

# Pioneer Catchment & Landcare News

June 2022

Nature Reserve in Bucasia given new life through project extension



Plant of the month - Cook's Screw Pine



Natural pest control in your garden



Meet our board members - Claire Stribbles



**Our Mission**

*To implement an integrated, science-based approach to natural resource management through supportive partnerships across our catchment*

## Nature Reserve given new life through project extension

Mackay Regional Council has added to the funding provided through the Reef Assist Program (RAP) to further restore Michelle Crescent Reserve in Bucasia, by supplying a massive 3000 plants for the site. PCL's RAP team, lead by Darrell Barba, have been working on this site since early 2021, when it was infested with a number of invasive weeds, including Lantana (*Lantana camara*), Singapore Daisy (*Sphagneticola trilobata*) and African Tulip Tree (*Spathodea campanulata*). In this time, the RAP team has significantly improved the condition of this site through extensive weed removal and protection of native regrowth (see photos). In order to prevent the weeds from returning, it was imperative that the area was planted with native species. We are all looking forward to seeing this incredibly valuable site, connected to the mangrove forests of Bucasia Creek, flourish into a healthy, functioning, biodiverse ecosystem that provides habitat for our local wildlife, helps to mitigate flooding, acts as a natural filtration system for Bucasia Creek and creates a treasured natural space for the community.

*Top right: Sabrina Black planting a tree at the Bucasia site.*

*Bottom left: Weed infestation at the Bucasia site in March 2021.*

*Bottom right: Site cleared of weeds and planting commencing in May 2022*



*Photos by PCL Project Officers*

### **OUR VISION:**

To empower our community to build biodiverse ecosystems

### **OUR MISSION:**

To implement an integrated, science-based approach to natural resource management through supportive partnerships across our catchment.

### **VALUES:**

- ◉ We are innovative, and driven by action at a grassroots level ◉
- ◉ Ethical ◉ Engaged ◉ Passionate ◉

**Cook's Screw Pine**

**Family: Pandanaceae**

Pandanus is a very distinctive genus of trees that are characteristic of Queensland coastlines. Often known as Screw Pines due to the trunk typically having a screw-like appearance, but despite the name, they are not pines, but are more closely related to palms. *Pandanus* species have separate male and female plants, prop roots are often present, and spirally arranged leaves crowded at the top of branches. Male flowers are borne on a branched inflorescence within a large leafy bract. Female flowers are borne on an inflorescence consisting of one or more heads nearly hidden within a large bract.

Three species occur in this area, *Pandanus cookii*, *P. brookei* and *P. tectorius* - all are very variable species. *P. tectorius*, the most widespread that occurs from the Torres Strait Islands along the E. coast south to northern NSW and beyond Australia, is confined to coastal areas on coral sands and rocky headlands. *P. brookei*, endemic to Qld between Brooke Island in the Whitsundays and Yeppoon including Middle Percy Is., occurs on damp flats and gradual slopes, gallery forests, and savannah forests.



***Pandanus cookii***, endemic to N.W. Qld from Cape York south to Mackay, is a tree to 10m, with erect aerial roots on the trunk and with or without short prop roots at the base.

**Leaves:** About 150mm long and 80mm wide, glaucous-green, margins variable - usually prickly in the lower half only, sometimes prickly above; midrib usually without prickles in the lower half, sometimes with prickles in the upper half or only near the apex.

**Fruit** Large pineapple-like orange to red, 160-220mm long consisting of 45-55, 5-7 angled woody segments (phalanges) with 9-12 seeds-hang from very stout branches and can persist for over a year. When ripe, the individual segments fall to the ground.

(Fruit shape, size, and number and shape of segments are all aids to identification of species.)

**Local Habitat:** Found near swamps and creeks, along sandy coastlines. (It has been collected from behind the industrial estate at Slade Point). **Growing Notes:** Full sun to part shade, drought tolerant once established, insect attracting.

**Sources:** *Flora of Australia Vol 39 p. 211-235 – Pandanaceae by A.J. Wilson. Personal records of IGC, Photos: Tropical Plants Qld*

**Pest Spotting**

***Jamella australiae***

**Pandanus Planthopper**

**Family: Flatidae, Sub-family: Flatoidinae**

The Pandanus Planthopper is an insect predator of pandanus populations, that occurs naturally in North Queensland where its impact is controlled by two species of parasitoid wasps. It is considered that transfer of pandanus material from North Queensland to Southeast Queensland for use in horticultural spread the planthopper to local coastal species of pandanus where the absence of its natural predators enabled populations to explode. This resulted in widespread mortality of local pandanus species. Although infestations have been primarily located in Southeast Queensland, it has been identified as far north as Yeppoon. Both the planthopper and parasitoids have been recorded on a number of pandanus species in Mackay since the late 1990s and it is likely that the pest is being kept in check in the region. The planthopper infestations can be revealed by peeling back the leaves from the centre of the crown where you will likely find white fluffy material from the nymphs, egg rafts and the black sooty mould that grows in the exuded honeydew. Secondary fungal infections may kill the plant.



