



Newsletter for Landcare and Dunecare in Byron Shire

<http://www.brunswickvalleylandcare.org.au/>



August 2018

Turning Grass into Habitat, a small step for Tricia and I

by Ross Bray, Land for Wildlife member

In 2012 we bought a clean block of land, in real estate speak, a blank canvas, not too bad at all, but a bit too clean really!

The 3 hectares we purchased had been kept mown, very neat, about 6 mature trees at best and a solid set of timber tiers to the side of the house, ready for a garden but nothing growing there save a wonderful mango tree.

Blank canvas alright! It was also a blank canvas for wildlife. There were the usual suspects, magpies, butcher birds, some honeyeaters on the callistemon hedge next door but nothing much.

So what to do? I've reached "a certain age" where ongoing hard labour wasn't the answer, but I do like my wildlife.

The plan in brief, fence around the house and let someone put cows on the grass to save the slashing. Inside the house fence turn most of the lawns into gardens to save mowing.

In 2013 I got busy creating gardens. Our entrance way was planted to a thick mix of native trees (mainly) to 5 metres, native shrubs, palms, stag and elkhorns. A sheltered entrance, a thicket, I do love a thicket, it saves on the weeding.



Around the sides of the house we planted a range of natives (mostly) to give some colour. Grevilleas, Callistemons. Lilli pillies, Banksias, Spear lillies, flowering gums and a few non native odds and sods. No point in having a dull garden.

Trees and shrubs rapidly replaced lawn. My mowing shrank dramatically.

Out in the paddock we planted a row (around 200) of mixed but mainly eucalypts trees courtesy of Koala Connections. I added to this with my own eucalypt plantings to create other Koala habitat.

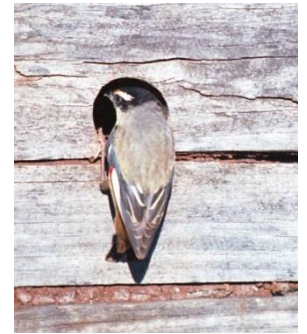
I also have what I pretentiously call "biodiversity areas", small roughly 10 by 10 metre areas fenced to exclude the cows. Deciding the nectar eaters had plenty around the house I planted these areas with native trees and shrubs for the seed and fruit eaters. There are 4 of these areas at the moment but I'll probably add one or two others. One area is fenced around 4 very large native pines that the cows were monsterring. I let these areas go feral, grasses and weeds fight it out between the trees and shrubs. They are also shelter and shade belts for the cows and food for the flocks of finches and quail.



I took a little while but now our property has birds everywhere. Plant it and they will come. From a handful of bird species, I've now logged over 90 species seen on or above the property (like the hawks and eagles hovering around). Some of these birds I've only seen once but others have become residents. Whip Birds call almost every day, Thorn bills, Scrub Wrens, Superb fairy Wrens and Silver Eyes forage in the thickets. Brown Honey eaters serenade us constantly. Wonga Pigeons use the veranda as a short cut around the gardens, Red-backed Wrens and lorikeets

provide a vivid splash of colour. Eastern Spinebills visit each winter. Spikey bushes provide safe places for nesting. It is a visual and audio feast often commented on by our guests.

When we first arrived I noticed Striated Pardalotes searching the wooden tiers for holes to start their nest tunnels. I reached for my 30mm spade bit and drilled some holes. By the time I had packed the drill away in the shed the birds were in and digging. Each year we have around 4 pairs of nesting pardalotes and more are nesting each year. It's now pardalote central.



During our house renovations I used timber off-cuts and banged together nest boxes of various shapes and sizes. In the bottom of the boxes I threw in quite a few handfuls of cheap potting mix for the birds to make a scrape for their eggs. Many people don't realize that birds don't make nests in nest boxes, in the bush they scrape a hollow in the rotting wood inside.



Rough-as-guts would be a fair and accurate description of my nest boxes. I put a couple up in the pine trees, the rest I fastened to 3 and 4 metre treated pine poles and screwed them to the wooden fence posts. The first eastern Rosellas were in two weeks later including a pair in a huge box I made hoping for black cockatoos. Obviously size doesn't matter. You won't find my nest boxes in text books but it didn't worry the owl nightjar either.

I am now planting various native trees and shrubs on the verge outside our property where the Council slasher can't reach.

Aside from the birds other wildlife has crept in. The Echidna lives under the concrete apron of the pool. Bandicoots forage in the gardens, unidentified native rodents live in the long grass. The large Red-bellied Black Snake also lives in the long grass in a small gully below the lawn. It stays there, we stay on the lawn, the arrangement suits us both.

My clever wife decided to add a bird bath. Genius. It's next to the veranda where we often breakfast to the sights and sounds of calling birds splashing about. It's just the base of a large garden pot but it's the perfect depth.

Serious bush regenerators tut tut when I tell them what I've done as many of our Grevilleas are the large hybrids (the smaller native Grevilleas suffered dieback and few flourished...we tried) or the plants aren't local natives. But who cares, it's our garden, it's colourful and 90 bird species is better than the few that called this place home when we arrived. Our house is surrounded by feathered movement, all day, every day. People who have stayed or worked at our place have now started birdscaping their yards and adding nest boxes and bird baths. I've become a small time facilitator and I'm happy about this.

