

## GREETINGS LANDCARERS



Have a fabulous and safe Christmas everyone!

We hope you enjoy time with friends and family and for some a much needed break.

It's also a time to be mindful of those who may not have family close or feel sadness around this time, reach out or check in with those and let them know you care.

Gift ideas: consider local artisans for special individual gifts, tasty local products from farmers markets, fruit trees, native plants from local nurseries, upcycled /recycled gifts from local op shops; support charities or donate to a local wildlife rescue organisation.

EVEN BETTER why not gift a lifetime Brunswick Valley Landcare membership to family and friends :-)) when you sign up for life, you never have to think about renewing again!



NSW Christmas Bush *Ceratopetalum gummiferum* R Meredith

## The Forest

by Judith Wright contribution Diane Hart

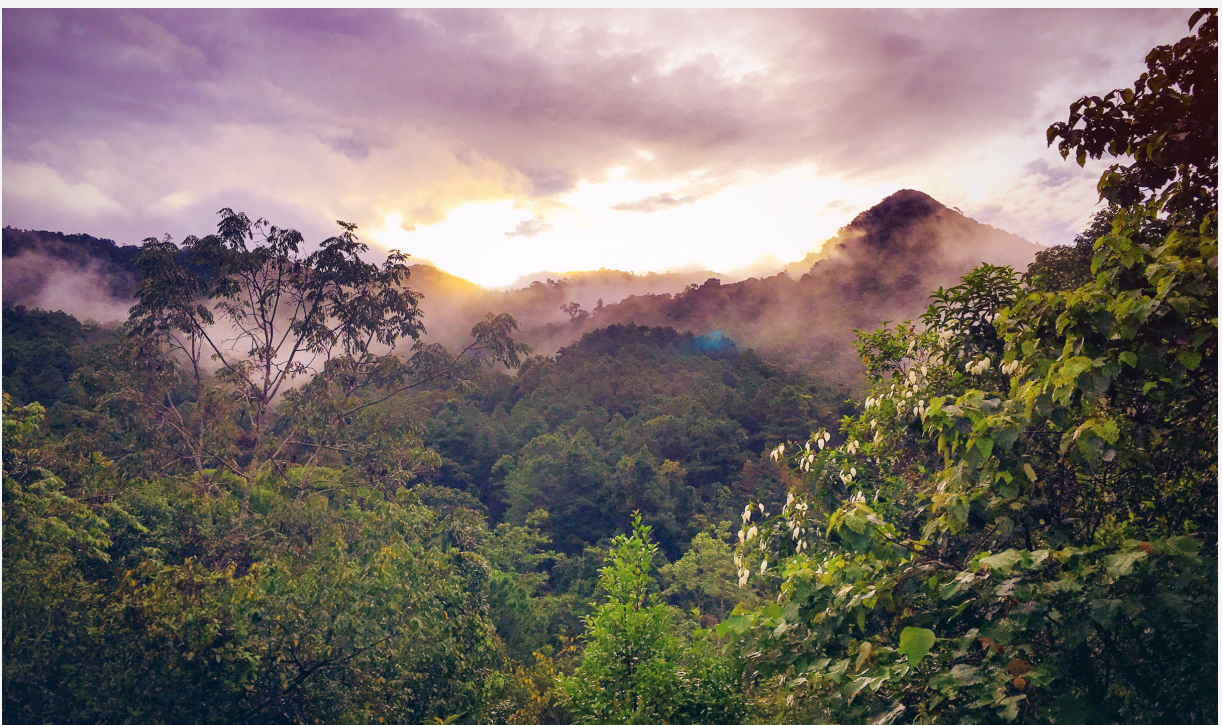
When I first knew this forest it's flowers were strange.  
Their different forms and faces changed with the seasons' changed-  
white violets smudged with purple  
the wild-ginger spray,  
ground orchids small and single  
haunted my day;

the thick fleshed Murray-lily,  
flame tree's bright blood,  
and where the creek runs shallow,  
the cunjevoi's green hood.

When first I knew this forest,  
time was to spend,  
and time's renewing harvest  
could never reach an end.

Now that it's vines and flowers  
are named and known,  
like long fulfilled desires  
those first strange joys are gone.

