

# SLCMA Catchment News 2021



**Feb 2021**

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*Office opening  
hours:*

*9am-2pm weekdays.*

*Other times by  
appointment, please  
call 4956 1388 :)*

## **Staff**

### **Administration Officer**

Kristy Thomsett

### **Coordinator**

Saskia von Fahland

### **Nursery Officer**

### **Project Officer**

Morgan Thomas

### **Call us for information:**

- ◇ Weed management
- ◇ Plant identification
- ◇ Land management
- ◇ FREE property visits
- ◇ Land for Wildlife

### **Volunteer opportunities:**

*SLCMA Community Volunteer Program, Wednesday 9-12 noon—**please register prior, to attend.***

**Native plants** available for purchase \$3 each.

### **SLCMA Executive 20/21**

**Chair:** Mark Evans

**Vice-chair:** Lachlan McBride

**Treasurer:** Kevin Plumb

**Secretary:** Shirley Sidey

### **Executive members:**

Sandy Evans

Karen May



## **SLCMA News!**

**VISITORS AND VOLUNTEERS** — To ensure that all visitors, volunteers and staff stay as safe as possible. Please be aware of the following procedures when visiting the SLCMA Office and SLCMA Community Nursery.

- ◆ Please do NOT visit if you are feeling unwell, have recently travelled to known hotspots or have been in contact with someone who has had the COVID-19 virus.
- ◆ All visitors must:
  - ◆ Complete the sign-in/out register
  - ◆ Maintain social distancing (minimum 1.5m spacing)
  - ◆ Utilise hand sanitiser supplied upon entry & exit to the office or nursery

## **Volunteering Queensland Grant—successful**

SLCMA was successful in our application for the 2020 Supplementary Volunteer Grant program as part of the Australian Government and Volunteering Queensland's work to support the efforts of Australian volunteers. The grant was available to eligible organisations to help support the efforts of Australian volunteers, help support the inclusion of vulnerable people through volunteering, encourage, support and increase participation in volunteering.

Volunteerism within our organisation is an essential part of what we do and how we operate. Our volunteers participate in many facets of the organisation including our Management Committee (guide the strategic direction of the organisation) and Nursery team (propagate and grow native plants for rehabilitation projects) as well as other volunteer events such as National Tree Day and Great Northern Clean Up.

SLCMA's goals for the grant were to:

- Encourage, support and thank our current Landcare volunteers for volunteering in Landcare activities.
- Inspire and recruit new Landcare volunteers
- Provide a safe environment for Landcare volunteers to operate in
- Re-engage and motivate our Landcare volunteers particularly since the easing of COVID restrictions.

As a result of the grant, SLCMA was able to:

- Update workplace health and safety signage within the nursery and office
- Contribute to the reimbursement of volunteer's fuel costs who use their own vehicle for volunteering activities
- Purchase a microwave and esky to support volunteer activities
- We were also able to host



Photos: S. von Fahland

We were also able to host a volunteer re-engagement event, which was at the Mackay Regional Botanical Gardens (MRBG) on the 10th of February. The event comprised of a guided tour by the very knowledgeable, Friends of the Gardens volunteer, Maya Harrison. We learned so much during our tour, and were captivated by some of the flora and fauna we had the opportunity to view and discuss.

The tour wrapped up and was followed by a delicious morning tea at the Lagoons Café for our volunteers, to reaffirm our appreciation for our volunteers and everything that they do for us. Without our volunteers we wouldn't be able to function so effectively and meaningfully, so, THANK YOU!

We thank Volunteer Queensland for the opportunity to support and thank our volunteers.

*Funded by the Australian Government Department of Social Services and supported by Volunteering Queensland.*



## Weed Feature: Ruby Alternanthera

Ruby Alternanthera (*Alternanthera barsiliana* 'Rubiginosa') otherwise known as purple joyweed or purple/ruby alternanthera; is an ornamental garden escapee which we are seeing more frequently invading our natural environment.

Native to southern Mexico, Central America, the Caribbean and tropical South America, this plant is a long-lived small, herbaceous shrub growing up to approximately 2m. It is historically (and still today) used in gardens as a long-lived mounding groundcover with a compact yet spreading habit. Ruby Alternanthera is also known to climb over other plants where it can reach a height of up to 4 meters.

Ruby Alternanthera is most commonly identified by its reddish or purplish stems (depending on the amount of sunlight that they receive) which are finely hairy when young but become hairless as they age. The whitish flowers are small, papery and are arranged in very dense clusters in the upper leaf forks or at the tips of branches.