Plant it and something's bound to happen.



Free Workshop



Native Species Planting Guide

An online native plant database to aid in selection of locally occurring species in Byron Shire.



Learn how to use this new online resource to select local plant species for a garden, natural area, landscape scale planting or revegetation setting.

Search for species that:

- occur in local vegetation types or broad landscape locations,
- provide habitat for fauna or have specific tolerances (wind, frost, sun),
- with a particular habit, achieve a required height or have a specific flower colour,
- search by individual species or plant forms (mistletoes, banksias, orchids).

Friday 24th August 2018 9.30 am – 12.30 pm Mullumbimby



PROGRAM:

- 9.30 Welcome, introductions and a cuppa.
- 9.45 Learn how to use the online database to create planting lists and explore species local to our area - some computers will be available to access the database online, however if you could bring your own device with internet access this would be great.
- 11.00 Walk or drive to Heritage Park to see some of the plants from the My Local Native Garden guide and see a demonstration of the best way to plant native species.

BOOKINGS are essential as numbers are limited.

Please contact Alison: alison.ratcliffe@byron.nsw.gov.au or 02 6626 7028 to book.



This project has been assisted by the New South Wales Government through its Environmental Trust and support from Byron Shire Council and Tweed Shire Council.



Biodiversity
Conservation
Trust

Free workshop

Private Land Conservation

Do you want to protect and enhance the biodiversity on your land?

Find out all about why you should get involved in private land conservation, the new types of agreements and which one would suit you.

Friday 31st August 2018 10.00 am - 12.00 pm Mullumbimby

The NSW Biodiversity Conservation Trust (BCT) works with private landholders to protect and enhance biodiversity across NSW. They administer 3 new types of private land conservation agreements.

TYPE 1 - Biodiversity Stewardship Agreements are in-perpetuity agreements and are registered on the property title. These sites generate 'biodiversity credits' which can be sold to offset the impacts of approved developments elsewhere. Landholders receive ongoing annual management payments and a potential profit from credit sales, once the credits are sold.

TYPE 2 - Conservation Agreements are registered on the property title, and are also in-perpetuity. In some areas of the State, Conservation Agreements may attract annual management payments, providing an alternative income stream for landholders. For these, landholders may bid through a 'Conservation Tender' or apply for a 'Fixed Rate Offer'. These are only available in specific areas or for specific habitat types.

However, any landholder can apply for a Conservation Agreement, at any time, without annual management payments. Once an Agreement is in place, one-off grants are available for direct costs of management actions such as fencing or weed control.

TYPE 3 - Wildlife Refuge Agreements are an entry-level agreement for interested landholders wishing to better manage biodiversity on their land. Wildlife refuges are 'registered on-title' agreements, but they can be revoked by the landholder at any time.

Current agreements can be kept as they are, or upgraded if the landowner wishes.

PROGRAM AND GUEST SPEAKERS:

10:00 Welcome, introductions and a cuppa.

10.30 Mark Sheahan, Regional Co-ordinator, BCT on the range of options for landholders that the BCT offers.

11.00 Georgia Beyer, Senior Landholder Support Officer, BCT on how local landholders are using agreements to better protect and manage their vegetation and habitats.

11.30 Sandy Pimm, Ecologist, Byron Shire Council - Biodiversity Credits in Byron Shire.

and Alison Ratcliffe, Landcare Support Officer, Brunswick Valley Landcare - Land for Wildlife.

Bookings are essential as numbers are limited.

Please contact Alison: alison.ratcliffe@byron.nsw.gov.au 02 6626 7028

This project has been assisted by the New South Wales Government through its Environmental Trust.





Wanganui Gorge - Nightcap National Park Restoring Rainforest and Threatened Species Habitat

Launch: Wednesday August 15, 2018, 9.00am—11.00am
Envite Environment Training Room: 56 Carrington St, Lismore 2480

We are inviting you to join us for the combined launch of two projects which are making a significant contribution to restoring critically endangered lowland rainforest and habitat for over 20 threatened species at Wanganui Gorge. Areas dominated by dense lantana are being successfully restored to rainforest.

- Bush regenerators will deliver a presentation about restoration techniques used including splattering large areas of lantana in challenging terrain.
- Fauna ecologist, David Charley, will speak about fauna surveys in Nightcap National Park and habitat restoration for the endangered Eastern Bristlebird in the Border Ranges area.
- Dailan Pugh, private owner of Wompoo Gorge prior to the area being incorporated into NPWS estate, will speak regarding the transformation of the area through a decade of restoration works.
- Meet and hear from others involved in biodiversity conservation and threatened species recovery.

The projects are building on a decade of ecological restoration in Wanganui Gorge. Supported by NSW Environmental Trust, NSW National Parks and Wildlife Service and others. The threatened species recovery project is also contributing to Eastern Bristlebird habitat restoration on private land adjoining Border Ranges National Park.

