Whitsunday Catchment Landcare

Newsletter

February 2020

www.whitsundaylandcare.org.au Find us on Facebook

Central QLD Coast Landcare Network

A partnership for the natural resource management of catchments in the Central QLD Coast Bioregions.

CATCHMENT COORDINATOR:
Cath Campbell
Ph.: 0408 187 944
coordinator@whitsundaylandcare.org.au

PROJECT OFFICER:

Ph.: 0488 768 567

CONTACT US FOR INFORMATION:

- Natural Resource Management
- Land management Plans
- Native plants
- Environmental weeds
- Volunteer activities

BECOME A VOLUNTEER:

Come seed collecting; learn to identify native plants; how to propagate them; improve your environment; enjoy the outdoors in a fun, social setting.

If you're interested in doing your bit for the environment and socialising with like-minded people, we offer coordinated activities on Tuesday & Thursday mornings and more. Contact us!

WCL Management Committee:
Graham Armstrong, Chair
Scott Hardy, Deputy Chair
Jacquie Sheils, Secretary
Glenda Hodgson, Treasurer
Dale Mengel
John Casey
Cr Ron Petterson

WCL is a community not-for-profit group, relying on grants & donations. We are a registered charity; donations of $2 or more are tax deductible. To make a donation please contact us or go to our page:

Make a Donation
Using the secure engine of GiveNow.com.au

REGISTERED CHARITY acnc.gov.au/charityregister

Coming Up in February
COMMUNITY NURSERY OPEN
FOR PLANT SALES (CASH ONLY)
9am-12noon Tuesday, Thursday & the 1st Saturday of each month-
Next Saturday opening—1st February 2020

WCL Management Committee Meeting
Tuesday 11th February 2020
4:30-6.30pm
Reef Catchments Boardroom
45 Main Street, Proserpine

Volunteer Event -Thursday 20th February 9am-12ish.
Galbraith Park (cricket net side)
Seed collecting & revegetation maintenance.
Please wear long sleeved clothing, a hat & closed in shoes.
If the weather is really hot we might start earlier– I will keep you posted.

At the Community Nursery & Volunteer Activities in February:
33 Kelsey Creek Rd Proserpine
Tuesday & Thursday 9am—12.30pm.
For enquiries please Ph. 0408 187 944 or email:
coordinator@whitsundaylandcare.org.au

Tuesday	Thursday
4th: Nursery Maintenance & propagation activities	**6th:** Propagation, Seed processing, Potting, Record keeping etc. at the nursery
11th: Nursery Maintenance & propagation activities	**13th:** Propagation, Seed processing, Potting, Record keeping etc. at the nursery.
18th: Nursery Maintenance & propagation activities	**20th:** Seed collecting at Galbraith Park Revegetation project– 9am– 12 noon
25th:	**27th:** Propagation, Seed processing, Potting, Record keeping etc. at the nursery

WCL receives support from the following organizations:

Reef Catchments · Whitsunday Regional Council · CANEGROWERS PROSERPINE · Australian Government Department of the Environment · Queensland Government

QLD State Government– Community Sustainability Grant.

WCL was awarded a 2020-21 QLD State Government– Community Sustainability Grant. Our submission – The Greater Gloucester Littoral Rainforest Project will see weed control & revegetation works and maintenance undertaken in the Nelly Bay Littoral Rainforest Reserve and patches of remnant littoral rainforest at Dingo Beach & Hydeaway Bay. We will also be hosting 2 'Eco—Walks" through the areas to raise awareness of the importance of these special places. These 2 events will be undertaken by WCL staff and advertised in our newsletter, Facebook page & we are hoping one walk will coincide with the Dingo Beach Family fun day.

Littoral Rainforest and Coastal vine thicket ecological communities are listed as critically endangered under the Commonwealth Environment Protection and Biodiversity Act 1999 (EPBC Act) due to the impact of human settlement on the coast. The ecological community provides habitat for over 70 threatened plants and animals and it provides an important buffer to coastal erosion and wind damage. Littoral Rainforest and Coastal Vine Thickets of Eastern Australia typically occurs close to the coast from northern Queensland southwards to eastern Victoria and on offshore islands. It occurs as a series of naturally disjunct and localised stands, on a range of landforms which have been influenced by coastal processes including dunes and flats, headlands and sea-cliffs. The appearance of this ecological community and its plant species can vary greatly depending on location, but it appears as a complex of rainforest and vine thickets. The vegetation generally is structurally diverse, with native trees, shrubs, vines and ground layers all potentially being present. The vegetation typically has a closed canopy.

Extensive mapping of the east coast remnants has been undertaken & a National Recovery program devised. This ecological community occurs in the following bioregions identified in the Interim Biogeographic Regionalisation of Australia (IBRA): Cape York Peninsula (from Princess Charlotte Bay southwards), Wet Tropics, Central Mackay Coast, South Eastern Queensland, NSW North Coast, Sydney Basin and South East Corner. Patches of the ecological community typically occur within two kilometres of the east coast, or on offshore islands, or adjacent to a large body of salt water, such as an estuary, where they are subject to maritime influences. What was once an almost continuous group of patches of the ecological community along the eastern coast of Australia has been and continues to be reduced and fragmented by land clearance, weed invasion, recreational disturbance, animal browsing/ grazing, fire and natural disturbance.

Clearing and land development pose serious threats to the Littoral Rainforest and Coastal Vine Thickets of Eastern Australia. These activities remove vegetation and the seedbank, further fragmenting the listed community and having a significant negative impact on biodiversity. Developments that are near or are upstream of the listed community and that change drainage patterns can also have negative impacts on the community. Changes in water runoff and timing potentially threaten the community as they can alter the surrounding vegetation and impact on the listed ecological community. Climate change may directly impact on the listed community by changes to rainfall and temperature regimes and by an increased intensity of coastal processes. This may include changes to inundation regimes and an increase in severity and frequency of storm events. Storm events may directly damage the forest canopy and increase the chances of weed invasion and establishment within the rainforest. Other indirect impacts may include: changes to fire regimes; species composition and the impact of myrtle rust on the Myrtaceae species found within this plant community.