**Description:** *Jamella australiae* is a sap sucking bug (Order Hemiptera) from the sub-family Flatoidinae. The adults are about 8-12mm long with brown wings held at a shallow angle over the body and piercing mouthparts. They can fly but prefer to jump hence their common name. They are distinguished from other planthoppers by their wing venation and short antennae which have a small collar-like first segment and small bulbous second segment with bristle-like projection. They have large compound eyes and two simple eyes (ocelli). Nymphs have a tail of waxy filaments and produce a distinctive white covering.

**Life cycle:** The adults lay their eggs in a raft of up to 80 eggs on the underside of the leaves. The nymphs have five instar (larval) stages ranging from 0.32 to 1.22mm wide heads and suck sap from the base of the leaves. The life cycle can take as little as eight weeks.

**Control:** The parasitoid wasp (*Aphanomerus* sp. nr. *pusillus*) is an effective biocontrol method. The wasps parasitise the egg rafts of the planthopper and once wasp larvae emerge, they consume the planthopper larvae in early development. Biocontrol has been found to be much more cost effective than insecticides at controlling the pest.

**Wasp (*Aphanomerus pusillus*) parasitising planthopper egg raft**



*Source: Pers com. Irene champion and Grant Paterson 20.05.22. Peter Gray 2017 Jamella australiae Pandanus Leafhopper; A Fact Sheet. NSW DPI, NJ Smith & D Smith 2000 Studies on the flatid Jamella australiae Kirkaldy causing dieback in Pandanus tectorius var. pedunculatus (A.Br.) Domin on the Sunshine and Gold Coasts in southeast Queensland. General and Applied Entomology: The Journal of the Entomological Society of New South Wales. Photos: Joel Fostin*

### A word from our PCL Volunteers

PCL is incredibly grateful to have such a fantastic group of committed and knowledgeable volunteers, some of which have been volunteering in the pioneer catchment for over 30 years! This month we asked our valued PCL volunteers to share their experience being a part of this community and volunteering for PCL and the Mackay Natural Environment Centre (MNEC).

#### What do you gain personally from being a volunteer?

Purpose of growing native plants and growing them for a purpose, comradery, growing plants and seeing them go out into the world, making a contribution to rehabilitation in Mackay, companionship with like-minded people. Involvement and connection.

#### What has been your favourite experience with PCL?

Learning all the different ways to propagate plants, all different varieties of plants, gaining lots of diverse knowledge, how to not kill plants, working with Sue McCormack (MNEC) and benefiting from her knowledge and expertise.

#### What knowledge gaps have been filled for you?

Learning about native plants, knowledge of care and requirements of individual plants, plants that are becoming rare, knowledge of weeds and particularly declared pest plants.



2021 Christmas Volunteer Lunch at MNEC

If you're interested in volunteering with PCL please contact us and we'll tell you how you can get involved!

### PCL Mail

If you have a Landcare question or insights you would like to share with us, please email us at [admin@pioneercatchment.org.au](mailto:admin@pioneercatchment.org.au) and you may be featured in our next monthly newsletter!



## Gardens for Wildlife: Natural pest control in your garden

Using pesticides in our gardens may be an effective way to ward off unwanted nibblers, but it can also give beneficial bugs and pollinators a hard time. As with any ecosystem, all species play a role in maintaining a natural balance in your garden and disrupting the food webs could leave your garden wide open to invaders and with no natural protection.

Thankfully, there are many natural options for controlling pests in your garden!

1. Companion planting—use the placement of plants that either repel pests, such as garlic or marigolds, or attract beneficial insects adjacent to other plants you want to protect. Flowering plants can attract an array of predatory insects.
2. Sacrificial plants—using plants that will attract particular pests to divert attention away from other more valuable plants that are being eaten.
3. Homemade sprays with simple ingredients such as bicarbonate soda, liquid soap, vegetable oil, neem oil, salt, essential oils, milk and chilli. There are countless recipes to try online, but remember to only target pests as these recipes can also kill beneficial insects.
4. Remove infected plants, ensure that you disinfect garden tools after use and be careful to use only clean mulch and soil when adding to your garden.
5. Keep your soil and garden healthy and diverse to ensure plant resilience. When you create a garden to attract wildlife, your plants are likely to be eaten at some stage—that's kind of the point, isn't it? If you have created a healthy, balanced ecosystem, in most cases your plants should be able to handle being nibbled on from time to time.