My search is further.  
There's still to name and know  
beyond the flowers I gather  
that one that does not wither-  
the truth from which they grow

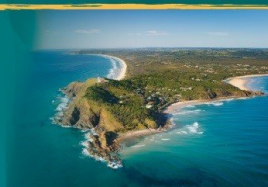






# Media release

## Byron Shire Council



### **It is not OK to let your dogs chase wildlife**

A swamp wallaby joey is being cared for by WIRES volunteers after being rescued from dogs at the beach at Suffolk Park last weekend.

Council's staff were called by a local resident, Jaz, who was walking her dog on the beach, and rescued the joey after watching it being chased into the water by two dogs.

"Jaz scooped up the exhausted joey in a towel with the dogs still trying to attack it, and all in front of the dogs' owner," Sarah Nagel, Council's Manager Public and Environmental Services, said.

"Our staff then called WIRES and from all reports the joey is recovering well," Ms Nagel said.

"The area where the attack happened is an off-leash dog area but that gives owners no right to let their animals chase or harass wildlife, other dogs, or people – they must be able to control their animals.

"We are very thankful to Jaz and WIRES for saving and caring for the joey and it's a reminder to dog owners to please do the right thing and keep their pets under control whenever they are in a public area," Ms Nagel said.

Council's Enforcement team is now focusing on dogs being off lead in Mullumbimby, Brunswick Heads and Byron Bay with fines being given to people who don't have their dogs on leads.

Work has also started on a Dogs in Public Spaces Strategy. This will focus on resolving the issues and challenges of managing dogs in public spaces in the Byron Shire.

"We launched a survey two weeks ago and we have had almost 900 responses which is a clear indication that dogs are a big issue in our shire," Ms Nagel said.

"Our public spaces need to be safe for everyone and some dog owners need to realise that not everyone likes or is comfortable around dogs," she said.

People can do the Dogs in Public Spaces survey on Council's Your Say Byron Shire website.

The survey will close on Monday 13 December.

For media enquiries contact Annie Lewis, Media and Communications Coordinator, on 02 6626 7320.



## E Zones to become C Zones from 1 December

The NSW Government is renaming the 'Environment Zones' (E Zones) that protect areas with high environmental and biodiversity values to 'Conservation Zones' (C Zones) on 1 December 2021.

"This change, from E Zones to C Zones, which will apply to our Byron Local Environmental Plan 2014, is purely administrative and of name only," Byron Shire Council's Land Use Planning Coordinator Alex Caras said.

"There are no changes to zone objectives and permissible land uses - only the prefix and zone category are changing," Mr Caras said.

The government's reasons for changing E Zones to C Zones include:

- the name 'environment protection zone' is too broad and is open to multiple interpretations which can cause confusion about the purpose, intent, and objectives of the zone. 'Conservation' clearly signals that this zone is about conserving the environmental values and natural qualities in areas where it applies.

- to make way for a new suite of employment zones to be rolled out over the next 12 months in council LEPs.

The name change affects all NSW councils, whose local environmental plans will be automatically updated by the State Government.

Council will update its website and relevant planning documents to include the State governments fact sheet, FAQs and other supporting information including a statement that: "a reference to an Environment Protection zone E1, E2, E3 or E4 in a document should be taken to be a reference to a Conservation zone C1, C2, C3 or C4."

For more details about the name change go to the Department of Planning, Industry & Environment's website:

<https://www.planning.nsw.gov.au/Policy-and-Legislation/Environment-and-Heritage/Environmental-zones>.





## **Salvinia weevils released in Tallow Creek catchment to control invasive weed**

Byron Shire Council and Rous County Council have released Salvinia weevils into the Tallow Creek catchment as a biological control for the invasive Salvinia weed.

Salvinia weed, also known as Salvinia molesta, grows very quickly and can double in size every couple of days, taking over waterways and lowering oxygen levels in water that fish need to breath.

The Salvinia weevil is bred by the NSW Department of Primary Industries (DPI) in Grafton as a biological control and natural alternative to chemical spraying.

Each female weevil is capable of laying 300 eggs and both the adult and larval stages of the weevil lifecycle help to kill the Salvinia plant.

The weevils do not feed on native plant species and when there is no Salvinia left the weevils will die.

Chloe Dowsett, Council's Coast, Biodiversity and Sustainability Coordinator said weevils have proven to be an effective control however they are not a quick fix, often taking many months for results to be seen.

"In 2019 we released weevils into the lake at Waterlily Park at Ocean Shores and they successfully reduced a Salvinia infestation to very low levels which allowed for the growth of a native aquatic plant."

"We strategically released the weevils into an upstream location of Tallow Creek with lots of green growth in the hope that this will provide a good habitat for them to reproduce and create a colony," she said.