Source: Littoral Rainforest and coastal Vine thickets of Eastern Australia. EPBC 39.pdf Policy Statement 19

Above: Beach Scrub
Photo: Christine Peterson

What good is a dead tree?

Dead trees can be very good indeed at providing support for native wildlife. In Australia, a country where animal species are under growing pressure from the extreme effects of climate change, preserving this habitat is crucial to species survival and ecological resilience.

Writer: Jo Russell-Clarke. Imagery various sources
Posted on January 9, 2020 in Foreground

In 2018 Australia was the only nation in the developed world to make the World Wildlife Fund's (WWF) global list of deforestation hotspots. The Guardian reported in March of that year that "Australia is in the midst of a full-blown land-clearing crisis," suggesting that projections show "in the two decades to 2030, three million hectares of untouched forest will have been bulldozed in eastern Australia." But more than just living trees are at stake. Old-growth forests provide habitat for animals that cannot survive in other environments, in particular in ancient, dead and dying hollow-bearing trees. Now bushfires have ravaged millions of hectares of forest and habitat, including tens of thousands of hectares set aside by the Victorian government to protect the greater glider and other threatened species from logging.

The existence of powerful owls in Moyne Shire in Victoria is attributed to the retention of some large, damaged trees after the Ash Wednesday fires in 1983. Many trees were lost due to clearing on private land and roadsides after the fire, much of which, it is suggested "occurred as an overreaction to future fire threats". Caution is being urged now to calls for increased hazard reduction and vegetation clearing, with experts advising that fuel loads are not as relevant as weather conditions and drought – that is, climate change – in driving wildfires. It becomes even more important to retain remnant natural environment, including even damaged and dead old-growth trees, when considering the multiple and growing threats to native fauna from climate change.

The significance of dead trees as habitat for native wildlife, not just in old growth forests but even in urban environments, is becoming widely recognised. The New South Wales government's Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list removal of dead wood and dead trees as a Key Threatening Process in the Act. The Committee outlines seven findings that explain the vital importance of dead wood and trees. Yet despite more recent recognition of the value of old-growth dying, damaged and dead trees, more attention needs to be given to developing not only legal protections, but a new mindset and a shift in aesthetic sensibilities too. This must come from authorities tasked to manage healthy landscapes but also from built environment professionals guiding a supportive public who will appreciate their enriched lived environments. A 2014 study of hollow-bearing trees (typically very old, dying or dead trees) as a habitat resource within a rapidly urbanising landscape found that despite Australian Federal and State legislation acknowledging the importance of hollow-bearing trees to biodiversity, there were insufficient mechanisms in place at all levels of government to actually halt their removal.

One of the more interesting users of large dead trees are owls. And a leading threat to Australia's owls is the loss of habitat and old-growth, hollow-bearing trees that 10 of 11 owl species rely on for breeding. Nest boxes have not proven very successful. There is only one instance, for example, of powerful owls using artificial replicas of tree hollows. Powerful owls are Australia's largest owl, occupying forests and woodlands throughout south-eastern Australia, including the suburbs of Sydney, Melbourne and Brisbane. They have been recorded in Fitzroy Gardens and Flagstaff Gardens in central Melbourne, as well as the suburban fringe. Raylene Cooke from Deakin University leads a powerful owl research team. Last year the team were tracking owls in suburban Warrandyte on the outskirts of Melbourne. She notes that the owls need three things to live in an area: a tree to roost in, a tree to nest in, and enough food to eat. The parks and linear waterway and corridors of Melbourne's urbanised areas can provide roost trees and food (particularly possums) but nesting trees with suitably large hollows are not easy to find. Local governments, including Mossman in Sydney's north are attempting to retain and monitor larger trees for habitat. In the late 1990s, Mossman local council began programs to improve the environment for local wildlife. One of these is creating hollows for habitat from potentially hazardous trees on public land. Arborist Kieren O'Neil creates hollows for up to 300 potential species to use, "accelerating the processes of nature" by chain sawing hollows into dead and damaged trees. The City of Melbourne's Draft Urban Ecology and Biodiversity Strategy is subtitled "The city as an ecosystem". It includes a section on "Using dead trees" that encourages dead tree retention and also targeted creation of artificial hollows while recognising that the "approach will need to be managed to ensure health and safety for everyone". The City has invited citizen scientists and "Citizen Foresters" to contribute to their database of nesting trees and hollows since 2016.

A prominent example of actively managed habitat creation is the site preservation and modification of a large Eucalyptus cladocalyx, or Sugar Gum, that died in Flagstaff Gardens. Signs at the "hollows for habitat" tree acknowledge that hollows "provide critical resources for wildlife including insects, parrots, owls, kookaburras, microbats and possums." Low garden bed fencing surrounds the dead tree. It protects the tree and the public and is planted with indigenous groundcovers, shrubs and young trees grown from seed of the parent gum above them . *continued over page.*

What good is a dead tree?- *continued*

A massive operation in Canberra in 2016 moved a 160-year-old, eight-tonne dead Eucalyptus melliodora, or Yellow Box, across the city to an "artificial forest" 30 kilometres away. The carefully pruned tree was installed at the soon-to-be-declared Molonglo River Reserve. The site, named Barrer Hill after late Canberra ecologist Peter Barrer, was once home to diverse species of raptors, reptiles, bats and birds, including wedge-tailed eagles and microbats.

