

OBJECT: To foster an interest in nature

June 2020

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FIELD NATURALISTS' ASSOCIATION OF CANBERRA INC.

June 2020 newsletter

No monthly meetings until further notice



Some late season ducklings: seven Pacific Black Ducks at the Giralang pond and 11 Wood Ducks at Lake Ginninderra this week.



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Coppins Crossing walk

Recently, with a group of friends we enjoyed a walk from the car park at Coppins Crossing downstream along the Molonglo River in the direction of the Murrumbidgee River.

We were lucky with the weather, which was clear, bright and sunny. Fortunately for us there were few other people out walking in the area so we had no difficulty with social distancing.

Along the way we saw numerous different types of fungi, but being ill informed about such matters other than to say some were of the “shelf” variety whilst others were huge, brown and puffy and yet others were small, white and delicate. Unfortunately I was unable to take any photos of them for later identification. There was very little in flower, and certainly nothing remarkable.

However, we did see several birds that I recognised: flocks of noisy Sulphur-crested Cockatoos, a pair of Yellow-tailed Black Cockatoos, an Eastern Rosella eating rose hips and a pair of Red-rumped Parrots.

We stopped for lunch in a grassy spot beside the river and adjacent to a tall dead gum tree, which had a Wedge-tailed Eagle’s nest in its upper branches. Then to our utter delight as we were eating our lunch a pair of Wedge-tails soared on the currents above our heads.



We took a slightly different route home and on the return trip walked through a pine forest with a few acacias growing beside the fire trail. The acacias were noticeable in that they had clear damage at their base and on their trunks where deer had been browsing.

A very enjoyable day with much of interest to see.

Deidre Shaw

Breakthrough for Norfolk Island’s morepork owl

ABC Western Plains By Jessie Davies: 17 Apr 2020

Researchers say one of the world’s rarest owl species has a chance at survival after a breakthrough discovery on a remote Australian island.

Rohan Clarke, an avian ecologist from Monash University, said the chicks represented the future of the species, given there were less than 50 individuals left on Earth. The owls only live on Norfolk Island.



Researchers have worked for more than 40 years to save the dark, spotty owl species. Work began in the 1980s after the island’s population declined, leaving all but one female.

In 1989, the last remaining owl was successfully paired with a male from a New Zealand subspecies. The cross-Tasman relations meant that all subsequent generations of moreporks on Norfolk Island were now a unique hybrid.

“Now, as far as we know, the entire population on Norfolk have descended from that pair,” Dr Clarke said.

Dr Clarke works alongside Norfolk Island National Park rangers and says the new chicks are a delight to see. But their arrival was hard earned.

Unexpectedly, the owls stopped breeding in 2012 and the dry spell continued until 2019. At that point, crisis talks were held.

“We were really concerned because there was every chance that the existing owls would get old and lose their reproductive ability,” Dr Clarke said.

At the emergency meeting a plan was hatched to build more nesting boxes throughout the island’s national park. Extra field staff were also allocated to monitor the owls’ movements.

“Now, we’re on the front foot to work with these birds and find a solution to keep them going,” Dr Clarke said.

Scientists push to raise awareness of Great Southern Reef

ABC South West Vic / By Sian Johnson

Australian scientists are concerned an image problem is preventing a huge reef system, which houses species found nowhere else in the world, from getting the attention and protection it deserves.

They are so concerned, in fact, that they are helping to write a children's book that instils in a new generation the importance of protecting the "biodiversity hotspot".

While our focus has always been on the Great Barrier Reef, There is a second 'great' Australian reef.

A few years ago, scientists bestowed the name Great Southern Reef on the kelp forest-covered structure that stretched more than 71,000 square kilometres, bordering roughly half of Australia's land mass.

The reef system touches five states, from New South Wales up to Kalbarri in Western Australia, but it is less colourful and lives in far colder waters than its north-eastern neighbour—the Great Barrier Reef—and has never managed to attract comparable interest.



Marine experts are determined to help people understand the Great Southern Reef's importance and the threats it faces, and they want to start with early education.

Prue Francis, the director of Deakin University's marine sciences course, said it was surprising how few people knew about the series of reefs bordering southern Australia.

She is part of a group at the university taking a small step to help boost the Great Southern Reef's profile by writing a children's book to try to explain its significance to a younger generation.

"We know we've got this amazing Great Barrier Reef in the tropical part of Australia, but we've got a fantastic temperate equivalent down here," she said.

Dr Francis described it as a "biodiversity hotspot" hosting more than 1,500 seaweed species.

"A lot of those are endemic, which means that they're not found anywhere else in the world, and they're specific to the Great Southern Reef," she said.