"The recent opening of Tallow Creek, saw some of the weed washed into the ocean and we know that this species does not like the salt water which is good news," Ms Dowsett said.

Council will continue to monitor Tallow Creek, by checking the Salvinia for any signs of bug activity like brown or damaged new growth buds.

"The weevil was a great success at Waterlily Park but this does not mean it will work as well at Tallow Creek," Ms Dowsett said.

"We will have to wait and see if they will do their job in their new home in Tallow Creek," she said.

"With the holidays about to start it's a timely reminder for people to check equipment like kayaks and stand-up paddleboards because this is often how Salvinia is introduced to waterways.

"And people should never throw any weeds from fishponds or tanks into waterways either," Ms Dowsett said.

# BACK FROM THE BRINK

## Wild bilbies found in Currawinya National Park for first time in 70 years

ABC Western Qld Ellie Grounds

No bilbies had been spotted in the wild on the park, on Budjiti country near the NSW border, about 830km west of Brisbane, since the 1950s.

Save the Bilby Fund charity breeds bilbies, which are endangered in Queensland, in captivity and then releases them into a 25-square-kilometre fenced enclosure on Currawinya.

The enclosure has been free of feral cats since 2018.

In 2019, they released six captive-bred bilbies into the fence's confines.

Now there are more than 200.

<https://www.abc.net.au/news/2021-11-25/wild-bilbies-found-outside-currawinya-fence/100628724>



This wild bilby was spotted outside the fenced area of Currawinya National Park.(Supplied: Cassandra Arkinstall)



Cassandra Arkinstall and Save the Bilby CEO Kevin Bradley releasing captive-bred bilbies into Currawinya National Park in 2019.(Supplied: Cassandra Arkinstall)



# FROM TRASH TO TREASURE

## WERRIBEE TIP TO TURN RUBBISH INTO ELECTRICITY

ABC News Margaret Paul

50% of waste brought to the waste facility will be sorted using a conveyor belt of magnets and machines, dividing the waste into things that can be re-used or recycled, and green waste.

The other part of the council's plan is sorting the green and organic waste and starving it of oxygen, then turning the methane that is produced into electricity.

Waste to energy is a good way of both dealing with waste and creating energy.

We need to think about ways and means we can reduce resources, such as single-use plastics, composting garden waste and household organics.

Ultimately the reduction of waste in the first place is the key.



Margaret Paul



<https://www.abc.net.au/news/2021-11-21/werribee-waste-to-energy-electricity-wyndham-council/100632106>

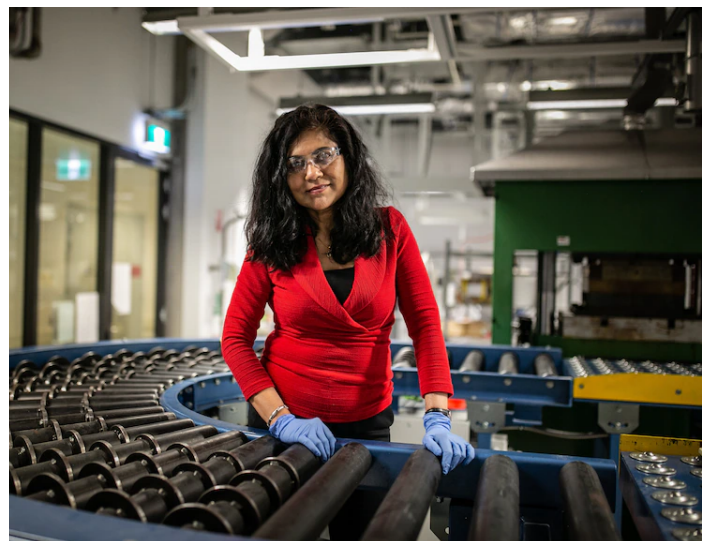
## Sydney waste research scientist Veena Sahajwalla awarded NSW Australian of the Year 2022

By Mridula Amin

The Australian Research Council laureate pioneered the process of turning waste into "green materials".

Her most notable invention is Polymer Injection Technology or "green steel", which repurposed the carbon found in shredded tyres to replace coking coal in steel production.

This breakthrough has been patented around the world and has diverted millions of old tyres — which would otherwise take decades to decompose — from landfills.