It is now considered naturalised in coastal districts of northern and eastern Australia. It often escapes from gardens or areas of dumped garden waste where it aggressively invades adjacent environmentally sensitive areas such as creek lines and open forests. It has the capacity to form a dense population which will dominate the ground layer of that area, degrading natural habitat by reducing or preventing natural regeneration and potentially shading out smaller plant species. Alternanthera plants are also known to exhibit *allelopathy*, in which it produces one or more biochemicals which negatively influence the germination, growth, survival and reproduction of other plants.

The driving force behind Ruby Alternanthera's aggressive invasion is its ability to reproduce by seed as well as vegetatively via the rooting of stems and stem segments (*much like Syngonium and Singapore Daisy*) which come in contact with soil. This reproductive strategy means that it is commonly spread by water, mowing and dumped garden waste. Ruby alternanthera is considered an environmental weed under QLD legislation, and as such is still currently being used in horticulture. However due to its extremely invasive nature locally, we advise controlling any infestations and using a native alternative to reduce or prevent any new colonies establishing. We currently stock a variety of alternative native groundcovers such as *Apowollastonia spilanthoides* and *Melanthera biflora*, which do not pose a risk to our natural areas.

Ruby alternanthera can be controlled manually or with the use of herbicides. Herbicides via foliar spray has been found to be most effective as they significantly reduce the chance of propagation by any broken pieces. Manual removal is possible too, however, all pieces of the plant need to be collected and disposed of correctly e.g. in land-fill rubbish bins and **not** as green waste. As with all control options, follow up monitoring of the site and ongoing control will be required.

**Information sourced from:** Brisbane city council. (n.d.). Weed Identification Tool. Retrieved from: <https://weeds.brisbane.qld.gov.au/weeds/purple-joyweed>.

## SLCMA Community Nursery Volunteer Program *by Morgan Thomas*

January rain has meant that many of the seeds sown last month have begun to vigorously germinate. This has given the volunteers lots of seedlings to pot-on into individual tubes. We have also been able to move many plants out of the greenhouse and onto our sun hardening bench, in preparation for planting. Some of the species sown over the last month include: *Eucalyptus tereticornis* (Blue gum), *Macaranga tanarius* (Macaranga), *Planchonia careya* (Cocky Apple), *Melaleuca leucadendra* (Weeping bottlebrush) and *Banksia integrifolia* (Coastal banksia). So look out for these as tubestock later in the year! We have also had fresh new faces join our volunteer team, which has been great to see. Our volunteers have been pivotal in maintaining our current plants in the nursery; keeping up with the weeding and topping-up of fertilizer, ensuring our plants are healthy and weed-free. They have also helped with washing pots to ensure no diseases or pests make their way into our new plants.

A special mention to Peter who has been tending to the plants in the Sarina Community Native Gardens, he is particularly proud of the Native Rosella (*Abelmoschus moschatus*) which are in full flower, after the recent rain.

If you would like to volunteer in your local community and meet new people while learning about local native plants and their propagation, come along to the SLCMA Community Volunteer morning, every Wednesday, 9am to 12noon. SLCMA Community Volunteer Program is proudly supported by Mackay Regional Council, Natural Environment Levy. For more details contact SLCMA on 4956 1388.



Photo: P Alden



Photo: S von Fahland

Infestation of Alternanthera among *Melaleuca* sp., smothering native ground covers.



Photo: S von Fahland

## Our local mangroves *by Morgan Thomas*

Mangrove significance is often forgotten, sometimes being thought of as wastelands with little importance. However, this could not be further from the truth; they provide a plethora of ecological values to their environments.

Mangroves provide essential resources to a long list of fauna including fish that utilise mangroves for breeding grounds, feeding and shelter; birds that utilise the mangrove communities for feeding and roosting (*including many migratory species which can travel vast distances, >5000km*) and; crustaceans which not only exploit mangroves for feeding, reproduction and protection they also help with nutrient cycling.

Mangroves help to filter nutrients, sediments and reduce erosion by slowing water flow and trapping and stabilising sediments. They also provide substantial protection to coastal foreshores from storms and cyclones which may otherwise batter the coastal vegetation communities. Lastly and most importantly in our ever-changing climate, mangroves act as a carbon sink, storing the captured carbon in their bodies and in sediment. On a per hectare basis, our coastal wetland ecosystems can capture up to 66 times more carbon and store 5 times more carbon in their soil when compared to terrestrial ecosystems.