Five dead trees were moved to the site and were modified to create artificial hollows, perches, boxes and other habitat features to encourage wildlife to return. It was part of environmental offset agreements for a new Molonglo development nearby. Late last year Mt Barker Council in the Adelaide Hills in South Australia relocated four large river red gums as part of the development of their Regional Sports Hub. The significant trees were recognised as valuable habitat. "Because they were full of natural habitat due to existing hollows, three of the trees have been relocated elsewhere on the site near two of the remaining trees," explain Council on their website. The trees were removed without root systems and then their trunks reburied up to five meters deep to ensure stability. Additional artificial hollows will be added to the trees. The work garnered criticism on social media, especially following what some considered a misleading Facebook post speaking of tree 'relocation' without explaining that they would be killed by the process. Critics were also concerned that a strategy to 'relocate' significant trees by permitting them to be killed for dead tree hollow habitat would normalise the destruction of even more valuable living tree habitat.

Australia's indigenous ecologies are currently under pressure to adapt to fast-changing environmental conditions. Communities too are becoming more vocal about human impacts on our landscapes and the flora and fauna we share with them. Along with better protection for living habitats, we should also recognise that dead trees in our landscapes have a lot of life in them.

Dr Jo Russell-Clarke is a registered landscape architect and Fellow of the AILA. She is editor-at-large of online journal Foreground and a senior lecturer at the University of Adelaide.

Thank you To Boomerang Bags Airlie Beach

Barb Adamson & Sandy Cleeland from Boomerang Bags have kindly donated 100 small cloth bags to WCL.

We will use these bags at the nursery for seed collecting when we go on our seed collecting adventures—they are more long lasting than paper bags & still allow the seed to dry in preparation for storing or propagating.
We can also use them when people purchase tube stock from the nursery.
Each bag will fit 6 tubes in it!

To return the favour I am asking all our members & volunteers to check in their cupboards for any cotton material that they no longer need and either bring it into the WCL office or drop it of at the Community Nursery so we can help Barb make more of these great bags that contribute greatly to reducing plastic in the Whitsundays.

Fires in the Holiday Season—Cath Campbell-a personal comment. It was with great sadness that I watched the devastating impacts of the catastrophic fires throughout the Australian continent during the later part of 2019 & into 2020. The south coast of NSW is my home country and my heart goes out to the people there & the others around the country, that are experiencing the devastation wrought by these fires. The impacts on their lives will be felt for many years to come as will the impacts on the flora & fauna in these areas. These impacts will be immense and as some are predicting, there will be extinctions of vulnerable species. This is happening on our watch– during our lifetimes and I believe it is incumbent on all of us to think deeply about the effects that climate change is having on our lives and the natural world. As individuals we can adjust our daily lives to reduce our impacts on the natural world but it is our Governments that have the greatest capacity to make changes for the better. It seems that with the lack of action on reducing our carbon emissions- "things" are just getting worse for all of us.

The Dead Tree Detective- Western Sydney University

About the project:

Aim

The aim of the project is to collect observations of dead or dying trees around Australia. It sounds a bit grim, but knowing where and when trees have died will help us to work out what the cause is, identify trees that are vulnerable, and take steps to protect them.

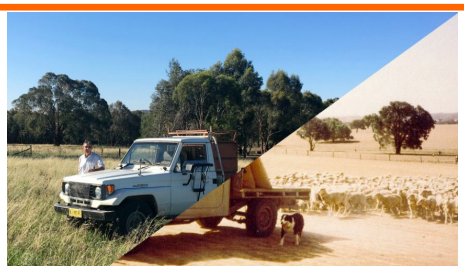
Description

This project will allow people Australia-wide to report observations of tree death. In the past, there have been many occurrences of large-scale tree death that were initially identified by concerned members of the public such as farmers, bushwalkers, bird watchers or landholders. Collecting these observations is an important way to monitor the health of trees and ecosystems.. The project was originally registered in Atlas of Living Australia

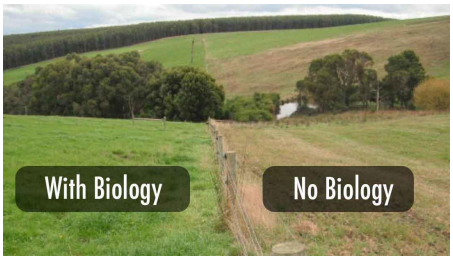
Get involved- https://biocollect.ala.org.au/acsa/project/index/77285a13-e231-49e8-b212-660c66c74bac?fbclid=IwAR3zOmQovUVboUMdX-gXEXAkCCeO89yuUyiHe7_mQbcSPqxJRo_1hGIifZ8

Or contact Belinda Medlyn
deadtreedetective@westernsydney.edu.au or b.medlyn@westernsydney.edu.au

Above: Eucalyptus albopurpurea– The Port Lincoln Mallee
Photo: Jeanette Graham -Nut about gums
A species endemic to Kangaroo Island & the southern tip of the Eyre Peninsula. Flowers range from white to pink to purple but rarely as deep a hue as in the phot above.



Above: Regenerative agriculture find solid backing
Photo: ABC



Above: Feeding the Soil
Photo: Lower Blackwood Landcare

Regenerative Ag Alliance—resilience through farming together

The Regenerative Agriculture Alliance (RAA) is a collaboration of Australia's leading researchers and practitioners in regenerative agriculture. Our aim is to improve the holistic health and wellbeing of Australian landscapes, farmers and communities through regenerative agricultural research, education and practice. Founded in 2018 by Lorraine Gordon – Director of Strategic Project at Southern Cross University, the Alliance includes leading researchers in environmental science, soil and plant science, marine and forestry science worldwide.

Regenerative Agriculture News

The Alliance's Government Policy Group met on National Ag Day in 2019. Representatives from membership organisations working in climate change mitigation met to find specific measurable solutions to deliver to Government.