<https://www.abc.net.au/news/2021-11-21/professor-veena-sahajwalla-wins-nsw-australian-of-the-year-2022/100636210>



# AUSTRALIA'S NATIVE WILDLIFE IN GRIP OF UNPRECEDENTED ATTACK

Helen Paynter

## FAST FACTS

- There are up to 6 million feral cats and 23 million feral pigs in Australia.
- Cane toads have invaded more than 1 million square kilometres of Australia.
- From 1960 to 2017, invasive species cost Australia at least \$390 billion.
- Grain growers spend more than \$2.5 billion a year on weed control.

## DID YOU KNOW?

- Feral cats and foxes have killed off 25 native mammal species.
- Just four pests - rabbits, feral pigs, cats, and a plant pathogen - endanger 800 threatened species.
- More than 2700 weed species make up 12 per cent of Australia's flora.
- European rabbits are the single biggest menace to threatened native species.
- Fire ants are one of the worst invasive species in Australia.
- Australia has the world's largest wild camel population.

## WHAT CAN YOU DO?

- Follow the rules for biosecurity when returning home from interstate or overseas.
- Be a responsible pet owner. Keep cats indoors, register your animals and keep them out of wildlife areas.
- Grow native plants in your garden; remove weeds and look out for those that pose a biosecurity risk to Australia.
- Report feral animals' locations.
- Be alert for signs of disease in farm animals and stock.

**Download a copy of the report: Fighting Plagues and Predators: Australia's path to a pest and weed-free future.**

<https://www.csiro.au/plaguesandpredators>



Feral cats have contributed to the extinction of 27 native species

Photo by Andrew Cooke



Female cane toads can lay up to 35000 eggs at a time.

Photo by Ruchira Somaweera



The Central Tablelands Local Land Services says wild pig numbers are on the rise following consistent wet weather. (Supplied: Local Land Services)



## A HOPE FOR LYME DISEASE? NEW VACCINE TARGETS TICKS

MRNA technology is now famous for delivering vaccines against COVID-19, and this week it achieved another distinction with an experimental Lyme preventive announced by the collaboration launched in Ireland. "It's the first vaccine [intended for humans] against an infectious disease that does not target the pathogen," Fikrig says. The mRNA vaccine, administered to guinea pigs, turned tick bites red and inflamed. The ticks fed poorly, fell off early, and often failed to transmit the Lyme-causing bacterium. Researchers hope the vaccine will one day work the same way in humans.

<https://www.science.org/content/article/hope-lyme-disease-new-vaccine-targets-ticks>



## Biodegradable 'flat-pack' homes to help wildlife survive after bushfires

It's the latest flat-pack innovation – a biodegradable shelter that can be rapidly installed to provide refuge for native animals left exposed and vulnerable after a bushfire. Newly designed 'habitat pods', developed by Dr Alex Carthey of Macquarie University, are this week being deployed as part of a world-first Australian Wildlife Conservancy research project at North Head Sanctuary.

The habitat pods themselves take the shape of a sturdy, six-sided pyramid made from folded cardboard, perforated with multiple small holes where animals can scamper in and out. Unlike the wire and shade cloth structures that have been used as post-fire shelters previously, the pods are light, easy to transport and set up, and entirely biodegradable.

<https://www.miragenews.com/biodegradable-flat-pack-homes-to-help-wildlife-683371/>



Joey Clarke/AWC

Launched at North Head Sanctuary in Manly is the world's first biodegradable shelter that can be rapidly installed to provide refuge for native animals left exposed and vulnerable after a bushfire.

# CLIMATE

## NEW RESEARCH LINKS AUSTRALIA'S FOREST FIRES TO CLIMATE CHANGE

CSIRO scientist, Dr Pep Canadell, said the research was one of the most extensive studies of its kind performed to date.

"While all eight drivers of fire-activity played varying roles in influencing forest fires, climate was the overwhelming factor driving fire-activity". "The results also suggest the frequency of forest megafires are likely to continue under future projected climate change."

Over the last 90 years, three of the four mega fire years occurred after the year 2000. A mega fire year is defined as the cumulative burned area of forest over one year of more than 1 million hectares.