There are approximately 40 species of mangrove found in Queensland alone, with approximately 18% of the 13,347km of coastline in Queensland having mangroves present. Typically, the seaward side of the mangrove ecosystem houses a fringe of Australia's most common mangrove, the grey mangrove (*Avicennia marina*) which is best suited to a range of soil conditions and early colonisation, hence its wide distribution. The mangrove apple (*Sonneratia alba*) frequently grows in this zone too. The red mangrove (*Rhizophora stylosa*) is generally found behind this zone with its specialised long prop roots help to secure it against wind and waves. The next zone landwards represents a firmer substrate with more saline conditions given the evaporation of saltwater leaving behind salt which is not diluted until next spring tide. This area is typically where salt marshes occur, although the yellow mangrove (*Ceriops tagal*) is known to be found in this zone occasionally. Less saline parts of this area are typically home to the orange mangroves (*Bruguiera exaristata* and *Bruguiera parviflora*).

The biggest threats to our mangrove species are development, erosion, declining water quality (increased sediments, nutrients and pesticides), marine oil pollution, uncontrolled stock access, climate change, disturbance events and human use (fishing, off-road vehicles, dumping of rubbish/waste). In this respect, we can help to protect mangroves by fencing off (with wildlife friendly fencing) mangroves to prevent stock access, designing structures such as jetties to minimise impact, avoid walking/riding/travelling through mangrove areas, disposing of rubbish/oils/chemicals in the correct manner, and reporting activities harming mangroves. Anyone can call a 24-hour toll-free Fishwatch hotline on 1800 017 116 to report any damage.

*All marine plants (including mangroves) are protected by law in QLD and a permit is required for operational works involving their removal, damage or destruction. Those caught breaking these laws face on-the-spot fines of \$1334, and penalties up to \$598,500 may apply in cases which are prosecuted in court.*

## SLCMA Community Nursery 'Plant of the Month'

This month's 'Plant of the Month' is the **Palm Lily** (*Cordyline petiolaris*) **Family:** Asparagaceae

**What is in a name?** Cordyline from the Greek *kordyle* —refers to the club-like roots of some species. Peitioarlars from the Latin *petiolaris* meaning a petiole or leaf stalk which is referring to the long petioles of this species.

**Form:** Shrub to around 5 metres tall, often sprawling and branched.

**Leaves:** 30 to 80 cm long and 4 to 12 cm wide, elliptic. Leaves on long unrolled leaf stalk.

**Flower:** White or lilac flowers, occurring late winter to spring.

**Fruit:** Fleshy red berries 7 to 10 mm and can remain on the plant for many months.

**Habitat:** Rainforests and wet sclerophyll forests.

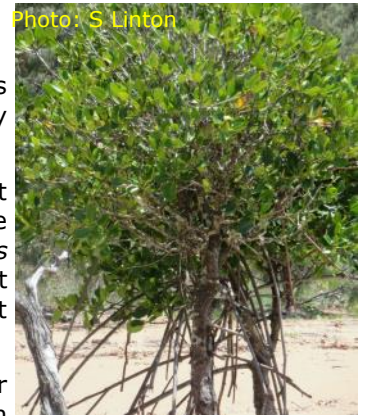
**Distribution:** Central eastern QLD and northern NSW

**Notes:** Germinates easily from seed, larger plants can be divided easily, and stem cuttings also strike readily.

The "**Plant of the Month**" is currently available from the SLCMA Community Nursery. Landcare members are eligible to receive 1 free "Plant of the Month", throughout that month. This and other native plant species are also available for purchase at \$3 each. All plants are grown from locally sourced seed in the SLCMA Community Nursery by SLCMA staff and the SLCMA Volunteer team.

**Information sourced from:** Melzer and Plumb (2007) *Plants of Capricornia*, Townsend (1994) *Across the Top—Gardening with Australian Plants in the tropics*, the *Atlas of Living Australia* and *Australian Native Plants Society*.

Photo: S Linton



# Australia's native bees *by Morgan Thomas*

Bees provide a multitude of benefits to the environment as well as agricultural, and horticultural industries— through their pollination services. Pollination is essential for the majority of the world's seed plants, to enable successful reproduction. While successful pollination occurring, plants can ensure they maintain their genetic diversity in the landscape, produce enough seeds for dispersal and propagation, and develop fruits sufficient enough to entice seed dispersers and therefore colonise additional areas.