Among the invited groups were Farmers For Climate Action, Australian Food Sovereignty Alliance, Carbon Farmers of Australia, Australian Institute of Ecological Agriculture, Regenerative Agriculture Network Tasmania, Australian Farm Institute, and Meat & Livestock Australia, joined by the Clean Energy Regulator. A document of detailed policy recommendations for Government will be compiled for further consultation with Alliance members.

Alliance leader an Australian of The Year Finalist
Recently, the Alliance founder Lorraine Gordon was named as a finalist for the NSW Australian Of The Year Award for her contribution to rural Australia.

Ms Gordon said, "I was just thrilled to represent rural Australia as a nominee and finalist in the Australia of the Year Awards. It was a great day, spent with amazing people who are doing their special thing for Australia - some of whom I intend to collaborate with on future projects."

Have a look at the new website?
The Regenerative Agriculture Alliance and Southern Cross University has launched its new website. As well as providing information and news about the Alliance, it will house all their podcasts and upcoming documentaries. Visit the website at: https://www.scu.edu.au/regenerativeag/

A new podcast- GROUND COVER produced by the Regenerative Agriculture Alliance at Southern Cross University, is set to ignite a much-needed national conversation about resilient farming practices in the face of climate change and drought.

The 'Ground Cover' podcast launched in September 2019 with a double episode and was introduced by thought-leading farmer Dr Charles Massey.

Hosted by the veteran voice of agriculture, Kerry Cochrane, Ground Cover is a podcast for farmers by farmers. It is a uniquely Australian series exploring real-life stories of land managers who have undertaken the transition from conventional farming to regenerative agriculture. Each week the Regenerative Agriculture Alliance will share a unique and honest conversation about the challenges and opportunities of regenerative agriculture so farmers can make informed decisions about how best to manage their land.

Regenerative agriculture describes farming and grazing practices that, among other benefits, mitigate climate change by rebuilding soil organic matter and restoring degraded soil biodiversity – resulting in both carbon drawdown and improving the water cycle.

The podcast can be accessed at the following:
https://podcasts.apple.com/au/podcast/ground-cover/id1479675823
https://www.stitcher.com/podcast/regenerative-agriculture-alliance-at-southern-cross-university/ground-cover?refid=stpr
https://open.spotify.com/show/5lFJx5g7A7FTVedsYIItgN

THE AUSTRALIAN ACOUSTIC OBSERVATORY:
A NETWORK TO MONITOR BIODIVERSITY

www.acousticobservatory.org

BACKGROUND

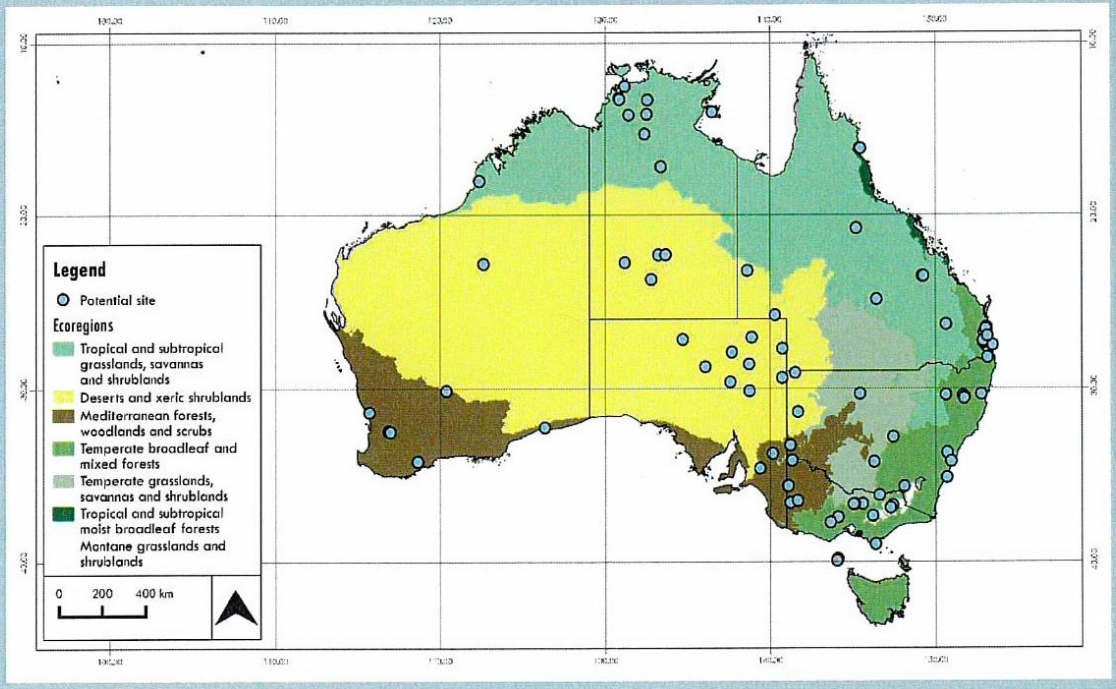
The Australian Acoustic Observatory (A2O) has been conceived as a continental-scale acoustic sensor network, recording for a five-year period across multiple Australian habitats.

The A2O will be composed of 400 continuously operating acoustic recorders collecting approximately 2PB of sound data over the duration of the project. The data will be stored on the cloud with the Queensland Cyber Infrastructure Foundation and made freely available to researchers, citizen scientists, and the general public. The A2O is a unique piece of scientific infrastructure that will transform environmental science and assessment in Australia, and foster cross-disciplinary research between ecologists, biologists and computer scientists.