"The beauty of it is that it's in really, really good, healthy condition and it stretches for so long.



The weedy seadragon is found only in waters off southern Australia, including around Tasmania. (Supplied: Flickr/ Klaus Stiefel)

Dr Francis said generally speaking the Great Southern Reef was in healthier condition than the Great Barrier Reef, which had been devastated by major coral bleaching as water temperatures rose.

But its southern neighbour does also face other serious threats to its long term health, including marine pollution like nutrient run-off from the land.

"A lot of our area down here has been undiscovered, untapped and unmapped, which is something we're slowly starting to change.

"They're discovering all these amazing sponge gardens and kelp forest."

The book will help young readers identify plants and animals from the southern marine environment, urged along by characters like Professor Seaweed, who lives in the coastal city of Warrnambool.

The book's author, Deakin University writing and literature senior lecturer Paul Venzo, said there was a gap in representations of southern coastal environments in children's books about marine science.

"We discovered that there was a great focus on places like the Great Barrier Reef, particularly the kind of bright colours in tropical environments that have been popularised by things like the Hollywood film Finding Nemo."

He said the picture book would help young people connect their summertime experiences at the beach with the larger story of the marine environments that dot Australia's southern coast.

How many species live in your home?

Manu Saunders

This is a guest post from Matthew Holden, an applied mathematician based at the University of Queensland. I loved seeing his backyard biodiversity hunt on Twitter, because so many of his pictures were of invertebrates! His story...

Well that's what I wanted to know about my home.

It all started one day, more than a year ago, when my housemate, Dr Andrew Rogers, was cleaning out his closet. He wanted to move the spiders outside and spare them from getting sucked up by our vacuum, during a much-needed cleaning session. But there was one problem, there were a lot of spiders, definitely several species. He thought, "How many spiders do I share the house with?" It was a slippery slope ... it wasn't long till we wanted to know all of the species in our home.

From then on, we regularly talked about conducting a very local biodiversity survey, but never got around to it. We were fortunate enough to even have a taxonomist, Dr Russell Yong, move in with us, who was keen to help out. But we kept putting it off.

Then the pandemic happened. We all decided to start working for home – a perfect time to do the survey. It would give us all a social activity to bond over during this time of isolation. Andrew even came up with a hashtag for us to share our findings #StayHomeBiodiversityChallenge.

I think we all guessed that there were likely at least 100 or so species in our house and yard, but we were shocked – as we surveyed each day, the tally kept rapidly increasing. We are now at 460 total species, with 409 animals and 51 plants. Of the 409 animals, 50 were vertebrates (mostly birds, but 6 mammals, 7 reptiles, and 2 frogs as well) and a whopping 359 invertebrates broken down below (316 of which were insects).

The results of the survey were quite shocking: 143 moths! What? That's nuts. But it makes sense when you think about it. If your neighbourhood has grass in it, there are many moths whose caterpillars feed on the stuff. Then if you have any neighbours with fruiting trees, there are many fruit-piercing moths. Other moths like flower nectar, and there are even a few pesky moths that live in our pantries and closets. They are all attracted to light at night. So, if you want to see what moths you live with, just leave a light on your porch or balcony or in your yard. Or if you have none of those, leave a window open and keep the light on in that room. You will see many moths, and if you look closely, there will be several species. We also got a bit lucky with the timing. Most moths peak around March or so. So, we definitely benefited from adopting the "work from home" attitude early. We had a ton of moths during the first part of the survey. If we started now, we'd get far fewer, but we'd still probably see 50 or so species.

Sadly, we only had 21 beetles. Beetles make up the most diverse category of animal on the planet, and yet

they are such a small part of our survey. While this year has been cold and dry, and our sampling methods may not favour beetles so much, we have to wonder where have all the beetles gone?

Moths	143
Flies	38
Bugs	31
Spiders	29
Butterflies	24
Beetles	21
Wasps	16
Ants	10
Bees	6
Lacewings/antlions	6
Grasshoppers/crickets/katy-dids	5
cockroaches	5
Mites	3
Dragonflies/damselflies	3
mantids	2
Snails	2
crustaceans	2
Centipedes	2
flatworms	1
earthworms	1
Nematodes	1
termites	1
Thrips	1
Webspinners	1
barklice	1
woodlice	1
Millipedes	1
Earwigs	1
alderflies	1

How we did the survey

Beside the surveys by our porch light, we regularly took a walk through all the vegetation around the house, paying special attention to the underside of leaves. While not looking under leaves, we were looking for movement. It's easier to spot flying things if you are focussing of movement rather than looking for something that looks like an insect. Occasionally, we would shake a bush, and place a large container underneath, and go through what fell into the container. This was a good way to look for the insects on leaves that don't fly much, or are weak fliers like beetles. We also spent some time under the house looking for, mostly, spiders.