Because of the natural and agricultural world's dependency on bees, our pollinators have sparked increasing public concern surrounding their wellbeing and survival, given global honeybee population declines and the potential threat to the industry. The common commercial honeybee (*Apis mellifera*) is not native to Australia, instead originating in Europe and being brought into Australia around 1822 for honey production.

Australia also has it's own bees, being home to roughly 2000 native bee species, with only around 12 of these being 'social bees' that live in hives or colonies. The vast majority of our native bee species are solitary insects, building their own nest but often living near other bees of the same species.

The major groups of Australian native bees are:

- **Stingless bees:** Our most commonly known native honey bees cannot sting you! They are black and range from 3-5mm. They live inside a resinous nest with a queen, males and hundreds of worker bees. Typically nesting in tree hollows but also in urban situations such as inside wall cavities.
- **Carpenter bees:** Growing between 15 and 24mm long, carpenter bees are the largest native bee in Australia. Females have a glossy black abdomen and bright yellow fur on the thorax, whereas males are covered uniformly with a yellowish brown fur. These bees cut nest burrows in soft timber, decayed wood or pithy stems.
- **Reed bees:** A much more slender bee, growing less than 8mm long. Some species exhibit a red abdomen. These bees nest inside dried or pithy twigs (such as Lantana). Many species of reed bee have a yellow patch on their face. Many people do not realise that these colonies are present when removing plants from gardens.
- **Blue-banded bees:** These bees have metallic stripes of blue-green or blue-white and black bands of hair across their black abdomens and grow between 8 and 13mm long. Females build their own individual nests in shallow burrows. They are gregarious, meaning many females build their nests close together.
- **Teddy bear bees:** Fluffy, round and, between 7 and 15mm long, the teddy bear bees build shallow nest burrows in soft soil and sometimes nest underneath houses. The hair on the top of their thorax becomes worn as they age and can become a bald spot. These are solitary bees but many may nest together in one location.
- **Leafcutter bees:** Ever see rows of neat circular cuts on the edge of some leaves in your garden? These bees (6 to 15mm long) are likely the cause, using the leaf cuttings to build a nest.
- **Resin bees:** Coming in a variety of colours and sizes, resin bees nest in pre-existing holes or gaps in timber or stonework. These bees collect resin to build partitions between their brood cells and seal their nest holes. They become common residents of bee hotels.
- **Homalictus bees:** A very small bee (typically, less than 8mm), these bees come in a large array of colours from Golden blue, coppery red and green tinged with purple. Homalictus bees dig intricate branching nests in the ground. Females may live together in a nest, taking turns to guard the nest entrance.
- **Masked bees:** These slender black bees aptly named because of the pale markings on their face. Typically the abdomen of these bees also has a distinctive yellow spot. They nest in pithy stems or pre-existing holes in wood, weaving their brood cells from a cellophane-like secretion.

Stingless bees in particular are becoming more and more popular for bee enthusiasts, educational industries, and landholders because they are low maintenance, fun, help pollination, create honey and as their name suggests, they have no sting.

Australia's vegetation is highly varied, with an array of small herbs and understory plants to large trees, all of which provide abundant pollen and nectar, suited to the needs of our native bee species. There is however uncertainty about the long-term availability and security of our natural resources which provide our bees with their essential resources (food, habitat, protection etc.).

Australia has undergone dramatic changes across its history, such as land clearing, wildfire, agricultural practices and change in land tenure which all may have altered the availability of these resources. Compounding this impact is the unreliability of honey flows (one of more major nectar sources are in bloom and the weather is favourable for bees), i.e., good flowering from usually productive species does not always result in a good crop.



Photo: QLD Museum



Photo: NSW DPI



Photo: LfW SEQ



Photo: Healthline



Photo: E. Siegel



Photo: B. Luttrell



Photo: A. Schnebelin

Above: **A:** Stingless bee. **B:** Teddy bear bee. **C:** Blue banded bee. **D:** Carpenter bee. **E:** Leaf cutter bee. **F:** Resin bee. **G:** Masked bee

## Australian native bees continued...

Flowering can also easily be influenced by climatic variability, rainfall fluctuations, geography and even intraspecies variation, which all provide further negative flow on effects to our pollinators such as reductions to flowering frequency, flowering abundance and nectar flows. Therefore, planting bee forage can offer major benefits to the industry, society, and the environment.

**So, what can we do to help our essential pollinators?** Simply put, we can plant more melliferous (yielding or producing honey) flora. By focusing on melliferous species or those already present in the remnant vegetation on your property, you could ultimately improve the honey and pollen yields and therefore make the site a viable bee habitat and therefore potentially encouraging native bees to naturally move onto your property!