Light morning tea provided. For further details and to register contact:

Maree Thompson at EnviTE on 02 66272800 or mareet@envite.org.au

*The project has been assisted by the New South Wales Government through the NSW Environmental Trust.
This project is supported by Envite Environment through funding from the
Australian Government's National Landcare Program.*



UNDERSTANDING AND MANAGING WILD DOGS FOR PROTECTION OF LIVESTOCK AND WILDLIFE

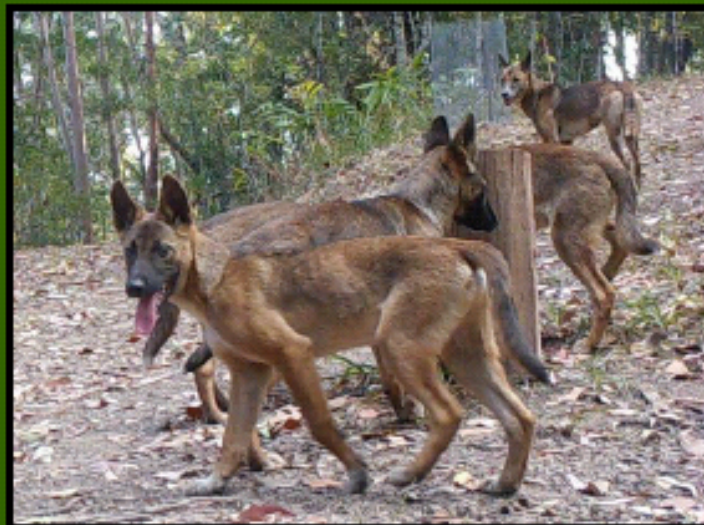
INFORMATION SESSION

Tuesday 21st August 2018

5 – 7 pm

CWA (Country Women's
Association) Hall

Tincogan and Gordon St
Mullumbimby



Come along and find out about:

- Who is responsible for wild dog management and why
- Impacts of wild dogs
- Wild dog behaviour
- Control methods, including tools and strategies for wild dog management
- Importance of reporting wild dog sightings
- Wild dogs and koalas
- What you can do to help control wild dogs in your local community

Refreshments provided. **BOOKINGS ESSENTIAL.** If you would like more information or to register for the information session contact Maria Matthes, Koala Watch Project Officer, on 0467 855 990 or maria@healinghistory.com.au or Friends of the Koala on 6621 4664



This Project has been assisted by the New South Wales Government through its Environmental Trust

Save the date

11th October **Farming into the Future**, held at The Farm Byron Bay

If terms like **regenerative farming, drought resilience, soil health, soil moisture, compost, stock cell rotation, tree cover, biological farming, social and market trends, climatic influence** interest you, don't miss this valuable and stimulating event.

An interactive, daytime seminar featuring:

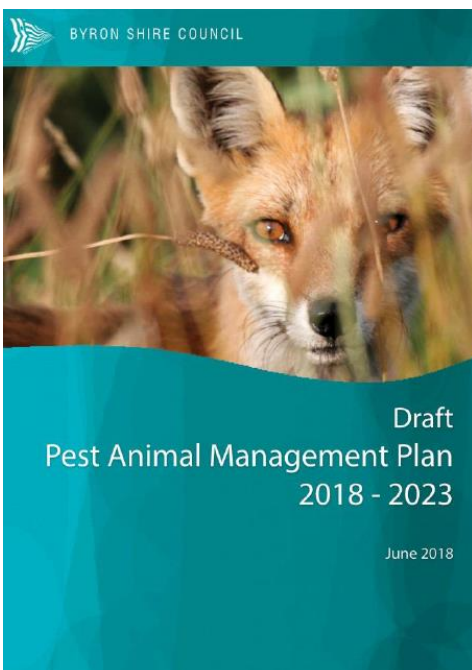
- **Charlie Massy**, "Call of the Reed Warbler",
- **Rob Pekin**, Food Connect Foundation,
- **Glenn Morris**, Figtrees Beef and Pork,
- **David Trevor-Jones**, Hayters Hill Beef and Produce,
- **Martin and Pam Brook**, Brookfarm Macadamias,
- **Rob Randall**, Norco,
- **Joel Orchard**, Future Feeders.

The seminar will focus on sustainable farming methods, management decisions and product marketing methods adopted by producers to meet current and emerging social, climatic, market and environmental trends. Details will follow shortly.

26th October **Riparian Restoration**, held in Ewingsdale

"Rise for Climate" Tweed/Byron area

Rise for Climate is a worldwide day of action on **Saturday September 8 organised** by "350.org". There will be rallies in all the capital cities across the planet, and we are collaborating with groups in Tweed, Byron and Gold Coast to have one here. More news later, but please put the date, Sept 8, in your diary now. "350.org" has been around for a long time, going back to the 1970s when there was hope that the CO2 level in the atmosphere could be kept to below 350 ppm equivalent, thought to be the safe upper limit. Well, here we are at 410 ppm, and seeing evidence of a fast changing climate all around... Now is the time for stepping up strong action on climate. We need people to assist make this event a success. contact daverawlins75@gmail.com for more info.