The project is funded by an ARC Linkage Infrastructure, Equipment and Facilities (LIEF) grant of $1.8 million. The A2O is led by Professor Paul Roe from the Queensland University of Technology (QUT) Ecoacoustics Research Group, in collaboration with Professor David Watson from Charles Sturt University (CSU), Professor Lin Schwarzkopf from James Cook University (JCU), Associate Professor Paul McDonald from the University of New England (UNE), and Associate Professor Richard Fuller from the University of Queensland (UQ). The A2O Chief Investigators have a deep understanding of Australia's fragile and mega-diverse environment, and the collection and interpretation of acoustic data, providing leading research expertise in this emerging field.

DESIGN: SITE LOCATIONS

The A2O will incorporate 100 sites across seven major ecoregions. Each site will be linked to four acoustic recorders, with two acoustic recorders established in relatively wet habitat (wetland, river, creek, drainage line, spring, depression etc.) and two in relatively dry habitat. The range of wet and dry locations will vary from site to site based on local conditions. This arrangement will provide a total of 400 acoustic recorders across the network.



HARDWARE

Acoustic recorders will be built to specification by Frontier Labs in Brisbane, Australia. Each acoustic recorder will store data on high-capacity SD cards, which will be manually collected and replaced at least once a year.

Acoustic recorders will be powered by solar panels linked to batteries and charge controllers, with all equipment easily mounted on a standard 1.8 m star picket. This design ensures each acoustic recorder and additional hardware is simple to install and has minimal space requirements.

FRONTIER LABS ACOUSTIC RECORDERS

DATA MANUALLY COLLECTED

EASY INSTALLATION

MINIMAL SPACE REQUIREMENTS

Solar panel attached directly to unit

Acoustic recorder, SD cards, microphone, battery and charge controller in one compact unit mounted on adjustable bracket

Unit mounted on 1.8 m star picket

INVOLVEMENT

The A2O provides an opportunity for land owners and managers to become involved in a nationally significant scientific project that will expand the understanding of Australia's rich and diverse ecosystems.

MORE INFORMATION

Visit the A2O website: www.acousticobservatory.org

If you would like to become involved with the Australian Acoustic Observatory (A2O), please contact Professor Paul Roe at QUT at p.roe@qut.edu.au.

The other Chief Investigators may also be contacted at:

- Professor David Watson (CSU) — dwatson@csu.edu.au
- Professor Lin Schwarzkopf (JCU) — lin.schwarzkopf@jcu.edu.au
- Associate Professor Paul McDonald (UNE) — paul.mcdonald@une.edu.au
- Associate Professor Richard Fuller (UQ) — r.fuller@uq.edu.au

Peter Faust Dam Mimosa pigra (Giant Sensitive Weed) Report– July 2019– December 2019

This weed of National Significance- Mimosa pigra forms dense, impenetrable thickets, 3–6 m high, establishing on waterways, flood plains and wetlands. Accessibility to water for stock, irrigation and recreation purposes is affected. Pastures are smothered, reducing available grazing area and making stock mustering difficult. Dense growth eliminates most other species and alters the natural habitat in conservation areas. In the Northern Territory, some 80 000 ha of floodplains have been covered by the plant. Mimosa pigra's invasiveness is due to its aggressive growth. Once seedlings are established, growth is rapid; one-year-old plants with a stem diameter of 2.5 cm often attain a diameter of 7 cm in the second year. In experiments in the Northern Territory, regrowth from young plants severed at ground level reached a height of 2.5 m and covered an area of 6.3 m2 within 12 weeks. The Northern Territory has the most extensive infestation of Mimosa pigra, which covers an approximate area of 80,000 ha.

Originally from Central and South America, it was planted at the Darwin Botanic Gardens in the late 1800's as a curiosity. Its invasive nature was not realised until the 1950's when it was observed growing in drainage lines and creeks. Mimosa pigra is spread via water, contaminated soil, vehicles, boats, boat trailers, animals and by the plant through suckering.

In 2001 a local landholder discovered Mimosa pigra growing at Lake Proserpine (Peter Faust Dam). This infestation is one of only two infestations found outside of the Northern Territory, the other being on the Western Australian/Northern Territory Border. Multiple surveys of the dam & immediate surrounds have been undertaken annually to make sure any seedlings are removed. The level of the dam influences the germinating of the seed & no one knows the full extent of the seed distribution or just how long the seed remains viable underwater within the dam area. As the dam level lowers so to opportunity for the seed to germinate increases. But **after 2.5 years of zero detections** at Peter Faust Dam, a routine dam inspection found two seedling plants during the July– December 2019 reporting period. Both plants were immediately removed.

With increased use & camping at the dam we are asking people to keep a keen eye out for this terrible weed. If you see it while visiting or staying at the dam please report it to

Whitsunday *Above: Mimosa pigra plants & leaf & thorn detail Photo: Peter Alden* **Regional Council ASAP.**

Above: Mimosa pigra Flower
Photo: Lucidcentral

Getting to Know Our Whitsunday Wildlife & Plants

Steve Pearson is a local dedicated nature photographer. Steve is a retired QP&WS ranger who spent a large part of his career at Eungella and in the Whitsundays. Assisted by his wife Alison, Steve has accumulated a comprehensive photographic reference of plants and also, the less understood and under-appreciated elements of our region's ecology such as invertebrates and fungi. To view more of his photos go to – steveandalison1@flickr

Above & below: Lymantria sp aff antenata
Photos: Steve & Alison Pearson

This month we feature a moth. This pretty moth turned up at our night lights just before Christmas and reminded me of a Christmas tree, so thought of sharing it with you. My Christmas tree moth Lymantria sp aff. antenata is of the family Erebidae and lives in our Mandalay Rainforest near Airlie Beach.

Lymantria antenata is a species of moth in the group commonly called Tussock moths. It is found along the east coast of Australia, from northern New South Wales to Cooktown in far North Queensland.

The adult moths are short lived because they have a reduced haustellum (the sucking organ or proboscis of an insect or crustacean) and do not feed.

