation in a given vegetation community.

Vines are climbing, twining or winding plants with long, woody or herbaceous stems that use the support of vegetation to climb towards sunlight.

Christmas Bells
*Blandfordia grandiflora*

**Family**
Blandfordiaceae

**Habitat**
Coastal heath, generally in broad drainage depressions with peaty sand e.g. Coolangatta Airport.

**Description**

**Habit:** Tufted herb with a central flowering stalk up to 80cm tall.

**Leaves:** Simple, 2-ranked but crowded at base, long and narrow with a v-shaped channel in the middle and crenulate margins (appearing entire), up to 70cm long and 5mm wide.

**Flowers:** Bell-shaped, orange and yellow (occasionally yellow), up to 6cm long and 3cm wide, arranged on a raceme at the end of long erect stalk 80cm tall, late spring–early summer.

**Fruit:** Papery capsules up to 6cm long.

Note: An iconic heathland species famed for mass flowering events following fire. Fewer than 50 plants remain in their original habitat on the Gold Coast. It is listed as Endangered in Queensland.
Leafy Twigrush
*Cladium procerum*

**Family**
Cyperaceae

**Habitat**
Generally freshwater wetlands and swamp forests e.g. Coombabah, Reedy Creek, Tallebudgera Valley. Occasionally associated with low to moderate levels of salinity.

**Description**

**Habit:** Large clumping sedge up to 2.5m tall, with noded stems.

**Leaves:** Basal, long and narrow (linear) up to 2cm wide and 2.5m long, V-shaped in cross section with finely serrated margins and midrib (appearing entire). Leaf base completely enclosing the stem.

**Flowers:** Inconspicuous, hidden in small spikelets that are arranged in panicles on long stems 2.5m long.

**Fruit:** Small, brown, shiny ovoid nut up 2mm wide.

Note: Reproduces asexually from plantlets that develop on long stems. First collected in the region in 1897 at Tumbulgum by the botanist W. Baueulen who noted its habitat as ‘at edge of a saltwater creek’.

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Love Creeper
*Comesperma volubile*

**Family**
Polygalaceae

**Habitat**
Swamp forest associated with Wallum on peaty sands e.g. Tugun, Cobaki, possibly South Stradbroke Island, also wet eucalypt vegetation in mountainous areas.

**Description**

**Habit:** Slender, mostly leafless, twining herb up to 2m long with ribbed branchlets.

**Leaves:** Simple, alternate, narrow, linear up to 6cm long with entire margins.

**Flowers:** Bluish to purplish-pink, occasionally white, small and 2-winged, up to 10mm long arranged in terminal racemes, spring.

**Fruit:** Slender capsules up to 1.5cm long narrowing to the base.

Note: First collected in the region at Tallebudgera around 1881 by Reverend B. Scortechini who referred to its habitat as ‘at the edges of jungles’. Most known locations of this species within the coastal plain have been cleared.
A Slender Sedge
*Cyperus stradbrokensis*

Family
Cyperaceae

Habitat
Coastal forests, especially littoral rainforest, on deep sand, often where ground has been disturbed e.g. Bilinga, Surfers Paradise, Coolangatta Airport.

Description
**Habit:** Small tufted sedge up to 45cm tall.

**Leaves:** Basal, 3-sided, slender and wiry up to 40cm long and 1.5mm wide.

**Flowers:** Inconspicuous, hidden in small spikelets 5mm long that are arranged variously (either solitarily or in clusters), sometimes on rays (umbel stalks), above 3 leafy bracts at the end of long stems.

**Fruit:** Tiny 3-sided nut 0.8mm long, dark brown and ovoid.

Note: Collected at Southport in 1933 by H.G. Cribb who referred to the habitat as, ‘along roads in sandy places. Partly scrub country, flat.’

Wallum Dampiera
*Dampiera stricta*

Family
Goodeniaceae

Habitat
Coastal woodland and heath on soils of low fertility e.g. Russell Island.

Description
**Habit:** Multi-stemmed herb (occasionally woody at base) to 60cm tall, sharply 3-angled stems.

**Leaves:** Simple, alternate, narrow and occasionally toothed, up to 3.5cm long and clustered at intervals along the stem.

**Flowers:** Purple, 5-petalled and notched, fanned-out in appearance, axillary mostly in clusters or solitary, spring–summer.

**Fruit:** Small hairy nut 3mm long, ribbed, crowned in dry sepals.
**Spear Lily**
*Doryanthes palmeri*

**Family**
Doryanthaceae

**Habitat**
Montane heath, cliff faces, and Wet sclerophyll forest near rainforest often on shallow low fertility soil e.g. Springbrook, Bonogin, Currumbin and Tallebudgera Valleys.