Byron Council's Pest Animal Management Plan

We are now inviting feedback on our new **draft Pest Animal Management Plan**, for six weeks from **9 August - 21 September 2018**. Our draft Plan has been prepared in accordance with the NSW Biosecurity Act 2015 and Local Land Services Act 2013 and consultation with stakeholders and the community.

View the Plan and more information at:

<https://www.yoursaybyronshire.com.au/pest-animal-management-plan>

Internet access to the draft Plan is also available at the 'self-help' kiosks in the foyer of Council's Customer Service Centre, Mullumbimby, where a hard copy can also be viewed.

Australian Biological Farming Conference & Expo 2018

9 to 12 November – Southern Cross University, Gold Coast

Pre-Conference Tours ~ Post Conference Workshops

27 Speakers – 40 Exhibitors

www.australianbiologicalfarmingconference.org



The lack of specialist advice or research on biological farming in Australia is leading to increasing numbers of farmers attending forums like the third Australian Biological Farming Conference. According to organisers SoilCare, biological farming is now firmly on the agenda for a growing number of Australian farmers.

We are fortunate to have noted international speakers along with Australian experts addressing the conference theme 'Science Meets Nature'. Importantly the speakers will also include farmers who will present case studies from their own successful implementation of biological farming practices."

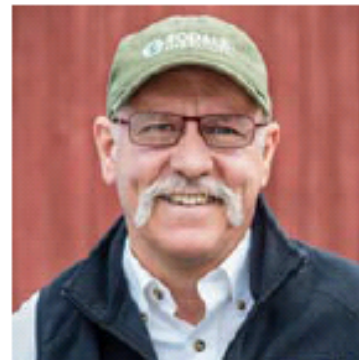
Michael Phillips is a farmer, author and orchard consultant who grows apples in New Hampshire, USA. In his latest book



Mycorrhizal Planet: How Fungi and Plants Work Together to Create Dynamic Soils, Phillips explores the complex science of the world beneath our feet in layman's terms - offering insight into how to make plants and their fungal partners prosper.

Jeff Moyer of Rodale Institute in Pennsylvania, USA, is a world renowned authority in biological and organic agriculture. His expertise includes organic

crop production systems with a focus on weed management, cover crops, crop rotations, equipment modification and use. Jeff conceptualized the ***No Till Roller Crimper*** for use in organic agriculture and in 2011, he wrote ***Organic No-Till Farming***, a publication that has become a resource for farmers throughout the world.



Prof Carlo Leifert, Centre for Organic Research, SCU will talk about healthy soil, crops and people.

Prof Susanne Schmidt, QLD Uni researcher - agro-ecosystems at the interface of plants, microbes & soil.

Dr Neil Wilson returns to continue sharing his enthusiasm for the microbial world and agriculture.

Rob Hinrichsen, Kalfresh – QLD, incorporating bio farming practices in large scale vegetable production.

Nick Kelly, Regenerating the soil ecosystem in the WA wheatbelt.

Dan Falkenberg, award winning vigneron, Barossa, SA, will explain how healthy soil creates great wine.

Visit the website to read about other speakers who will cover diverse topics such as Functioning Bio-diverse Ecosystems in Orchards and Vineyards, On-Farm Compost Making and Usage, Advanced Compost, The Great Mineral Debate, Weed Management on Organic Farms, Soil Analysis interpretation, Organic/biological no till management for grain production, Integrating forage crops for pastured livestock into standard grain rotation, Pasture soil biology and lots more.

Delegate Registration \$440 ~ Tours \$165 ~ Post Conference Workshops for delegates \$132
For more information & registration visit www.australianbiologicalfarmingconference.org



The August issue of Village Eco News is now available. There's a great article on helping baby native birds. <http://brunswickvalleylandcare.org.au/wp-content/uploads/2016/06/Village-Eco-News-Issue-24-August-2018.pdf>

Wanted – a good home for a critically endangered tree

In last month's newsletter we read that Myrtle Rust has a particularly devastating affect on several local plant species.

One of those plants, Native Guava, *Rhodomyrtus psidioides*, is especially susceptible to Myrtle Rust which can be fatal for the shrub. Less than 10 years ago this shrub was common and found growing in and on the edges of rainforest from about Gosford north to Maryborough. There is a concern that in a few years Native Guava may be extinct in the wild.

I have several Native Guava in pots ready to go in the ground and in need of a good home. However, if you are keen to take on this task, this tree will require special care. You will need to monitor it regularly. Any infected leaves will need to be removed, wrapped and put into the bin. Regular application of fungicides may help.

Native Guava is a local rainforest shrub suitable for a garden that grows to 2-5 metres. It has clusters of white flowers in spring and can grow in full sun.

If you would like to help ensure the survival of this species and are prepared to watch over and care for a Native Guava, then contact John 0448 000 909.



TOWARDS

ZERO
DEFORESTATION



FOR OUR FORESTS AND WILDLIFE

Nature in NSW is in crisis. New laws allow for devastating deforestation and clearing of important wildlife habitat. At least 1000 species of plants and animals are facing extinction, and the destruction of their habitats is the leading threat.