<https://www.nature.com/articles/s41467-021-27225-4>

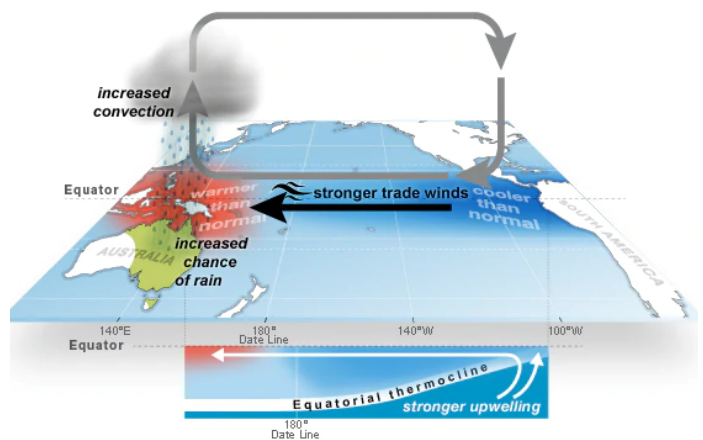


## IT'S OFFICIAL BOM HAS DECLARED LA NINA

This La Niña is expected to be relatively weak and short-lived, but with many catchments already full following a La Niña last summer, as well as a wet winter and spring, its impacts could still be severe.

La Niña means wetter-than-average conditions are favoured over the north and east.

La Niñas are typically associated with above-average numbers of cyclones and an early start to the wet season.



El Niño–Southern Oscillation (ENSO): **La Niña**

<https://www.abc.net.au/news/2021-11-23/bom-declares-la-nina-as-rain-continues/100568884>



## Large scale renewable hydrogen project proposed for South Australia to target international export markets : EcoVoice – Environment News Australia

Kallis Energy Investments is developing the Moolawatana Renewable Hydrogen Project – a large scale (up to 6000 MW) combined solar and wind farm to produce low-cost renewable (or green) hydrogen on Moolawatana Station in the north of South Australia (SA)

The project is expected to involve around 3000 MW of solar and 3000 MW of wind power generation, together with electrolyzers and desalination plant to produce green hydrogen which would be transported via a dedicated hydrogen pipeline to, or near Port Bonython and transformed into green ammonia ready for shipping to overseas markets.



<https://www.ecovoice.com.au/large-scale-renewable-hydrogen-project-proposed-for-south-australia-to-target-international-export-markets/>

## FARMERS AND MINERS JOIN CLIMATE CHANGE DEBATE TO REACH NET ZERO BY 2050

ABC Rural By Ashleigh Bagshaw

Farmers and miners often feel they are not included in conversations around climate change. A psychology student has launched a campaign to highlight the voices of those most impacted by climate change

The agriculture industry is central in Australia's path to net zero.

The sector generates about 15 per cent of Australia's greenhouse gas emissions.

The federal government forecasts up to 17 million tonnes of carbon dioxide equivalent could be sequestered in soil carbon projects by 2050.

Mr Alexander said operating in an environmentally conscious manner was integral to his business.

"We need to be putting those funds into programs that are going to hold up more water, that are going to increase ground cover, that are going to help us to build our carbon back in our soils.



Central Queensland Grazer Mick Alexander says farmers "feel the heat" when it comes to climate change. (Supplied: Exit Ghost Productions)

<https://www.abc.net.au/news/rural/2021-12-03/farmers-and-miners-join-climate-change-debate/100664350>

# Farmers can add biodiversity payments to carbon credits, but questions raised over locked-up land

ABC David Cloughton

The federal government is launching a new trading platform for biodiversity credits. Trials will be held in six regions to test how much biodiversity can be improved and measured. There will be limits on how much land can be planted with trees proposed as too much land is locked up in some regions.

<https://www.abc.net.au/news/rural/2021-12-15/biodiversity-carbon-credits-rading-scheme-for-farmers/100695682>