It goes without saying, plant species which are native to your area are the most ideal, as they can handle the conditions, won't have weed potential, and can provide a plethora of benefits to the ecosystem as a whole opposed to simply one species. Below is a list of beneficial native species which occur in the Sarina catchment, with some being stocked in our nursery. The list is a general guide and suggestions should not be considered the only options.

Table 1: Valuable native species for native bee use in the Sarina catchment and availability in our nursery.

Common name	Species name	Notes	SLCMA nursery
<b>Eucalyptus</b>	<i>Eucalyptus tereticornis</i> , <i>Eucalyptus crebra</i> , <i>Eucalyptus robusta</i> .	Strongly preferred by native bees. Prolific flowering provides a large array of pollen and nectar for native bee species. Mature trees can also be an important source of resin for resin bees.	Yes Yes Yes
<b>White cedar</b>	<i>Melia azedarach</i>	Liked by stingless bees and flowers prolifically when flowering occurs.	Yes
<b>Bottlebrush</b>	<i>Melaleuca viminalis</i>	Nectar rich flowers attract many native bees and utilised as a resting place for some bee species.	No
<b>Red silky oak</b>	<i>Grevillea banksii</i>	Liked by stingless bees for pollen and nectar.	Soon
<b>Lilly pilly</b>	<i>Syzygium australe</i> , <i>Syzygium luehmannii</i> .	Liked by stingless bees.	Yes No
<b>Banksia</b>	<i>Banksia integrifolia</i>	Used by a variety of native bees.	Soon
<b>Pigface</b>	<i>Carpobrotus glaucescens</i>	Liked by stingless bees.	Yes
<b>Grass trees</b>	<i>Xanthorrhoea sp</i>	A favourite for stingless bees and a good indicator of their presence. Old stems can be used by carpenter bees for nest sites.	Soon
<b>Flax lillies</b>	<i>Dianella caerulea</i>	Used by stingless, leafcutter, reed bees, and various other bees.	Yes
<b>Melaleuca sp</b>	<i>Melaleuca leucadendra</i> , <i>Melaleuca polandii</i> , <i>Melaleuca viridiflora</i> , <i>Melaleuca dealbata</i> .	Abundant flowers provide a major pollen resource throughout the year which attracts a range of native bee species.	No Few No No
<b>Brown Kurrajong</b>	<i>Commersonia bartramia</i>	Extensive coverage by flowers provides a plethora of pollen for bee species.	Yes
<b>Acacia sp.</b>	<i>Acacia leptocarpa</i> , <i>Acacia simsii</i> , <i>Acacia flavescens</i> .	Pollen and in some cases, nectar, used by almost all bee species.	Yes Yes Soon
<b>Yellow rattlepod</b>	<i>Crotalaria mitchellii</i>	Liked by resin bees.	Yes
<b>Palms</b>	<i>Archontophoenix alexandrae</i>	Popular with stingless bees even after flowers have been cut for pollen.	Yes
<b>Tuckeroo</b>	<i>Cupaniopsis anacardioides</i>	Liked by stingless bees.	Soon
<b>Red Kamala</b>	<i>Mallotus philippensis</i>	Liked by stingless bees.	Yes
<b>Crinum lily</b>	<i>Crinum pedunculatum</i>	Liked by stingless bees.	Yes

Revegetation along creekbanks can also help to bolster bee communities. Often there are large stretches of riparian zones which have been cleared or lack any vegetation, taking up a significant amount of space. By revegetating with native bee forage, you increase the potential for establishing high-value bioactive plantings. You will also have the added benefit of strengthening your stream banks. Bees use streams for movement, as they provide unhindered flight paths, so their health is extremely beneficial to our native pollinators. When revegetating, by planting three or more pollen producing species which flower during the same period, you are providing insurance for the bees if any one should fail or fall short in their pollen and nectar production in that particular season. Likewise, planting different species which flower at different time will ensure that bees have the resources they require year round.

You can also help your local natives by avoiding the use of pesticides around areas where bees have been seen, make or buy bee hotels, leave undisturbed ground and vegetation for burrowing bees and provide year-round pollen. We also advise leaving any naturally occurring native bee hives that you find, as moving or disturbing the bee hive can negatively impact the bees and lead to their destruction.