As a result of these new laws, 99% of identified koala habitat on private land can be bulldozed.

This devastation is firmly within our power to stop.

NSW urgently needs strong laws to protect our forests, bushland and wildlife. These laws must allow nature to thrive, encourage landholders to protect and restore native habitat, and make deforestation and land clearing a thing of the past.

Sign our petition today and send a message to the NSW government – it's time to protect our forests and wildlife.

www.Nature.org.au/Deforestation



Towards zero deforestation

New laws allow for clearing of important wildlife habitat. 99% of identified koala habitat on private land can be cleared.

To sign the petition The Nature Conservation Council visit <https://www.nature.org.au/get-involved/take-action/lets-end-deforestation/>

STORIES to inspire and give you hope

A New Fern Species may have been discovered in the Nightcap Range

by ABC North Coast

A NEW FERN SPECIES MAY HAVE BEEN DISCOVERED IN THE NIGHTCAP RANGE.

Scientists believe they may have discovered a new fern species in the Nightcap National Park near Lismore.

Botanist Ecologist, Lui Weber believes he may have found the first record of the genus *Scleroglossum* in New South Wales and potentially a species new to Science.

Specimens have been unable to be identified by the Queensland Herbarium, and so, have been sent to New Zealand for identification by Barbara Parris, a world expert on this particular fern family.

Stay tuned. <https://www.facebook.com/ABCNorthCoast/>



New app helps ecologists rapidly map ecosystems

by EchoNet

A mapmaking app created by UNSW scientists harnesses the power of Google and NASA to empower ecologists to create a view on ecosystems without any specialist equipment.

UNSW scientists have created a mapmaking app that can fast-track large-scale ecosystem analysis from months to minutes, giving conservationists a way to monitor decades of human impact, hotspots of biodiversity and vulnerable ecosystems.

Less than a year after its launch, [REMAP](https://www.echo.net.au/2018/07/new-app-helps-ecologists-rapidly-map-ecosystems/) – a free online mapmaking tool that allows users to detect environmental change over time using satellite images – has been used in 140 countries and is now applied in a range of contexts. The app is now an integral part of an international effort to map Myanmar's ecosystems. <https://www.echo.net.au/2018/07/new-app-helps-ecologists-rapidly-map-ecosystems/>

The Numinbah Nature Links Project

by ABC North Coast

Tweed Council is working with landowners to restore World Heritage Listed rainforest in the Border Ranges. Please enjoy the video of their work.

<https://www.facebook.com/ABCNorthCoast/videos/1922112464476639/>



Meet Justin Mallee by Saving our Species newsletter

Saving our Species Project Officer Justin Mallee has been working on threatened species management since early 2017. Justin is based at Alstonville on NSW's north coast and has a Diploma in Production Agriculture and a Bachelor of Environmental Science – Natural Resources Management.

Were you always keen to work in the natural world/environmental management?

I have always enjoyed the outdoors. I was originally interested in being a farmer. After working on a range of farms, I became increasingly involved in trying to understand and manage the natural ecosystems adjoining the 'productive' areas on each property. What started as a side interest grew into a passion and motivated me to go to university and study environmental science.



What are you mainly working on now?

I now work part-time with both the ecosystem and threatened species team (EaTS) at Coffs Harbour and as a project officer for Saving our Species (SoS), based at Alstonville. The species I manage as part of SoS are two rainforest trees, Minyon quandong and nightcap oak, and two high-altitude species occurring in the border ranges; Mt Merrino wax-berry and border mallee. I job share the SoS role with Peter Higgins who has a wealth of knowledge in fauna with a focus on birds.

What is one of the best workdays you've had or projects you've worked on?

In 2017, after a contractor discovered a Minyon quandong seedling in Terania Creek, I organised a team of experts and the National Parks and Wildlife Service North Coast Branch SoS team to survey the area and find more individuals of the rare and illusive Minyon quandong. It was really exciting to spend the day with so many knowledgeable people, many of whom had been working on this species for over 20 years. The results? Eleven trees were located at the new site – one for each member of the field team!

What is the strangest workday/experience you've had?

I recently contracted a rash shortly after arriving at a rainforest monitoring site. The source of the itch I discovered was Scrub Itch, a small orange-red mite called a Trombiculid larva. Luckily, they don't carry disease (in this area) and after a few itchy days looking like a chicken pox victim, I recovered with a reinvigorated appreciation of insect repellent (for prevention) and lavender oil (to soothe bites).

What do you like to do outside of work? What are your other hobbies or ways to unwind?

I like spending time with my family and looking after our small rural property. We're surrounded by national parks and wildlife providing many opportunities for bird watching, photography, bush walking, creek swimming and nature focused play. We enjoy restoring weedy areas, propagating and planting local species and learning about all the plants and critters that call our little property and the surrounding locality home.

What message would you send to a young person about to start a career in conservation/threatened species management?

You have made a good choice. Working in conservation is such a fulfilling career that is likely to become much more, including a lifestyle, a passion, a social network, a journey of constant learning and a source of enjoyment.