All Lymantria species males have wings and fly in search of females for mating, necessary for survival of the species but some species have females that have reduced wings and are flightless. The females wait on the host plant for the males to fly to them for mating then they lay the eggs on the host plant. Lymantria means "defiler", not because of the moth but because of the caterpillars. Some Lymantria moth caterpillars are in big numbers and are vegetation defoliators. Most Lymantria moth caterpillars feed on trees and shrubs, vines, herbs & lichens but some feed on grasses and because grasses are listed, some people think the other common name Tussock Moth means it feeds on grass tussocks.

Records state that most moths called Tussock moths, have that common name because their caterpillars are really hairy, hairy ITCHY GRUBS, and some have four long dense dorsal tufts of hair like grass tussocks. Many also have other hair pencils, and some have two coloured dorsal glands on abdominal segments six and seven. These glands appear to exude a liquid which deters ants from attacking the caterpillars.

The records confirm that many of the caterpillars are a pest for two reasons: they attack cultivated plants, not just in Australia, but more seriously overseas. And secondly, the hairs of many species cause skin irritation in some people (Urticaria and Dendrolimiasis).

If you or family friends are sensitive and react to stings badly, especially little children, it is recommended you be vigilant and carefully brush the hairy grubs into a jar and relocate them to a safe place on other specimens of host food plant. Killing them on the spot or even burning them is hazardous as the hairs from the dead grub can blow about and cause more inflammation or be breathed in.

The caterpillars usually pupate within a cocoon wrapped in their own hairs so even the cocoons are coated with the stinging hairs and can cause problems if handled. Even old empty cocoon shells that might be shredded by whipper snipper or mowers can release the hairs to blow about and settle on bare skin or get breathed in.

Beautiful moths but horrible grubs.

A World Wetlands Day Event!

Slade Point Reserve

Guided Walk

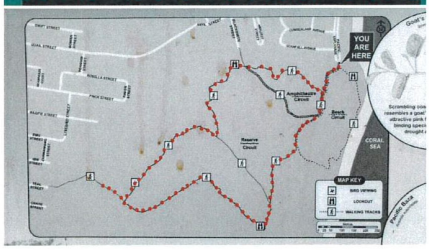
Saturday 8th February 2019 8.30am-10am

Join Pioneer Catchment & Landcare & Conservation Volunteers Australia on a Guided walk at the Slade Point Reserve one of Mackay's most spectacular locations. Learn about this reserve and the many plants and animals that inhabit it.
Celebrate World Wetlands Day with us!
The walk is 3.1km, and will have uphill sections and soft sand. You will need to be moderately fit and able bodied. We will take plenty of rest stops as required.

Where: Meet at the end of Pacific Esplanade, Slade Point. Near The Seabreeze Hotel.

RSVP: Kade Slater
kade.slater@pioneercatchment.org.au

Bring: Covered shoes, comfortable sun smart clothes, hat, sunscreen, insect repellent, and water bottle.



PIONEER Catchment LANDCARE

Conservation Volunteers Australia

Whitsunday Catchment Landcare

Whitsunday Catchment Landcare (WCL) is launching our Sustainable Land Management Services.

We are seeking to encourage *non-commercial* landholders in the sustainable management of their land and offer the following assistance on a **fee for service** basis:

- **Site visits & Land Management Advice**– verbal advice to landholder.
- **Land Management Plans** (3-5 year documented site specific plans)
- **Weed Control Services**– targeted to have minimal impact on Native vegetation & maximum impact on weed species & undertaken by WCL's qualified & licensed staff using our weed control equipment.
- **Hire of weed control equipment**– Landholder operated after training by WCL staff

If you would like advice on how to sustainably manage the weeds or native vegetation on your land, please consider the services offered by WCL.

Please email the Coordinator at: coordinator@whitsundaylandcare.org.au for the fee schedule & detailed description of services offered.
Or call mbl: 0408 187 944 to discuss your requirements.

Getting to Know Our Whitsunday Wildlife & Plants

Steve Pearson is a local dedicated nature photographer. Steve is a retired QP&WS ranger who spent a large part of his career at Eungella and in the Whitsundays. Assisted by his wife Alison, Steve has accumulated a comprehensive photographic reference of plants and also, the less understood and under-appreciated elements of our region's ecology such as invertebrates and fungi. To view more of his photos go to – steveandalison1@flickr

Above Austrosteenisia blackii
Photo: Steve &Alison Pearson

This month our feature plant is the blood vine, **Austrosteenisia blackii (Blood Vine) of plant family Fabaceae**. This local native vine is listed as a leguminous liana of the tropical and sub-tropical rainforests and dry rainforests of eastern Australia.

In the Whitsunday Mackay area we have all 3 of these forest types. The blood vine, Austrosteenisia blackii is growing naturally in our Airlie Beach cyclone rainforest patch as part of the canopy wall. It also forms part of the umbrella like top where it becomes the main canopy with hanging new vertical stems lining the cyclone damaged holes. By sending out shoots and sprouting leaves and spreading quickly in the new sunlight holes it recreates a sun blocking canopy, a quick start to recreating the true interlocking closed canopy rainforest. Even though the canopy is really far from " proper, even rainforest " it forms a severely undulating canopy stage, which I call "ragged, cyclone rainforest"- an early stage of the repair and regrow, helping the rainforest on the path to recovery before the next cyclone. It maybe even help to reduce the future damage by weaker cyclones.

Anyhow in early December 2019, at the end of the long dry the blood vine in our patch flowered. In past years I have observed it flower in late October after the dry. Each time its flowering seemed to herald the dry is over and the beginning of the build- up to the wet season. I have heard it said that some ants head for higher places before a big wet so they watch the ants. Another personal observation with the cyclone prediction link is when I observed big ground snails climb a metre up the trunk of trees and anchor on the sheltered side of the tree the day before a bad cyclone hit and wrecked their rainforest.