## Net zero policies could have a big impact on farm businesses and the rural landscape

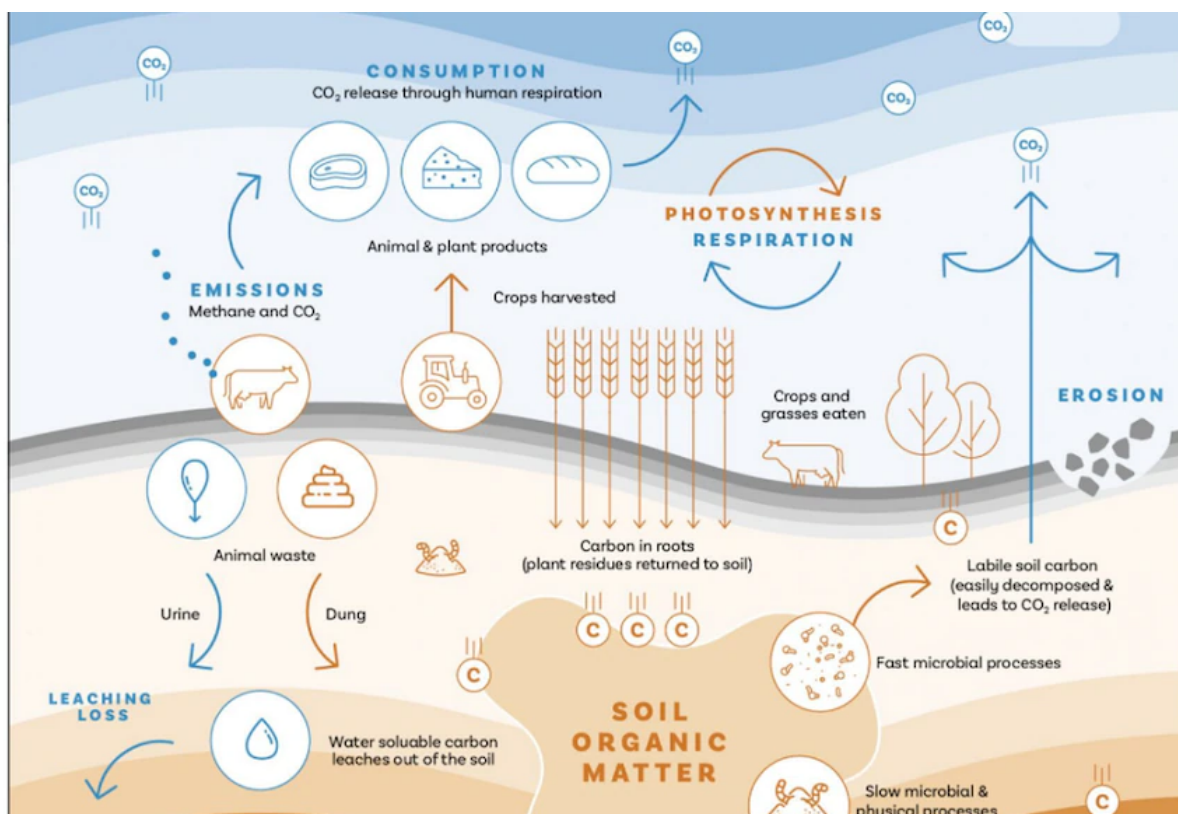
ABC Rural David Cloughton and Josh Becker

Labor's 2030 net zero target could drive up the carbon price and demand for carbon credits

The government's Technology Investment Roadmap aiming to bring down the cost of carbon sequestration on farms

The rising carbon market could help transform farm businesses and reshape the Australian landscape

<https://www.abc.net.au/news/rural/2021-12-08/net-zero-policies-to-impact-farmers-/100680464>





# REGENERATIVE AGRICULTURE

## The power of poo

Landline by Jon Daly

Slurry tankers, as they are known, are not new in Australia, but few can efficiently inject effluent into the soil at scale.

The Italian-made tanker has a capacity of 30,000 litres and a vacuum pump that can fill it to the brim in a matter of minutes.

Implements towed behind it inject effluent 20-30 centimetres into the soil.

The whole set-up, including the tractor and importation, cost Mr Young about \$1 million.

Mr Young said finding new technologies such as his slurry tanker could improve fertiliser efficiency and reduce run-off.

"We're putting it down at the plant roots and we're capturing all the microbial activity."

In addition to their own crops, the Young family plans to contract the tanker to other piggeries and farmers.

The broader agriculture industry is also taking notice of this novel approach.

<https://www.abc.net.au/news/2021-11-21/machine-making-the-most-out-of-pig-poo/100630156>



Implements pulled at the back inject manure beneath the soil where crops need it.(ABC Southern Queensland: Jon Daly)

## Why soil carbon equals better nutrient cycling

A healthy biome involves communities of microbes interacting with each other and plants for mutual benefit.

There are several families of microbes, but we are mostly concerned with the relationship between fungi and bacteria, each doing their part in cycling plant nutrients.

*Fungi and their relationship with bacteria and roots are the warp and weft of the fabric that creates the cloak that we call soil that sustains the earth.*

Fungi in soil either live interdependently with plant roots or interdependently with bacteria. In both cases, fungi are fed simple carbohydrates by either bacteria, roots or both.

Fungi provide hyphae highways transporting food and water to bacteria and plant roots.