Try not to get overwhelmed by the enormity of the task or the diversity of plants and critters. I try to focus on the bits I know and gradually add to them over time. Take whatever opportunities are presented to you even if they are not exactly what you had imagined. Find people, places, courses and organisations that interest you and spend time exploring them. Volunteer whenever you have the chance, and most importantly, spend time in wild places.

Justin is also an ace photographer! See some of his images in the gallery in this edition.

<https://www.environment.nsw.gov.au/news/meet-justin-mallee>

Land for Wildlife

The results of excluding cattle by Lindsay Murray, LfW member



The only Coolamons *Syzygium moorei* (also known as Durobby)

on the farm are really old ones, almost certainly survivors from the original clearing 120 years ago. I have never found a single juvenile or seedling anywhere on the property. There were a few old ones on the hill that are big and beautiful. Last year thanks to a drone, we discovered that a hollow in one was home an owl. But sadly these big old trees have



suffered serious cattle compaction over the years. Two years ago we fenced off these old trees and now enough decomaction and leaf litter has accumulated to see a carpet of Coolamon seedlings appear. Other areas with more compaction from cattle still aren't allowing seedlings to root. I was very excited to find these babies, perhaps the first Coolamons to germinate naturally on the farm for 120 years.



Why have reports of sick or injured barn owls risen 875 per cent?

By Emily Bissland, ABC

South West VIC

Photo: When Chelsea Fox found this dead barn owl, she could see no clear signs of death and wondered why, Chelsea Fox

The rate of sick or injured barn owls reported to Wildlife Victoria so far this year has increased by 875 per cent on the same period last year.



In 2018 Wildlife Victoria received over 117 rescue requests for barn owls between January to mid-July. The year prior during the same period, there were only 12. In the coastal town of Port Fairy, locals have taken to social media to share their experiences. Chelsea Fox found a dead barn owl on her Port Fairy property with no apparent visible sign of injury. After she posted a photo to Facebook it sparked a flood of people sharing similar experiences online. At least nine other friends had found dead barn owls in the surrounding area in the week prior. Ms Fox found a second dead owl just days later on a friend's property in Killarney. **Rat poison or starvation to blame?** To read the full story visit <http://www.abc.net.au/news/2018-07-12/something-killing-barn-owls-in-victoria/9980016>

Lyrebirds and their relatives are overlooked major dispersers of mycorrhizal fungi

By Todd F. Elliott & Karl Vernes, [University of New England](#)

Superb Lyrebirds (*Menura novaehollandiae*) are symbolic of Australia and are found through a range of habitats from southeastern Queensland to Tasmania. These ground foraging birds are one of the ultimate mimics of the bird world, sometimes perfectly copying more than a dozen unique sounds ranging from other bird species' calls to chainsaws.

In our recent IBIS paper, we show for the first time that Superb Lyrebirds eat a diversity of fungi (at least 14 species) and may be providing a vital ecosystem function through the dispersal of mushrooms that are essential to the health of Antarctic beech and Eucalyptus forests in southeastern Australia.



Figure 1. A diversity of sequestrate fungi (truffles). Associations formed by these and related fungi are important for plant health and as foods for a diversity of birds, mammals, and invertebrates around the world.

Fungi form a wide variety of associations in the environment. The majority of vascular plants depend on mycorrhizal associations with fungi for their nutrient uptake. Most plant roots are relatively inefficient at nutrient absorption on their own and rely heavily on the underground thread-like networks (mycelia) of fungi to “infect” them and increase their nutrient absorptive abilities. The plant gives the fungus sugars

produced by photosynthesis in exchange for water and minerals that the fungus extracts from the soil. These associations are vital to the success of most plants and many fungi.

Many of the fungi that form these associations have truffle-like (sequestrate) fruiting bodies. These truffles fruit below ground, making it difficult for them to disperse spores and for associated plant roots to become colonized by the symbiotic fungi. These fruiting bodies are highly nutritious to animals, and it has been widely suggested that mammals and insects are their primary dispersers. In this study, we apply methods not previously used in bird studies to detect fungal presence in diets and report for the first time that superb lyrebirds eat truffles and other fungi. We suggest that birds may be an overlooked and vital disperser of mycorrhizal fungi.

Fungi have been vastly underreported in the diets of birds, and we believe this may be due to methodological flaws in historic bird dietary studies. Most fungal spores are under 30 microns (1 micron is 1,000th of a millimeter) and are thus difficult to detect at less than 400X magnification. Most bird studies do not examine diet samples at sufficiently high enough magnification to determine whether or not spores are present. It is difficult or impossible to macroscopically recognize fungi in crops or stomach samples, as fungal tissue is very soft and breaks down quickly.

Most mammals that eat fungi have seldom (or never) actually been observed feeding on fungi; reports of this dietary component are generally based on microscopic examination of fecal samples. However, the majority of reports of fungi consumption by birds are based solely on chance feeding observations. As we demonstrate in this study, we think this human sampling error has led to a bias in the understanding of many bird diets. The bias may also be impacting hypotheses of fungal biogeography, since some migratory birds have the potential for much wider spore dispersal than mammals or insects.