We did several surveys where we grabbed some dirt and dead leaves from the ground and sorted through it for invertebrates. This yielded many tiny things that we could only ID to very broad categories. For example, there are many microscopic sized spiders in the soil. We were lucky enough to own an old microscope we bought for cheap off of gumtree a while back. But even then, it's quite difficult to ID the microscopic organisms. The soil was also filled with small centipedes, millipedes, bark lice, worms, beetles, and much more.

Besides the old microscope, my most useful tool was my smartphone, armed with the iNaturalist app and a cheap macro-lens attachment for the phone's camera. The iNaturalist app allows you to upload photos, and it will use image processing and machine learning to give suggestions about what the organism is. Experts on iNaturalist often refine or correct the guess. Or you can do it yourself by looking through a catalogue of species with iNaturalist records in your state/country. The macro-lens attachment was really helpful for IDing because it created photos with more details. My lens attachment does 7 times zoom without losing any pixel resolution and I purchased it off eBay for \$20.

Even with the help of iNaturalist, and a taxonomist in the house, we knew it would be really tough to identify everything to species. So we agreed that we'd try our best to identify everything to as fine a taxonomic classification we could. But some things will always be too tough. For our numbers we counted "leaves" of the taxonomic tree of life. So if, for example, we couldn't identify 3 insects to species, but one of them was in a family not previously observed in our sample, we'd count that as a new species. If the other two were in families that were already represented in our sample, we wouldn't count them as new species until we were more certain what they were.

My life feels so much more enriched knowing all the species I live with. Plus, I now have a great idea for the perfect holiday gift for my family ... a field guide to all of the wildlife in my home/yard! ... scratch that, I think if they knew I lived with 400+ invertebrates they'd get the heebie jeebies and never visit ;). But happy that the hashtag has gotten many folks involved with their local wildlife around the world (from the USA to Germany, and of course at home in Oz).

Matthew Holden

Editor: Field Natters may remember my talk, and subsequent book on What is living in my backyard? At the time of my talk the tally was 376 species but has increased substantially since, particularly in the category of moths. One difference in my findings and that of Matthew's is that I haven't deliberately searched for species by sifting soil and leaves, for example, I haven't included plants as they are mostly planted (and I don't even want to think about the weeds), and I only included species identified by Canberra Nature Map. There are many more 'unidentified' reports, so I'm sure I would have exceeded Matthew's total count. Also to consider is the different localities and climate.

However, this again raises the change for fellow Field Natters to use this time of home isolation to look around their environment to see how many species they can find.

I was surprised today to find a wasp and a ladybird on one of my birdbaths this close to winter, plus a female satin Bowerbird visited yesterday and the Grey Butcherbird seem much earlier this year, is still hanging around.

While not in my backyard, I was surprised to find two Blue-banded Bees still active at Mount Painter late last week.

So a challenge Field Natters: For the next newsletter, who can send me the longest list of species found in your local environment. No need for formal identification. Send to editor@fieldnatsact.com

Join Bush Blitz scientists on a virtual expedition!

For the last decade, Bush Blitz, Australia's largest nature discovery program has taken taxonomists to remote parts of the country to document plants and animals. This program is a partnership between the Australian Government, Parks Australia (through the Australian Biological Resources Study), BHP and Earthwatch Australia.

Bush Blitz participants have helped to discover more than 1700 new species and made thousands of species records. There are an estimated 580,000–680,000 species in Australia but three quarters of this biodiversity is yet to be identified and scientifically described.

With species discovery expeditions currently on hold due to the pandemic, the Bush Blitz team has organised a virtual expedition. The Backyard Species Discovery project encourages all Australians to contribute to our knowledge of Australian biodiversity while practicing their social distancing.



We can't promise you'll find a new species but this is a great way to make a valuable contribution to science and brush up on your ID skills with the help of Bush Blitz scientists. All you need is a digital camera and Internet access: the Bush Blitz team will guide you through the rest. For more information about Bush Blitz, and how to join this virtual expedition, visit the Bush Blitz website <https://bushblitz.org.au/introducing-an-expedition-for-everyone/>

Kingsway jottings

It is hard to believe, but just a few weeks ago our block was three acres of dust, dried twigs, failing bushes and wilting trees. Now it is green everywhere and the bottle brushes and Correas have decided to bloom as well as ever: and Grevilleas. Under several trees among the many shooting plants (mostly weeds?) we have thriving tomato plants courtesy I expect of the Currawongs who were marauders in my tomato patch before the heat devastated it. Some are even flowering! Will we get winter tomatoes?