Together with bacteria, fungi release organic acids that liberate tightly bound nutrients such as phosphate - benefiting the plant, improving nutrient cycling and reducing fertiliser inputs.

<https://www.theland.com.au/story/7491996/why-soil-carbon-equals-better-nutrient-cycling/>





# WEED OF THE MONTH

## Slash Pine

### *Pinus elliottii*

A large tree with grey to rusty brown bark that is shed in flat discs. Its needle-like leaves (17.5-30 cm long) are grouped in twos or threes and held within a sheath at their base. Its elongated male cones (2.5-6 cm long) are borne in clusters. Its large female cones (7-20 cm long and 3-7 cm wide) are borne on short stalks. These cones have small prickles on the tips each of their woody scales.

**This species is becoming widely naturalised in the sub-tropical regions of eastern Australia.**

**Slash pine (*Pinus elliottii*) is regarded as an environmental weed in Queensland and New South Wales.** It is also seen as a potential environmental weed in Western Australia.

#### Control

Cut and remove small trees - they can make great Christmas trees. Cut at ground level, no need to poison after cutting.

Ring bark large trees by removing thick bark to the cambium layer. The tree will slowly die.

Remove large trees by arborist and chip.

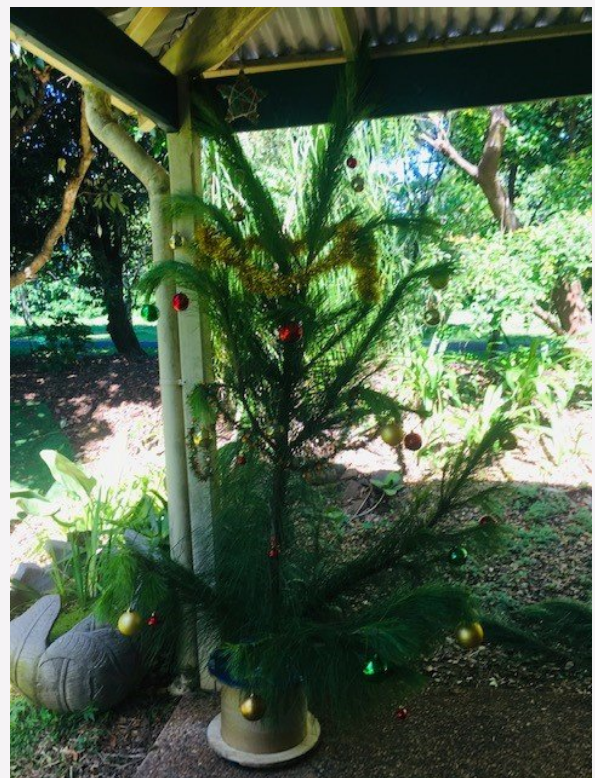
Foliar spray seedlings with Glyphosate 1:50



weed control harvesting



<https://weeds.brisbane.qld.gov.au/weeds/slash-pine>



Slash pines make fabulous live Christmas trees.

# WORKING BEES

-Why not get out and get involved in one of our local groups?

For all Landcare Working Bees please wear protective clothing - long pants, long-sleeved shirt, closed-in shoes, hat, gloves and bring water, sunscreen, and insect repellent. Please always contact the group co-ordinators before attending a working bee as plans do change!

Bangalow Land and Rivercare, Bangalow

WHEN: every Saturday 8:30am

WHERE: find out from

CONTACT: Noelene Plummer [bangalowlandcare@gmail.com](mailto:bangalowlandcare@gmail.com) 0431200638 66874470

Green and Clean Awareness Team, Byron Bay

WHEN: 3rd Sunday of the month 9:00am

WHERE: Meet Main Beach, Byron Bay

CONTACT: Veda Turner [vedaturner@gmail.com](mailto:vedaturner@gmail.com) 0427 857 991

Heritage Park Landcare, Mullumbimby

WHEN: Saturdays 9:00am – 11:00 am

WHERE: Heritage Park, Mullumbimby

CONTACT: Diana Hughes [bromspot@gmail.com](mailto:bromspot@gmail.com)

Jinangong Landcare, Ocean Shores

WHEN: 1st Sunday of the month

WHERE: The Tunnel Road, Ocean Shores

CONTACT: Ian Parer [ianparer@hotmail.com](mailto:ianparer@hotmail.com)

Mullum Town Landcare, Mullumbimby

WHEN: last Sunday of the month

WHERE: find out from John Tann

CONTACT: John Tann [johntann99@gmail.com](mailto:johntann99@gmail.com)

Ocean Shores Landcare, Ocean Shores

WHEN: each Friday at 8.30 – 11.00 am (8.00am DST)

WHERE: corner of Yallakool Drive and Warrambool Road, Ocean Shores

CONTACT: David Kemp [dnkemp77@gmail.com](mailto:dnkemp77@gmail.com) 0427 650 861

Tallowood Ridge Locality Landcare, Tallowood Ridge Mullumbimby

WHEN: Second Saturday of the month from 3pm (winter), 4pm (summer).