Many of the Australian mammals that were historically key dispersers of symbiotic fungi are endangered or virtually extinct, so birds may be one of the last remaining groups of organisms dispersing these vital organisms across the landscape. We urge other researchers working on bird diets to adopt methods similar to those we outline in this study and determine how widespread this phenomenon is in bird communities around the world. There are endless ecological, nutritional, and dispersal research questions to be asked about these associations, and some of the answers may prove birds' associations with fungi to be vital to the health of forest systems around the world. <https://www.bou.org.uk/blog-elliott-verne-lyrebird-diet/>

Rainbow lorikeets, gliders and cockatoos call man-made hollows home

By Tom Forbes and Lucy Murray, ABC Gold Coast

Rainbow lorikeets, sugar gliders and micro bats are competing for man-made tree hollows springing up across the Gold Coast.

A council audit of Australia's largest tree hollow program has found almost every new home produced is being used by birds and animals. The hollows are cut into trees using a chainsaw, and mimic natural hollows as closely as possible.

"We are finding up to around 85 per cent, 90 per cent uptake by native wildlife, which has just exceeded our expectations," project management officer Marty Harris said.



With new housing estates popping up across the 1,300 square kilometre Gold Coast City Council area, Mr Harris said he had seen the habitat destruction first-hand.

"I have lived on the Gold Coast most of my life and done tree work here for most of my life, for 20 years ... and have seen the number of urban eucalypts that have been removed," he said.

Tree hollows that wildlife live in can take up to a century to occur naturally.

PHOTO: *Almost 90 per cent of the artificial tree hollows on the Gold Coast are occupied by wildlife.* (ABC Gold Coast: Lucy Murray)

The council began its program three years ago and it has produced more than 400 hollows.

"We do look at any opportunity we can to retain and manage the trees that remain," Mr Harris said.

Arborist Matt Collom said dead or dying eucalypts that would otherwise be cut down were now being preserved. "They would be cut to a stump and put through a chipper," he said.

Now the dangerous limbs are lopped off and the hollows are cut into the tree using a chainsaw.

"We are trying to mimic what would naturally happen. We investigate that and we try to mimic it the best we could," Mr Collom said. "The thickness, the depth, the entrances' sizes and heights and angles, we have studied it all to create these boxes."

PHOTO: *Gliders, possums, galahs and cockatoos have been using the man-made hollows.* (Supplied: Dan Collom)

The most frequent tenants for the new hollows are rainbow lorikeets, but the audit also found wood ducks, squirrel gliders and cockatoos. Mr Collom said one tree had 14 hollows cut into it and native animals were flocking to take up residence.



"In the space of an hour after making a hollow, we had some galahs," he said.

Mr Harris said other councils in Sydney and Melbourne had similar programs. "It is something that, as a practice, I would like to see adopted across the board," he said.

<http://www.abc.net.au/news/2018-07-15/wildlife-flocks-to-man-made-hollows-on-gold-coast/9958486>

FUNDING

Do you have a great project and need funds to make it happen?

You can find more information on available grants on the Brunswick Valley Landcare website including a calendar of all grants expected to be available during 2018. There are also some handy tips on how to be successful with grant applications. Below is a summary of grants which are currently accepting applications and ones that are anticipated to open within the next month.

<http://brunswickvalleylandcare.org.au/funding/>

Saving Our Species Contestable Grants

The NSW Environmental Trust is inviting applications for its Saving Our Species (SoS) Contestable Grants Program. Applications close **13 August 2018**.



Funding is available to organisations / groups to support long term projects that will secure threatened [landscape managed species](#) and [threatened ecological communities](#) in the wild, in line with the objectives of the NSW Government's [Saving our Species \(SoS\) program](#).

The \$9 million program will include one round of competitive grants to support a number of 7-year projects. Grants of up to \$350,000 each will be available over the first 4.5 years of 7-year projects.

The grant program has been designed to see the program and the applicant resource the first 4.5 years of the project, with the remaining 2.5 years resourced solely by the applicant. The funding model assumes that for most conservation projects higher costs occur upfront in the first few years, with fewer resources needed when the project transitions to a maintenance phase.

Community groups or organisations that are not incorporated are only eligible to apply if they arrange for the grant to be administered by an incorporated or government organisation.

Go to the Trust's website for more information about SoS Contestable Grants and application materials: <http://www.environment.nsw.gov.au/grants/saving-our-species-contestable-grants-program-2018.htm>

Patagonia Grants Program



Patagonia Australia funds only environmental work. They are most interested in making grants to organisations that identify and work on the root causes of problems and that approach issues with a commitment to long-term change.

Because they believe that the most direct path to real change is through building grassroots momentum, their funding focuses on organisations that create a strong base of citizen support.