**Description**

**Habit:** Giant rosette herb up to 3m tall.

**Leaves:** Simple, basal, entire, sword–shaped up to 3m long and 20cm wide.

**Flowers:** Red, with 6 spreading tepals up to 12cm long arranged on a toothbrush-like raceme at the end of a giant scape (flowering stalk) up to 5m long, spring.

**Fruit:** Brown ovoid capsule up to 9cm long.

Note: The photo on pages 4 and 5 shows the flower stalk of *Doryanthes palmeri*. This species is an important nectar resource for fauna. A Paradise Riflebird is shown in the photo on page 75, visiting the plant to feed on its flowers.
Buffalo Spinach
Enydra woollsii

**Family**
Asteraceae

**Habitat**
Swamp forest and Freshwater wetlands on peaty soils e.g. Pimpama, Coombabah, Merrimac and Tallebudgera Valley.

**Description**

**Habit:** Soft perennial herb up to 20cm tall and 100cm wide with creeping stems that root at the nodes.

**Leaves:** Opposite, simple, up to 8cm long, margins entire to toothed.

**Flowers:** Yellow and clustered, arranged in an axillary capitulum or head, spring–summer.

**Fruit:** Black and narrow up to 2.7 mm long, finely striped with longitudinal ridges and grooves.

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Tall Sawsedge
Gahnia clarkei

**Family**
Cyperaceae

**Habitat**
Coastal swamp forest and creek banks, often on peaty sand e.g. Miami, Coolangatta Airport, Tugun, Miami, Pine Ridge Conservation Park, South Stradbroke Island.

**Description**

**Habit:** Large tufted sedge, up to 2m tall.

**Leaves:** Grass-like, basal, flat, inrolled and up to 200cm long with finely sharp toothed margins (appearing entire).

**Flowers:** Inconspicuous, hidden in small chaffy spikelets 6mm long. Spikelets arranged in drooping panicles (several clusters of branches) up to 120cm long.

**Fruit:** Small, variously egg-shaped, orange to red nut 3 mm long, shiny and faintly 3-sided.

Note: Host plant for the Swordgrass Brown Butterfly, *Tisiphone abeona* subsp. *morrisi*. This butterfly species has been subjected to enormous habitat loss in recent decades and is now restricted in Queensland to *Gahnia clarkei* populations on the Gold Coast. The photo on page 78 shows a female Swordgrass Brown Butterfly resting on *Gahnia clarkei*. 
Stream Lily
*Helmholtzia glaberrima*

**Family**
Philydraceae

**Habitat**
Rainforest (subtropical rainforest) associated with head water streams, protected gullies and wet slopes e.g. Upper Currumbin and Tallebudgera Valleys, Border Ranges.

**Description**

**Habit:** Large clumping herb, up to 2.5m tall.

**Leaves:** Simple, basal, entire, strap-like up to 2.5m long.

**Flowers:** White to pink 10cm long on erect terminal panicles up to 70cm long, spring–autumn.

**Fruit:** Capsule compressed, ball-like (ellipsoid) up to 7mm long.
A Guinea Flower
_Hibbertia vestita_ var. _thymifolia_

**Family**
Dilleniaceae

**Habitat**
Dry sclerophyll forest and coastal heath on infertile shallow soils e.g. Russell Island.

**Description**

**Habit:** Low shrub up to 30cm tall with low spreading branches.

**Leaves:** Simple, alternate, small, linear and entire, up to 9mm long with rounded tips and curved margins.

**Flowers:** 5-petalled, yellow up to 16mm wide, terminal and solitary (singular), somewhat notched, spring–summer.

**Fruit:** A small hairy follicle.

Note: Varietal separation appears to be based on habit and slight differences in leaf length and shape, all of which may overlap.

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Slender Milk Vine
_Marsdenia coronata_

**Family**
Apocynaceae

**Habitat**
Dry sclerophyll forest and woodland on ridgetops and hillsides on shallow, well-drained soils e.g. Guanaba, Ormeau, Reedy Creek.

**Description**

**Habit:** Slender, wire-like vine up to 3m long with milky sap. Stems have 2 vertically spiralling bands of small hairs on their surface.

**Leaves:** Simple, opposite and discolourous up to 5.5cm long.

**Flowers:** Small, yellow-green, bell-shaped, 5-petalled, up to 4mm wide arranged in axillary clusters (umbels), summer.