WHERE: Gathering Tree Pocket Park, Cockatoo Cres Tallowood Ridge Estate

CONTACT: Joanne McMurtry [jmcmurtry@bigpond.com](mailto:jmcmurtry@bigpond.com)

South New Brighton Dunecare

WHEN: 1st Friday of the month 1:30pm - 4:30pm

WHERE: Meet at southern end of the Esplanade at the Strand beach access point.

CONTACT: Robyn Bolden [robyn.bolden@optusnet.com.au](mailto:robyn.bolden@optusnet.com.au) 6680 1970

Suffolk Park Dunecare

WHEN: 1st Saturday of the month

CONTACT: Helen Brown [hellyh@bigpond.com](mailto:hellyh@bigpond.com) 6685 4964

Tyagarah Landcare

WHEN: Each Thursday 9:00am – 11:00am

WHERE: 23 Prestons Lane, Tyagarah

CONTACT: Bela Allen [bela\\_allen@yahoo.com](mailto:bela_allen@yahoo.com) 6684 7113

Can't find a group near you? We have many other groups who meet on an ad hoc basis (contact us for more details) or if there isn't an existing group in your neighbourhood or you are interested in looking after a particular area, BVL can help you to form a locality group under the BVL umbrella.



# LINKS

- Arakwal <http://arakwal.com.au/>
- Border Rangers Alliance [http://www.greateasternranges.org.au/border\\_ranges/overview/overview](http://www.greateasternranges.org.au/border_ranges/overview/overview)
- Bangalow Koalas <http://www.bangalowkoalas.com.au/>
- Bangalow River and Landcare <http://www.bangalowlandcare.org.au/>
- Big Scrub Landcare <https://www.bigscrubrainforest.org.au/>
- Brunswick Valley Landcare <http://www.brunswickvalleylandcare.org.au/>
- Byron Bird Buddies <http://www.byronbirdbuddies.com.au/>
- Byron Community College <http://www.byroncollege.org.au/>
- Byron Shire Council <http://www.byron.nsw.gov.au/>
- EnviTE [www.envite.org.au](http://www.envite.org.au)
- Environmental Trust <http://www.environment.nsw.gov.au/grants/envtrust.htm>
- Friends of the Koala [www.friendsofthekoala.org](http://www.friendsofthekoala.org)
- Federal Landcare Inc [federalandcare@gmail.com](mailto:federalandcare@gmail.com)
- Local Land Services [www.northcoast.lls.nsw.gov.au](http://www.northcoast.lls.nsw.gov.au)
- North Coast Local Land Services <http://northcoast.lls.nsw.gov.au/>
- Border Ranges Richmond Valley Landcare [www.brrvln.org.au](http://www.brrvln.org.au)
- Mullumbimby Community Gardens <http://mullumcommunitygarden.wordpress.com/>
- North Coast Nature <http://www.northcoastnature.org.au/>
- Richmond Landcare Inc. <http://www.richmondlandcare.org/>
- Rous County Council (formerly Far North Coast Weeds) <http://rous.nsw.gov.au/>
- Soilcare [http://www.soilcare.org\\_](http://www.soilcare.org_)
- Tweed Landcare Inc. <http://www.tweedlandcare.org.au/>
- Wilson's Creek Huonbrook Landcare <http://www.wilsonscreeklandcare.mullum.com.au/>

**For information about Landcare or other natural resource issues in Byron shire please contact  
Landcare Support Officer, Alison Ratcliffe 6626 7028  
(Mon, Tues, Wed)**

**[aratcliffe@byron.nsw.gov.au](mailto:aratcliffe@byron.nsw.gov.au)**

**Project Officer, Rochelle Merdith 6626 7201 [rmerdith@byron.nsw.gov.au](mailto:rmerdith@byron.nsw.gov.au)**

**[www.brunswickvalleylandcare.org.au](http://www.brunswickvalleylandcare.org.au)**