The very first time the blood vine Austrosteenisia blackii was pointed out to me was by Alison, I am colour blind so didn't see it, but Alison did because the blood vine was heavily loaded with its blood colour flowers on its large branching loose panicles hanging down. It was almost 30 years ago, after a dry season and it was the year the Peter Faust Dam had just been completed- " A REASON FOR JOY ". At the time it was estimated that it would take many years to fill the dam, so no quick JOY. THE BLOOD VINE AT EUNGELLA HAD HEAVY FLOWERING and then a few weeks later came "Cyclone Joy. We received 150 inches rain at Eungella Broken River ranger station and much more fell north along the range at Mt William, Mt Henry, Mt David and Mt Dalrymple- about 5 metres of rain there in 10 days. We received VERY LITTLE JOY at Eungella but the run off along the Clarke Range filled & overflowed the Peter Faust Dam in 10 days, NOT YEARS! What was the new empty Proserpine dam probably saved Proserpine and the area from major flood damage from that event.

Above Austrosteenisia blackii– branching flower panicles
Photo: Steve &Alison Pearson

Above Austrosteenisia blackii– flowers
Photo: Steve &Alison Pearson

Reference sources state Austrosteenisia blackii is commonly called the blood vine because it bleeds dark red sap when the stem is cut but I had been told it was called blood vine because of the flowers, they look like droplets of blood hanging down. The flowers are dark red, pea flowers on large branching loose panicles and are followed by flattened pea pods up to 12 cm long with kidney-shaped, bean-like seeds (giving the reason to be called leguminous).

The vine is listed as a liana & it has no tendrils but just sprouts new shoots that head towards sunlight, bending and kinking in any direction forming an umbrella. The vine stems being the umbrella ribs and the spreading compound leaves are the skin– which struggle to create the ever so important canopy and ideal for after cyclones. It is so sad that many people pull out vines from their patch because they see them as pulling down the tree tops. Instead, the vines are filling in the gaps and creating a canopy vital for the rainforest to develop into a proper rainforest.

It you have lots of rainforest tree species planted in a plantation style the patch is a plantation not a rainforest. It is not until the tree tops interlock and block out the sunlight from getting to the forest floor that it becomes a true rainforest. Sunlight getting to the rainforest forest heats and dries the humus on the forest floor and burns new shade-loving leaf growth. This kills the vital recycling fungi and moulds found on the forest floor. The umbrella-like canopy also blocks out a lot of winds and so stops hot air invading and drying or burning the new delicate leaf growth as well as the fungi and moulds that are working on recycling the fallen vegetation-which makes it re-usable as food supply which sustains the rainforest as well as making the conditions necessary for rainforest seeds to germinate. The under-canopy REALLY needs to be kept cool and moist. *Continued over page*

Getting to Know Our Whitsunday Wildlife & Plants cont.

Above Austrosteenisia blackii twining trunk
Photo: Steve &Alison Pearson

With no vines the forest re-grows much slower and cyclone impacts are much worse. The forest takes much longer to recover and much, much longer to be safe from catching on fire and burning in wildfires that may escape from adjoining lands in the years that follow.

The big python like vine Austrosteenisia blackii grows up to 150mm diameter and really hangs on. Having a big strong python-like vine hanging on can be both good and bad depending on how strong the cyclonic winds are. Up to moderate force winds, the vine anchors all the forest as one and can withstands the cyclone. This greatly reduces damage but if the winds are really, really strong, the vine can be part of the falling tangle and pull down other vegetation. But if the winds are extreme it will flattens any forest, VINES OR NO VINES.

If you have ever seen sugar cane flattened, or maybe pine plantations, (no vines in either of these landscapes) when there is a breach and the collapse starts, it can all go down. A flattened forest, with no vines does not recover very well. A rainforest with vines like the blood vine, as the vines are flexible and will go down with the trees but they stays alive and quickly send out new growth which runs all over the fallen forest blocking out the sunlight and breezes that heat and dry everything that is exposed and stops the rainforest repair and regrowth. Having vines to form a lush green leafy umbrella over the fallen rainforest quickly protects it from fires and the drying effects of the sun/wind which means the recovery is so much quicker.

You cannot stop the cyclones but you can have vines and speed up the recovery in your rainforest patch. I know from my background forestry training we worked hard to remove vines and undesirable species from plantations because they were competing with desired MONEY earning species of our timber producing plantation.

So if your regenerating rainforest on your patch the question is- Do you want a rainforest or a plantation? Why not leave the vines and enjoy your life in our tropical weather resting or playing or doing other jobs. And if you have a blood vine check out when it is flowering and observe the weather patterns– Is it a natural sign of a wet season with maybe a Cyclone coming? It could be an early warning of cyclone season coming.

Austrosteenisia blackii (Blood Vine) is an interesting vine is very strong and has a part in holding the forest together, linking trees against the stormy winds and whilst it is but it is not something you would grow and sell in a nursery it may be well worth while to collect seeds and sow directly onsite if you want it in your patch. Seeds are hard skinned and can last many years before germinating.

Above Austrosteenisia blackii compound leaves. Photo: Steve &Alison Pearson

We request that you share this piece of information in your network as much as you can. This will create awareness amongst people that plastic is one of the major problems for our environmental sustainability.

Above: Nymphaea sp.
Photo: Christine Peterson

HOW LONG DOES IT TAKE TO DECOMPOSE ?