They fund work that:

- is action-oriented
- is quantifiable
- builds public involvement and support
- is strategic in its targeting and goals
- focuses on root causes
- accomplishes specific goals and objectives that can be effectively measured to evaluate success

Grant applications are open 1 July - 31 August 2018 and can be between \$10,000 USD and \$20,000 USD, depending on the specific needs of the project. For more details head to their website:

<https://www.patagonia.com.au/pages/grant-guidelines>

Weed of the Month

This month's weed of the month is Freckle Face *Hypoestes phyllostachya* (*Hypoestes sanguinolenta*). A perennial herb or subshrub to 1 m originally from Madagascar.



Branches, leaf stems and young leaves densely are covered with long white hairs. The leaves are ovate to broadly lanceolate, dark green with pink to lilac spotting above, paler below.

The flowers are a single lilac flower at junction of the leaf and stem. The seed capsule is 8-12 mm long and hairless. The plant produces a prolific amount of tiny black seeds, which are readily dispersed by runoff and able to spread along drainage lines, and possibly spread by wind. Plants can reach reproductive maturity within a growing season.

It invades native vegetation, outcompetes native ground covers and is common in forest and woodland.

Returning Northern NSW residents urged to 'weed out' threats to the region



Rous County Council is urging Northern NSW residents returning from overseas or interstate to be vigilant with their hygiene as part of ongoing efforts to protect the region's environment and agriculture industries from potential weed threats.

"Imagine sowing a crop and waiting for rain only to have it invaded by a parasitic weed," Rous County Council Weeds Biosecurity Officer Kim Curtis said.

"This is a real threat facing our region given overseas weeds such as Red Witchweed and Parthenium have already entered Queensland. While overseas or interstate our residents may not realise they or their personal items and luggage could have been exposed to endemic weeds, especially as some weed seeds are as small as specks of dust. It is very important residents returning to the region are vigilant and follow good hygiene practices to make sure our native vegetation and local agriculture industry are not put at risk," Mrs Curtis said.

The hygiene and other practices Rous County Council strongly recommends residents follow include:

- Always comply fully with quarantine border restrictions and declare any food, plant material or animal products being brought into Australia.
- Before packing to return to Northern NSW, wash all clothes and clean all footwear (if this is not possible, do so immediately after returning).
- Disinfect all footwear using a disinfectant, bleach or alcohol/water mix.
- Consider leaving clothing and footwear behind if a location is known to pose a particularly high risk.
- Use a wet cloth or disinfectant wipe to wipe down non-washable items such as suitcases, iPhones, iPads, camera bags, watchbands and belts.

"Farmers, researchers, agronomists, government staff and others who have visited rural or remote areas overseas or interstate need to be hyper vigilant," Mrs Curtis added. "We are particularly vulnerable to weed threats from countries with similar climatic ranges such as China, India and South America. These weeds have the potential to devastate our current farming systems, disrupt or stop some export markets and increase the costs of growing crops." For a copy of the new Weed Biosecurity priority list go to www.rous.nsw.gov.au and select 'Weed biosecurity', 'Weed information', 'Weed resources'. Further media enquires: Kim Curtis, Extension Officer, 6623 3800 or 0427 335 502.

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 groups co-ordinators before attending a working bee as plans do change!**

Yallakool Reserve Landcare, Ocean Shores

WHEN: each Friday at 8.30 am
WHERE: corner of Yallakool Drive and Warrambool Road, Ocean Shores
CONTACT: Felicity Watson 0467 650 140
or David Kemp dnkemp77@gmail.com 0427 650 861

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 0427 857 991

Heritage Park Landcare, Mullumbimby

WHEN: alternate Saturdays 9:00am – 11:00 am
WHERE: Heritage Park, Mullumbimby
CONTACT: Diana Hughes 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

Mullum Town Landcare, Mullumbimby

WHEN: last Sunday of the month
WHERE: find out from Rita de Heer
CONTACT: Rita de Heer 02 6684 1495 rdeheer1@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@australis.net 6680 1970

Suffolk Park Dunecare

WHEN: 1st Saturday of the month
CONTACT: Helen Brown 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 6684 7113

We have other groups working throughout the shire, but these groups work on an ad hoc basis. If you are interested in volunteering please contact Brunswick Valley Landcare to find your closest group.

LINKS

- Arakwal <http://arakwal.com.au/>
 - Border Rangers Alliance <http://www.greasternranges.org.au/border-ranges/overview/overview>
 - 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
 - Environmental Trust <http://www.environment.nsw.gov.au/grants/envtrust.htm>
 - Friends of the Koala www.friendsofthekoala.org
 - Local Land Services www.northcoast.ils.nsw.gov.au
 - North Coast Local Land Services <http://northcoast.ils.nsw.gov.au/>
 - Border Ranges Richmond Valley Landcare www.brrvl.nsw.gov.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>
 - Tweed Landcare Inc. <http://www.tweedlandcare.org.au/>
 - Wilson's Creek Huonbrook Landcare <http://www.wilsonscreeklandcare.mullum.com.au/>
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For information about Landcare or other natural resource issues in Byron shire please contact

Landcare Support Officer

Alison Ratcliffe 6626 7028 0421 244 640 (Monday, Thursday and Friday)

email: alison.ratcliffe@byron.nsw.gov.au



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