**Information sourced from:** Dollin, A (n.d.). *Which native bees are in your area?* ([www.aussiebee.com.au/beesinyourarea.html](http://www.aussiebee.com.au/beesinyourarea.html)); Dollin, A (n.d.). *FLOWERS LOVED BY AUSTRALIAN NATIVE BEES.* ([www.aussiebee.com.au/flowerslovedbybees.html](http://www.aussiebee.com.au/flowerslovedbybees.html)); Heard, T. (2016) *The Australian Native Bee Book.*



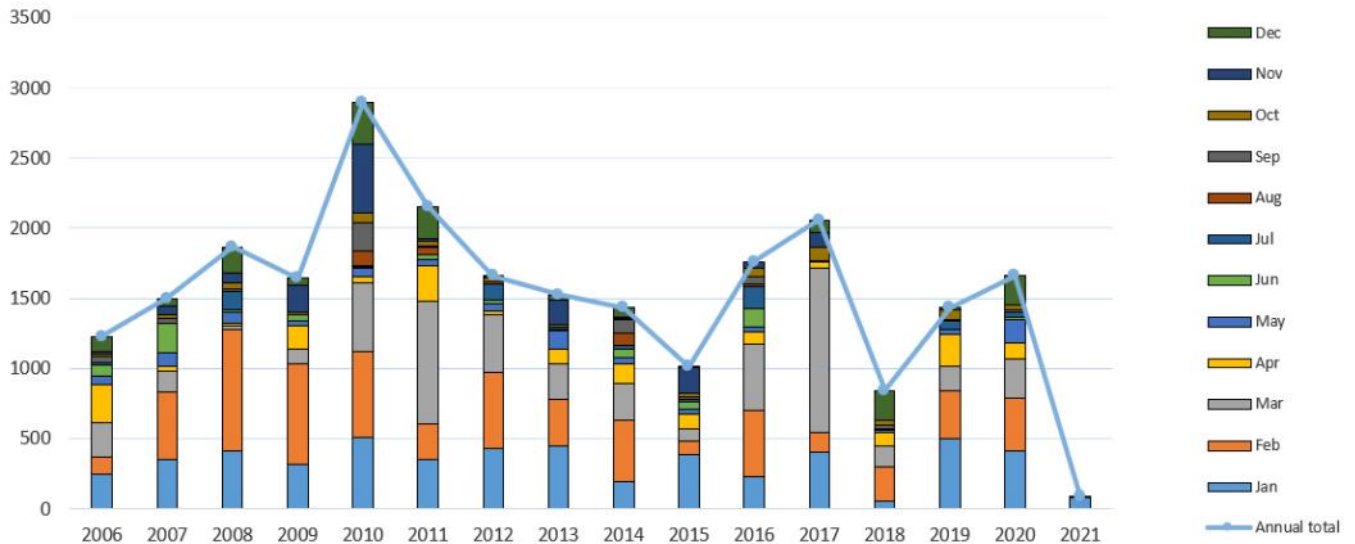
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## What SLCMA Membership does for you !

A membership with SLCMA has many rewards:

- ◇ Easy access to Natural Resource Management information and extension
- ◇ Monthly newsletter, meeting minutes, progress and project reports
- ◇ A vote on issues in your catchment
- ◇ A say in the types of projects applied for
- ◇ Up to 10 free local native seedlings/year from the SLCMA Community Nursery
- ◇ Invitations to Natural Resource Management field days and workshops
- ◇ Copy of the SLCMA Annual Report

Monthly rainfall for SLCMA Office, 2006 -2021 (inc annual total)



### Just for fun!

Q: Why did the mangrove go to the dentist?  
 A: For a root canal!

Q: What does a bee use to style their hair?  
 A: A honey comb, of course.

Q: What did the landholder say when slashing his paddock?  
 A: Thistle be the end of me...

Q: How much do we care about the environment?  
 A: Even the bags under our eyes are re-usable.

Q: Why are husbands like lawn mowers?  
 A: They are difficult to get started, emit foul smells, and don't work half the time.



*Banksia integrifolia*



Central QLD Coast  
**Landcare**  
 Network

**A partnership for the natural resource management of catchments in the Central Queensland Coast Bioregion: Pioneer, Sarina & Whitsunday Catchments.**

## Containers for Change

SLCMA has registered with Containers for Change for virtual donations and we are hoping that you will consider using our identifier code — **C10002138**. We also welcome physical donations of eligible containers to our office, feel free to contact us on 4956 1388, to arrange drop-off. Thankyou to those who have donated your containers, so far we have raised **\$241.00** —Thankyou :)



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