PAPER TOWEL - 2-4 WEEKS
BANANA PEEL - 3-4 WEEKS
PAPER BAG - 1 MONTH
NEWSPAPER - 1.5 MONTHS
APPLE CORE - 2 MONTHS
CARDBOARD - 2 MONTHS
COTTON GLOVE - 3 MONTHS
ORANGE PEELS - 6 MONTHS
PLYWOOD - 1-3 YEARS
WOOL SOCK - 1-5 YEARS
MILK CARTONS - 5 YEARS
CIGARETTE BUTTS - 10-12 YEARS
LEATHER SHOES - 25-40 YEARS
TINNED STEEL CAN - 50 YEARS
FOAMED PLASTIC CUPS - 50 YEARS
RUBBER-BOOT SOLE - 50-80 YEARS
PLASTIC CONTAINERS - 50-80 YEARS
ALUMINUM CAN - 200-500 YEARS
PLASTIC BOTTLES - 450 YEARS
DISPOSABLE DIAPERS - 550 YEARS
MONOFILAMENT FISHING LINE - 600 YEARS
PLASTIC BAGS - 200-1000 YEARS.

WCL Community Nursery– Always Needs Seeds

The WCL Nursery is very keen to source endemic seed so please keep an eye on your flowering native trees, shrubs & grasses for the volunteer nursery. Some of the species we need are:

Acacia– all local species	
Archontophoenix alexandrae	*Alexander Palm*
Aidia racemosa	*Archer Cherry*
Atalaya rigida	*Veiny Whitewood*
Breynia oblongifolia	*Coffee Bush*
Cajanus reticulatus	*Native Pigeon Pea*
Carallia brachiata	*Freshwater mangrove*
Casuarina cunninghamiana	*River oak*
Chionanthus ramiflorus	*Native Olive*
Cordia subcordata	*Sea Trumpet*
Corymbia clarksoniana	
Corymbia intermedia	*Pink Bloodwood*
Corymbia tessellaris	*Morton Bay Ash*
Cryptocarya hypospodia	*Large leafed Laurel*
Cupaniopsis anacardioides	*Tuckeroo*
Dysoxylum gaudichaudianum	
Elaeocarpus grandis	*Blue Quandang*
Eucalyptus crebra	*Narrow-leafed Ironbark*
Eucalyptus platyphylla	
Eucalyptus exserta	*QLD Peppermint*
Eucalyptus tereticornis	*QLD Blue Gum*
Eucalyptus tessellaris	*Morton Bay Ash*
Euroschinus falcatus	*Ribbonwood*
Ficus racemosa	*Cluster fig*
Hymenosporum flavum	*Native frangipani*
Ganophyllum falcatum	*Scaly Ash*
Lophostemon confertus	*Brush Box*
Lophostemon grandiflorus	*Nthn Swamp Mahogany*
Lysiphyllum hookeri	*Hookers Bauhinia*
Macaranga tanarius	*Macaranga*
Melaleuca dealbata	*Blue Tea Tree*
Melaleuca leucadendra	
Melaleuca viminalis	*Weeping Bottle Brush*
Melicope elleryana	*Corkwood, Euodia*
Memecylon pauciflorum var. pauciflorum	
Micromelum minutum	*Native Lime Berry*
Pandanus sp.	
Ptychosperma elegans	*Solitaire palm*
Sterculia quadrifida	*Peanut Tree*
Syzygium australe	*River cherry*
Timonius timon	*Tim Tam Tree*
Trema tomentosa var. aspera	*Peach-leafed Poison Bush*
Trema orientalis	
Vitex trifolia	*Vitex*

Guidelines for seed collecting:

- Only collect seed from your own property or with written permission
- Source plants must have grown from seed from the Whitsunday Region
- Collect ripe, mature seed & no more than 10% of the seed from any one plant
- Collect from several parts of the plant, mainly the middle & upper branches
- Use paper bags (not plastic) to store the seed & keep them in a cool place
- Label the bag with the species, location, date and your name. Not sure of your identification? Include a stem with some leaves & /or take a photo.

You can drop seed off at the nursery on Tuesday or Thursday mornings, or at Reef Catchments, 45 Main St Proserpine, or call 0408 187 944.

INTERESTING WEB SITES:

Native Animals, Insects, Birds:
www.whitsundaylandcare.org.au
http://www.wildlife.org.au/magazine/
http://www.aussiebee.com.au
www.**birdsinbackyards**.net
www.australianmuseum.net.au/reptiles
http://birdlife.org.au/locations/birdlife-mackay/activities-mac

Native plants:
http://ausgrass2.myspecies.info/content/oplismenus
https://www.anbg.gov.au/cpbr/cd-keys/rfk/
https://www.eucalyptaustralia.org.au/
http://sgaptownsville.org.au/
www.facebook.com.au/sgapmackay

Wetlands
http://wetlandinfo.ehp.qld.gov.au/wetlands/ecology/components/flora/mangroves/mangrove-moreton.html

Feral Animals: feralflyer@invasiveanimals.com
https://alumni.uq.edu.au/cane-toad-baits

Feral plants:
www.weeds.org.au
www.environment.gov.au ›Biodiversity ›Invasive species › weeds
www.iewf.org/weedid/index_by_reserve.htm
www.anbg.gov.au/cpbr/herbarium/

You can make a tax deductable donation to the Whitsunday Catchment Landcare Fund at any time.
Just go to http://www.givenow.com.au/whitsundaycatchmentlandcare
All donors will receive a receipt from Givenow at the time of the do-

Make a Donation
Using the secure engine of GiveNow.com.au

If you would like to receive this e-newsletter please email coordinator@whitsundaylandcare.org.au with your request.
Or you can phone Cath on mbl:0408-187-944 to request one.

Thank You Everyone!

Thank you to so many of you who have generously and kindly donated your container refunds to WCL. To date (July 2019– January 2020)we have had **$ 159.50 donated**. Please find below our Containers for Change ID number to conveniently cut off and include in your bags. Your contributions are allocated to the WCL Public Fund which allows WCL to take on various projects for the ongoing education of our members and the wider community. Thank You again!

ID: C10053139

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