**Fruit:** Green follicle, spindle-shaped up to 10cm long with silky seeds.
**Swamp Orchid**  
*Phaius australis*

**Family**  
Orchidaceae

**Habitat**  
Swamp forest on waterlogged peat to peaty sand e.g. Coolangatta Airport, Jacobs Well, South Stradbroke Island.

**Description**

**Habit:** Large terrestrial orchid up to 2m tall.

**Leaves:** Large, simple, alternate, 2-ranked, entire up to 120cm long and distinctly pleated. Plants generally have 4–8 leaves.

**Flowers:** Spectacular, large and spreading up to 15cm wide (or not opening widely), red brown and white with yellow stripes on inner surface, flowers arranged on long-stalked racemes up to 2m tall, spring–summer.

**Fruit:** Large 3-chambered capsules.

Note: This species is listed as Endangered under State and Federal legislation. It has the largest flowers of any Australian orchid.

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**Vanilla Lily**  
*Sowerbnea juncea*

**Family**  
Anthericaceae

**Habitat**  
Coastal heath (wet heath) in broad drainage depressions on peaty sand e.g. Coolangatta Airport, possibly Tugun, Pine Ridge Conservation Park.

**Description**

**Habit:** Tufted herb up to 75cm tall.

**Leaves:** Simple, basal, entire, wire-like, narrow up to 50cm, light bluish-green.

**Flowers:** Pink to white, 6-tepalled up to 10mm long arranged in clusters (umbels) on stalks up to 75cm tall, smelling of vanilla, spring.

**Fruit:** Small 3-lobed capsule up to 3mm wide.

Note: An iconic wallum plant known for its spectacular, mass flowering events after fire. The image on page 89 shows the flowers of the Vanilla Lily.
Scale Rush  
*Sporodanthus interruptus*

**Family**
Restionaceae

**Habitat**
Coastal wet heathlands in broad drainage depressions on peaty sand e.g. Coolangatta Airport, possibly Tugun, Pine Ridge Conservation Area.

**Description**

**Habit:** Densely clumped herb with long wiry, branched, stems up to 80cm tall and 1mm wide, separate male and female plants.

**Leaves:** Reduced to sheaths that surround the stems at intervals, each sheath has a deciduous, downward facing, wire-like leaf blade emerging from the top, around 5mm long.

**Flowers:** Tiny up to 3.5mm long, red and arranged into well-spaced spikelet-like clusters either terminal or along the upper parts of stems, spring.

**Fruit:** Tiny ovoid capsule, 1mm long.

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Tufted Blue Lily  
*Thelionema caespitosum*

**Family**
Phormiaceae

**Habitat**
Coastal heath and coastal woodland (wallum) on peaty sand restricted to Pine Ridge Conservation Park, Southern populations previously known from the wet heath at Tugun are now extinct.

**Description**

**Habit:** Tufted herb up to 90cm tall.

**Leaves:** Simple, 2-ranked, basal, linear up to 55cm long, flat or slightly folded with a minutely warty surface.

**Flowers:** Purplish, 6-tepalled, around 2cm wide and arranged on long-stalks in an open branched cyme with 2 or 3 major branches and up to 7 minor branches, summer.

**Fruit:** A narrow ovoid capsule up to 10mm long, 3-sided towards the top.

Note: The photo on pages 90–91 are of *Thelionema caespitosum* flowers.
<table>
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Information and advice

The City of Gold Coast’s Conservation Partnerships team offers a number of services for private landholders (including Land for Wildlife, Voluntary Conservation Agreements and the Nature Conservation Assistance Program) to help you identify native plants and weeds, restore bushland that has been cleared or disturbed, and protect your property.

Visit cityofgoldcoast.com.au/conservationpartnerships or call 07 5582 8896 to find out how we can help you manage your property’s bushland.

You can connect with nature by getting involved in the environmental volunteer opportunities available through the Bushcare and Beachcare programs. The NaturallyGC program has a range of free and low cost nature based education workshops, activities and events.

Recommended references

Books

*Mangroves to Mountains: A Field Guide to the Native Plants of South-east Queensland* (revised 2008 edition)
Logan River Branch SGAP (Qld Region) Inc.


Websites

cityofgoldcoast.com.au/conservationpartnerships

goldcoastflorafauna.com.au

Free City publications

*Threatened rainforest plants of the Gold Coast*
*Environmental weeds and native alternatives*
*Landholders Guide*

To obtain a copy of these free publications email conservationpartnerships@goldcoast.qld.gov.au or call 07 5582 8896.

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FOR MORE INFORMATION

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