Ladybug eating aphids.  
(Flickr: Jean and Fred)



Sources: **Companion Planting for Beginners**, Dave's Garden, 2018, **Toxicity of Pesticides to Pollinators and Beneficials**, UMA, 2022

## Upcoming Local Community Events

### June

**Thurs 2** - Native Plants Queensland (Mackay Branch) meeting 7:30pm at Mackay Regional Gardens Meeting Room

**Fri 3** - Mackay Regional Botanic Gardens Guided Walks in the Gardens 10am to 11am

**Sun 5** - World Environment Day 2022, Reef Catchment's Slade Point Walk and Talk from 8:30-11:30 at Slade Point Reserve.

**Tue 7** - PCL Volunteering in the nursery, 8am to 12pm.

**Thurs 9** - Reef Catchment's Healthy Soil-Food-People Forum 6pm at West Tigers Leagues Club, Walkerston.

**Fri 10** - Mackay Regional Botanic Gardens Guided Walks in the Gardens 10am to 11am

**Sun 12** - Pioneer Valley Show

**Tue 14** - PCL Volunteering in the nursery 8am to 12pm, and planting at Michelle Crescent Reserve, Bucasia from 8:30am—12pm.

**Thurs 16** - PCL Committee Meeting 4pm at PCL Office at Swayne Street North Mackay, all members welcome.

**Fri 17** - Mackay Regional Botanic Gardens Guided Walks in the Gardens 10am to 11am

**Tue 21** - Volunteering in the nursery 8am to 12pm.

**Fri 24** - Mackay Regional Botanic Gardens Guided Walks in the Gardens 10am to 11am

**Tue 28** - Volunteering in the nursery 8am to 12pm, and planting at Michelle Crescent Reserve, Bucasia from 8:30am to 12pm.

### July

**Tues 5** - PCL Volunteering in the nursery, 8am to 12pm.

**Thurs 7** - Native Plants Queensland (Mackay Branch) meeting 7:30pm at Mackay Regional Gardens Meeting Room

**Tues 12** - PCL Volunteering in the nursery, 8am to 12pm.

**Tues 19** - PCL Volunteering in the nursery, 8am to 12pm.

**Thurs 21** - PCL Committee Meeting 4pm at PCL Office at Swayne Street North Mackay, all members welcome.

**Tues 29** - PCL Volunteering in the nursery, 8am to 12pm.



**PCL'S ID:**  
**C10041933**

### COVID SHIFTS VOLUNTEERING OPPORTUNITIES

Keen to volunteer with PCL? We are looking for new volunteers keen to get involved in Landcare planting activities, at beautiful locations like Far Beach and Lamberts Headland. Come join us! Contact [projectofficer@pioneercatchment.org.au](mailto:projectofficer@pioneercatchment.org.au) for more information.

Due to Mackay Natural Environment Centre COVID policy, there has been a temporary suspension on NEW volunteers for propagating activities at the MNEC nursery. Existing volunteers are still welcome.

### Pioneer Catchment & Landcare Group Inc.

#### Executive

**Chair** | Sharon Dwyer

**Deputy Chair** | Judith Wake

**Secretary** | Fran Mann

**Treasurer** | Claire Stribbles

#### Committee Members

Earl Neilsen

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## Meet our Board Members

### Claire Stribbles—Treasurer

Claire Stribbles is an agribusiness banker at Rabobank Mackay and holds the position of Treasurer in the committee.

With a career spanning nearly 20 years in commercial and agribusiness across rural Victoria and QLD, Claire brings strong business and financial skills to the table and is very happy to be a part of the Pioneer Catchment Landcare committee.

Having grown up in a small country town in the Riverina, NSW, Claire's childhood was spent on her grandparents vegetable farm, at the sale yards with her stock & station agent father or fishing at the river with her mother.

Claire has a passion for the natural environment, which shines through in her hobby of landscape photography. Having relocated to Mackay in 2021 from Toowoomba, Claire is enjoying exploring the area and is excited to play her part in the amazing environmental contributions that Pioneer Catchment Landcare makes to the Mackay Region.



### Pioneer Catchment & Landcare Group Inc. Proudly supported by:

