

Whitsunday Catchment Landcare



August 2021

www.whitsundaylandcare.org.au

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Central QLD Coast Landcare

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

CATCHMENT COORDINATOR:

Cath Campbell Ph.: 0483 811 229 coordinator@whitsundaylandcare.org.au **PROJECT OFFICER:** Chris Barbeler Ph.: 0488 768 567 project@whitsundaylandcare.or.g.au

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 Jacquie Sheils, Secretary Glenda Hodgson, Treasurer Dale Mengel John Casey WRC representative- CR. Gary Simpson One Community position vacant

WCL is a community not-for-profit group, relying on grants & donations. We are a registered charity; donations of



REEF

CATCHMENTS





WCL receives support from the following organizations:











Coming Up in August 2021 **COMMUNITY NURSERY OPEN FOR PLANT SALES** (CASH ONLY)

9am-12noon Tuesday, Thursday & the 1st Saturday of each month-

Next Saturday opening—7th August 2021.

Volunteer Activities in August: National Tree Day Sunday 1st August. Galbraith Park- southern side see page 2 for details

19th August: Volunteer Event—

Visit to the QLD Government Community Sustainability Action Grant funded Cape Gloucester Beach Scrub project sites-Nelly Bay, Dingo Beach & Hydeaway Bay. See page 2 for details

At the Community Nursery in August: 33 Kelsey Creek Rd Proserpine Tuesday & Thursday 9am—12.30pm.

Tuesday	Thursday	
3rd: Propagation, Seed processing, Potting, Record keeping etc. at the nursery.	5th: Propagation, Seed processing, Potting, Record keeping etc. at the nursery.	
10th: Propagation, Seed processing, Potting, Record keeping etc. at the nursery.	12th: Propagation, Seed processing, Potting, Record keeping etc. at the nursery.	
17th: Nursery Maintenance & propagation activities	19th: Propagation, Seed processing, Potting, Record keeping etc. at the nursery.	
24th: Nursery Maintenance & propagation activities	26th: Propagation, Seed processing, Potting, Record keeping etc. at the nursery.	
31st: Propagation, Seed processing, Potting, Record keeping etc. at the nursery.		

National Tree Day Sunday 1st August. Galbraith Park– southern side of the Community Garden 9am– till we have finished planting. Please bring:

Water bottle, wear closed in Shoes, Sun Smart clothes & a Hat .



National Tree Day at St. Catherine's College Proserpine. Corner Bruce Highway & Renwick Road, Proserpine

Join us and plant a tree for National Tree Day on Sunday, 1st August at the Primary Campus with all of the fun kicking off from **8am**.

> WCL has donated local native plants which will be planted for our local wildlife and students to enjoy. **Bring your hat, water bottle and gloves along.**

Whitsunday Catchment Landcare will be hosting a Weed Stampede- so bring that unknown plant along & we'll do our best to identify it for you. If its in the weed book, we will swap it for a local native plant. We'll have brochures & weed information available & some books for sale.

There will be a jumping castle and face painting for the kids, and a sausage sizzle and cold drinks for

WCL Volunteer Event—19th August—9am—12noon.

Our third Thursday of the month alternative to the WCL Community Nursery volunteer activity is a visit to the QLD Government Community Sustainability Action Grant funded **Cape Gloucester Beach Scrub Rehabilitation project sites at Nelly Bay, Dingo Beach & Hydeaway Bay.**

We will be checking the revegetation works, undertaking weeding and watering(if required) and collecting seed for propagation back at the nursery. The QLD Governments Community Sustainability Program -Threatened Species Round 3 enabled WCL to undertake revegetation, provide supplementary watering

The contract commenced in October 2019 and will end on the 31st October 2022

This event is offered as an alternative to attending the Community Nursery. Please were closed in shoes, sun smart clothes and a hat. Please bring your water bottle

Please meet Chris Barbeler at the Nelly Bay Carpark at 9 am. Morning tea & water bottle refills provided.

What's Showing

Family: Boraginaceae Common name: Camel or Cattle Bush Scientific name: Trichodesma zeylanicum

Description:

This is an erect annual or perennial herb to about 1 m or a little more in height, with a well-developed taproot. Much of the plant is covered with irritating bristles and small hairs, including the stems and the leaves.

Distribution:

The native range of the plant is from eastern tropical Africa to India, Sri Lanka, the Malay Peninsula, New Guinea and northern Australia. It has become naturalized in many of the Pacific Islands, particularly



Fiji. Grows in a variety of soils, granite, sandstone, coastal sand dunes, rocky hills, creek beds, flats, floodplains.

Trichodesma zeylanicum Photo: David Pepplinkhouse

Leaves: At the base of the plant the leaves are opposite, but they become alternate as one moves up the stem. They are shortly petiolate, and elliptic. The apex is usually acute, but sometimes obtuse. Plant covered with stiff irritant hairs. CAUTION



Flowers: The inflorescence is raceme-like, the individual flowers (1.5–2 cm in diameter) blue, rarely white. The sepals are narrow-ovate, 1–1.5 cm long, 3–4 mm wide, broadening in fruit. The flowers usually become nodding soon after sun-up. Flowers March to October or December. T. zeylanicum provides a unique pollination system; although it produces typical chasmogamous (open) flowers, the pollination is exclusively autogamous (pollen from the same flower) and is not dependent on insect visits.

Trichodesma zeylanicum flower detail Photo: David Pepplinkhouse

Fruit: The fruits have four spherical-shaped chambers, each with one seed .

Propagation: From fresh seed. Grows fairly readily from seed.

Notes: Frost tolerant. With a little water this annual can be maintained as a tough perennial. The leaves are used in folk medicine, usually as a soothing poultice. They have sudorific properties (i.e., they promote sweating), and are used for treating chest ailments. In some places, particularly in Fiji, the leaves are used for the treatment of leucoderma (localized loss of skin pigment), and for piles. The roots are also powdered and the powder used to treat painful ulcers.

BEWARE

Many claim that the plant is poisonous to stock; but the only evidence is anecdotal. Information about medicinal qualities of plants, or about their use as medicines, is for interest only, and is not intended to be used as a guide for the treatment of medical conditions

Sources:

http://www.somemagneticislandplants.com.au/index.php/plants/314-trichodesma-zeylanicum http://www.currentscience.ac.in/Volumes/107/05/0743.pdf

Whitsunday Catchment Landcare & Prickly Pear Control in the Whitsundays

Opuntia stricta & Opuntia monacantha - Prickly pear are prohibited invasive plants under the Biosecurity Act 2014. It must not be given away, sold, or released into the environment.

Historical Prickly Pear biological control & physical removal projects WCL has undertaken.

Whitsunday Catchment Landcare was contracted by Reef Catchments to carry out the following activities on the foreshore and in the beach scrubs of the Council Reserve at Conway Beach. Conway Beach covers approximately 2 kilometres of coastline from the mouth of the Proserpine River to the Repulse rocks. The dunes retain a significant proportion of remnant vegetation, including over three hectares of microphyll vine forest on coastal dunes (RE 8.2.2 'beach scrub'), which is listed as 'Critically Endangered' under the EPBC Act. Beach Scrub ecosystems are considered to provide habitat for the listed northern quoll (Dasyurus hallucatus), rusty monitor (Varanus semiremex), and coastal sheathtail bat (Taphozous australis).

Conway Beach Revegetation and Weed Control 16/01/2015

Various weeds targeted: Opuntia stricta & Opuntia monacantha, Yucca sp., Passiflora, Guinea grass, Lantana etc. Extent of Prickly pear species infestation identified & mapped in 2.8 ha of fore dunes area at Conway Beach. Prickly pear physically removed- approx. 6.5 ton disposed of into landfill or treated with foliar spray.

Prickly Pear Biological control - site extension Coral Beach and Swamp Bay- 30/04/2016 Prickly pear infestation identified at these sites & marked for release of biological controls

Reserve Rehabilitation Works Conway Beach 13/01/2017- 12/05/2017.

Various weeds targeted: Opuntia stricta & Opuntia monacantha, Yucca sp., Passiflora, Guinea grass, Lantana etc.

Cyclone Debbie occurred 30/3/2017. With the arrival of TC Debbie, heavy damage to foreshore and vegetation behind prevented any further meaningful activity on this site for this year. All lantana controlled by Splatter gun has been killed but a little is reshooting. Follow up in the next 3 months to catch what survived. All trees that have been planted on frontal dunes by previous projects have either been washed out or buried with sand. All Opuntia plants on the foreshore have been smashed up and redistributed into the foreshore vegetation and beyond. There has been significant damage to vegetation and sand dunes over 25m back from previous high tide mark. And there is water borne debris (pumice and shells and seaweed and mangrove leaves and twigs) over 150m into the forest from existing beachfront. The reserve is a mosaic of dunes and brackish water holding swales, fully vegetated, and difficult to traverse and survey. Recent timber fall caused by TC Debbie makes progress even more difficult. There were 192 volunteer hours contributed to this project by Whitsunday Bushcare volunteers.

Beach Reserve Rehabilitation works 2017-2018 Conway Beach 25/09/2017 Whitsunday Catchment Landcare carry out 55 hours of weed control and monitor 3 previously established photo points on the foreshore and in the beach scrubs of a 25ha section of the Council Reserve at Conway Beach, between Allan Rd. and the settlement of Conway Beach.

Extension of RC Prickly Pear Control Works Conway Beach- 19/06/2018-22/06/2018

WCL provided in-kind monitoring of the Biological control tent & release more Cactoblastis egg stick into the exclusion tent to infest the prickly pear within the tent.

Whitsunday Catchment Landcare- Reef Assist Team

May 2021– July 2021 Prickly Pear work, training & experiences since commencing—main activities includephysical removal of above ground plants, monitoring, tending & re-infesting the biological control tent, spreading of infested prickly pear paddles to other locations with weed colonies and trials of cut & paint of & injection of chemical controls into large trunks.

Right: Reef Assist Team member Fenna Van Zeilen hard at work physically removing prickly pear from the dense beach scrub at Conway Beach. *Photo: Wayne Oakley.*



Pest Hall of Fame- Prickly Pear and its Biological Control- COCHINEAL **Beetles.**

Cochineal has had a long history in Australia. The original cochineal insects, and the first prickly pear plants, were brought to Australia with Captain Arthur in the First Fleet, to start a cochineal (red) dye industry. Please see Prickly Pear History for more information on the origins of cochineal in Australia.

There are four main species of cochineal insects (and one mealy bug) of importance in the biological control of the main prickly pear (cactus) species found in Australia. The four species of cochineal insects look the same, but they're not. And, very importantly, they will only survive on their own, specific host plant!

This table, be	elow, (courtesy	Dr JH Hoskin	ng, Tamv	vorth NSW)	shows which	species of
cochineal fee	eds on which s	pecies of pric	kly pear	/ cactus:		-

Prickly pear species	Cochineal species
Common pest pear <i>Opuntia stricta</i> spp. Velvety tree pear <i>O. tomentosa</i>	Dactylopious opuntiae cochineal
Riverina pear <i>O. paraguayen-sis</i> (Riverina area) Smooth tree pear <i>O. vulgaris</i> (NSW coastal areas)	<i>Dactylopious ceylonicus</i> cochineal (NB <i>D. opuntiae</i> will "work" on smooth tree pear but it is not as effective as <i>D. ceylonicus</i>)
Rope pear Cylindropuntia imbricata	Dactylopious tomentosus cochineal
Tiger pear O. aurantiaca	Dactylopious austrinus cochineal
Harrisia cactus Harrisia martinii	Hypogeococcus ferterianus mealy bug

DESCRIPTION OF COCHINEAL INSECTS The adult female cochineal is a soft, shapeless sac hidden beneath a white, silky covering. The female grows to about the size of a "match head". Once the female attaches itself to the plant, it sheds its "legs" and cannot leave. The male is a small twowinged insect with mobility to visit the females (such is life?).

According to Dr John Hosking, entomologist with NSW DPI (Tamworth), one female can produce up to 2,000 offspring under ideal conditions. Rate of development is largely influenced by temperature. One generation may be completed in less that two months. A cochineal population can actually

double its number every five days under right conditions (i.e. dry, and a consistent temperature around 26-28 °C)!

COCHINEAL INSECTS HAVE THEIR ENEMIES.

A combination of wet and cold weather can wipe out cochineal insects in their thousands: rain washes away their (white) protective covering, exposing them to the cold. Ants sometimes take a special interest in cochineal, as they carry away their hapless victims. Another common, naturally-occurring predator is the devastating mealybug ladybird (cryptolaemus montrouzieri). The adult ladybirds fly from plant to plant

to lay their eggs - both the adults and the larvae attack Above: NWW20520WX VT-cochineal-underthe cochineal insects.



threat-from mealybug North Star NSW

Click on the photo, right, to see two of these ("many-legged") insects amongst a colony of cochineal on velvet tree pear. The cochineal insects have no defence against the cryptolaemus – note the red areas where cochineal insects have been wiped out! Cochineal insects breed up in their thousands in their peak times, but the cryptolaemus can still have a serious impact on their numbers.

Prickly Pear Biological Control- COCHINEAL Beetles. Cont.

WHERE AND WHEN TO USE COCHINEAL? "Where" relates to how much pear there is. If you only have a small patch, if you want to keep your property really clean, or if you want to run special animals eg stud cattle or horses in the paddock, don't rely on insects. On the other hand, if you have pear over a large and/or inaccessible area, biological control is an excellent, cost-effective and long-term option.

"When" to use cochineal relates to climatic conditions. In north-western New South Wales, cochineal insects are at their peak from November to May. But, they are delicate little critters and are easily wiped out by a combination of wet and cold weather.

MEANS OF DISTRIBUTION The eggs hatch into tiny "crawlers" within a few hours. The crawlers' natural instinct is to move off to find a new food source. They have four (4) different means of travel:

1) They can crawl over smooth ground for up to 10 metres in search of new plants. But, they're not so good on rough ground (eg they can disappear forever into a crack in black soil).

2) Cochineal insects can be blown long distances by the wind. The sketch, to the right, (*courtesy VC Moran & BS Cobby*, 1979, Rhodes University, Grahamstown, South Africa) shows the insect's hairs which act as sails in the wind.

3) By being carried on the actual prickly pear plant material. Pieces of pear are spread by (a) floodwaters, (b) by being attached to a passing animal or (c) by being attached to tyres of passing motor vehicles or farm machinery.



4) By being manually transferred from an infected plant to a new, non-infected plant – using a bucket and a pair of tongs.



As you can imagine, distribution methods 1, 2 and 3 are very haphazard – especially where plants are very scattered. Manual distribution of cochineal insects (as in method 4) is the most reliable for new areas. And, one person can carry out a lot of insect distribution in a short time. Even an hour every now and then will boost the insect

A bucket and a pair of tongs – all we need to move cochineal insects into new plants. Photo, above, shows simple method of distributing infected plant material into new areas. Bob Smith (NSW DPI Bingara) using a bucket and a pair tongs. Easy and environmentally friendly!

numbers.

Tips to help the cochineal?

The basic thing to remember is that **cochineal insects are very delicate**. They don't like cold and wet weather (or extremes of heat). They don't favour heavily shaded areas. When you put insects into a new plant (especially in the approach to winter) give them some protection from the elements. Cover the infected segments with parts of the plant,

or branches, bark, cow pads etc. Covering newly infected plants with cardboard, plywood or even a bit of old corrugated iron will offer the cochineal insects maximum protection from the weather. **CAUTION: snakes may also take up residence under these protective coverings.**

Another trick is to breed the insects indoors, in readiness for release in early summer, the optimum time for release. Store infected plant material in cardboard boxes in a dry, warm area. Over a period of 6 to 8 weeks, generally, you'll have good supplies to put out when the weather warms **USE THE CORRECT SPECIES OF COCHINEAL...** Tiger pear, common pear, tree pear and rope pear cochineal all look the same, but they're not! They are all specific to their own species of pear (check the chart at the top of this page). One exception: common pear and velvet tree pear – same cochineal.

MORE INFORMATION: <u>https://www.daf.qld.gov.au/ data/assets/pdf file/0008/1492910/</u> common-pest-pear.pdf. <u>https://www.daf.qld.gov.au/ data/assets/pdf file/0014/55301/prickly-</u> pear-story.pdf; <u>https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/</u> land-management/health-pests-weeds-diseases/weeds-diseases/invasive-plants/prohibited/ prickly-pear





Above & Right: Cochineal Beetle infested Prickly Pear paddles are relocated to the bio-tent at Conway. The infested paddles are then attached to paddles of a stand of Prickly pear plants to breed more beetles and provide a source of infested paddles that can be spread to other infestations. The biological control tent is carefully sealed to prevent predatory insects accessing the cochineal beetles & larvae so that a healthy population can build up.

Photos: Fenna Van Zeilen & Wayne Oakley- the Reef Assist Team







Left: An example of the extent of prickly pear that infested bushland in the early 1920's Photo: CSIRO.

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/activitiesmac

Native plants:

http://ausgrass2.myspecies.info/content/oplismenus https://www.anbg.gov.au/cpbr/cd-keys/rfk/ <u>https://www.eucalyptaustralia.org.au/</u> 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/

https://www.vision6.com.au/em/mail/view.php? id=1769275019&a=17056&k=a87f8df

WCL Community Nur Needs Seeds The WCL Nursery is very k endemic seed so please ke flowering native trees, shr volunteer nursery. Some of are: Abutilon auritum Abutilon albescens Acacia aulacocarpa Acacia leptocarpa Acacia leptostachya Acacia leptostachya Acacia simsii Alphitonia excelsa Alphitonia petriei Antidesma parviflorum Aphananthe philippinensis Archontophoenix alexandrae Allocasuarina torulosa Allocasuarina luehmannii Aidia racemosa Atalaya rigida Brevnia, oblongifolia	rsery– Always een to source eep an eye on your ubs & grasses for the of the species we need Alexander Palm Black she-oak Archer Cherry Veiny Whitewood Coffee Bush	Lagerstroemia archeriana Lophostemon confertus Lophostemon grandiflorus Lysiphyllum hookeri Macaranga tanarius Melaleuca dealbata Melaleuca leucadendra Melaleuca leucadendra Melaleuca viminalis Melicope elleryana Memecylon pauciflorum var. Micromelum minutum Omphalea celata Pandanus sp. Petalostigma pubescens Planchonia careya Ptychosperma elegans Phyllanthus novae-hollandia Sterculia quadrifida Syzygium australe Tabernaemontana orientalis Timonius timon Trema tomentosa var. asper	Brush Box Nthn Swamp Mahogany Hookers Bauhinia Macaranga Blue Tea Tree Weeping Bottle Brush Corkwood, Euodia pauciflorum Native Lime Berry Cocky Apple Solitaire palm e Peanut Tree River cherry Tim Tam Tree ra Peach-leafed Poison Bush
Cajanus reticulatus Carallia brachiata Casuarina cunninghamiana Chionanthus ramiflorus	Native Pigeon Pea Freshwater mangrove River oak Native Olive	Trema orientalis Vachellia bidwillii (WAS Acad Vitex trifolia	cia bidwillii) Corkwood Vitex
Cordia subcordata Cordia subcordata Corymbia clarksoniana Corymbia intermedia Corymbia tessellaris Corymbia erythrophloia Cryptocarya hypospodia Cupaniopsis anacardioides Diospyros compacta Diospyros geminata Diospyros hebecarpa Dysoxylum gaudichaudianun Elaeocarpus grandis Eucalyptus crebra Eucalyptus platyphylla Eucalyptus tereticornis Euroschinus falcatus Ficus racemosa Hymenosporum flavum Indigofera pratensis	Sea Trumpet Pink Bloodwood Morton Bay Ash Red Bloodwood Large leafed Laurel Tuckeroo Blue Quandang Narrow-leafed Ironbark QLD Peppermint QLD Peppermint QLD Blue Gum Ribbonwood Cluster fig Native frangipani	 Guidelines for seed collectin Only collect seed from yowith written permission Source plants must have the Whitsunday Region Collect ripe, mature seed of the seed from any one Collect from several parts the middle & upper brance Use paper bags (not plas & keep them in a cool plate keep them in a keep them in a cool plate keep them in a cool plate keep them in a cool plate keep them in a keep them in	ng: our own property or grown from seed from I & no more than 10% plant s of the plant, mainly thes stic) to store the seed ace becies, location, date of your plant stem with some leaves at the nursery on mornings, or at nts Office serpine, or
Ganophyllum falcatum	Scaly Ash	call 0483 81	1 229.

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

> If you would like to receive this e-newsletter please email <u>coordinator@whitsundaylandcare.org.au</u> with your request. Or you can phone Cath on mbl:0483 811 229 to request one.

Make a Donation

Disclaimer: Information in this newsletter is offered as a guide only and while every care is taken to ensure its accuracy, Whitsunday Catchment Landcare does not invite reliance upon it, nor accept responsibility for any loss or damage caused by actions based on it.

Thank You Everyone! Thank you to so many of you who have generously and kindly donated your container refunds to WCL. 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. Please find below our Containers for Change ID number to conveniently cut off and include in your bags. Anything Environmental who manage the local container exchange have moved to a QR Code– please find the new WCL ID below. Thank You again!





33 Kelsey Creek Road, Proserpine Qld 4800 Phone: 0483 811 229 Email: <u>coordinator@whitsundaylandcare.org.au</u> Chairperson: Graham Armstrong Coordinator: Cath Campbell

July 2021- June 2022 MEMBERSHIP NOMINATION FORM

Membership to WCL is currently free of charge and General meetings are usually held every 2 months.

Name of Applicant:			
Address:			
Phone:		Fax:	
Name of Proxy: Optional		(separate nomina	ation form to be completed)
N	IEMBERSI	HIP TYPE (Plea	se specify)
Ordinary Member	All persons who are approved of by the management committee, each of whom will have one vote.		
Renewal	Ordinary member renewal – complete section above only.		
Organisation Member	Stakeholde local autho one vote. WCL meet authorised	er groups/associat rities etc, each of If you will be repre ings please comp person from your	tions, public/other incorporated bodies, whom will have one representative with esenting another organisation during lete the lines below and have an organisation complete page 2.
	Organisatio	on/Agency Name:	Click here to enter text.
	Role in Org	ganisation/Agency	y (if applicable): Click here to enter text.
Associate Member	Governme interests of but who sh	ent departments/ag f the Association a all not have voting	gencies, and any persons who have the and furtherance of its objectives in mind g rights.
Please tick your choice below.	Email is our	r preferred contac	t method.
I wish to receive the WCL news I wish to receive meeting notice	sletter via es	🗌 email 🗌 email	no newsletters required
Signed by Applicant:		Da	.te: Click here to enter a date.
 Please return to the V Membership is due Jur 	VCL Admin ne 30 each y	Officer at: admin rear	n@whitsundaylandcare.org.au.
	(0	FFICE USE ONLY	()
Name:			
(Proposer – existing m	ember)		(Seconder – existing member)
Signed:(Proposer)			(Seconder)
Date:			