At last there is food for our resident kangaroos and the shy, beautiful wallabies no longer come down from the hills in the evening to drink at the little pond and eat the carrots we put out for them during that scary hot period when not a blade of grass remained. Kookaburras and Butcher birds still turn up for their meat along with the resident Magpies and Currawong.

I may be fooling myself, but I think there are even a few more insects around. We had a few days with clouds of Caper White butterflies. Two tiny, curious Plume Moths (*Pterophoroidea*) landed on our back door. We have even had bushflies!

I looked up details of the native Blue-banded Bee that we observed and to my surprise saw that there is also a Cuckoo Bee. It has a parasitic behaviour just like the birds. That even extends to the newly hatched larvae destroying the eggs and larvae of the host bee. What does that say about evolution?

Only two or three Wattle birds remain to winter with us, the rest have moved on along with the cuckoos and friars. But still one or two Cuckoo Shrikes and some Fantails turn up occasionally and an Oriole passed through yesterday. A pair have been here today.

A pair of Bronzewings potter around and the Crested Pigeons seem to be thriving best of all. Our Spinebills and White-eared Honeyeaters are enjoying the flowers and a Yellow-faced Honeyeater joins them sometimes. The Tree-creeper still (after years?) roosts on the timbers under the back deck with an ever-growing pile of droppings recording its presence. We often hear it 'get up' early in the morning as it flies to the nearest tree and sends out that string of piercing whistles.

The black cockies are steadily ripping the bark off a fallen down tree and digging into our wattles for grubs – if we don't chase them off in time!

Most addicted to water? Must be the Crimson Rosellas, which are so often bathing in the pond or water bowls. High and mighty? The pair of Wedge-tailed Eagles, which drift up the valley, may be looking out for a rabbit, not that many remain – perhaps due to the foxes we see here. Oh yes, the Ravens passed by again. They come each year around November, December time, the two adults and their two or three young. According to Gisela Kaplan (the Professor in Armidale who wrote that lovely Magpie book) in her "Bird Bonds": "*Wherever the youngster flies, the parents will follow and will roost in close-proximity. Raven offspring are probably the most carefully supervised youngsters among birds and they very rarely come to harm*".

Perhaps the most amazing sign of the rejuvenation is the coming up of so many fungi, more than 10 kinds on our block alone, many of which we have not seen for several years now. Many of the hundreds and hundreds of different fungi have only a scientific, classifying name (if that) but I love some of the common names: Lawyer's Wig, Spectacular Rustgill, Stinkhorns, Horse Dung Fungus, Rooting Shank, Earthstar, Slippery Jack, ... Surely some of the strangest but most attractive things in the natural world.

Colin Pask, 30 April 2020

Now Winter weather has made an appearance. Snow has been seen on the Brindabella Mountains and the first frosts have destroyed many of those runaway tomato plants. But still there are flowers on some blackberry bushes and yesterday an Admiral butterfly was here. Yesterday and again today there was a Cuckoo trilling high in the trees. Just where are we with the seasons!

Editor: Colin, such a wonderful report of the activity at your property, and I am jealous of the amount of diversity you are still seeing.

In response to the confusion of the seasons, I too am seeing this, with a sighting of Blue-banded Bees I thought would have long since hibernated (or whatever they do over winter) and have about 12 small fruit on my apple tree, that should not now be producing any fruit.

A pair of swans are nesting near the skate park at Lake Ginninderra and there have also been numerous reports of ducklings of varying breeds.

A woodland fit for purpose

I travel through David Street, O'Connor fairly regularly and I noticed that there were a series of plant protectors near the drain and cycle path. I was not able to stop so made a note to follow up to see what had been planted.

Last Sunday Andy and I went there to inspect the site. There were seven smaller sites within the block. There was a bee hotel as well as a sign with the title *Birdscaping our Urban Landscape*, showing that the ACT Government provided the grant for the work. Both SEE-change and Greening Australia contributed to the development of the site in 2018. Salvaged logs have been placed around the plantings, which as they break down will attract insects, and in turn the insects would provide food for the birds. Greening Australia research had shown that small birds are attracted to areas with a good ground layer as well as shrubs. Two hundred volunteers planted two thousand native plants.



By the time we visited, all the plant protectors had been removed. There were grasses and forbs including *Themeda triandra* and *Poa* species, *Crysocephalum apiculatum* and *C. semipapposum* and *Xerochrysum viscosum*.

The shrub layer included two acacia species, *A. mearnsii* and *A. dealbata*, *Bursaria spinosa* and *Daviesia mimosoides*. It is an excellent example of a well-thought out and researched community project.

Janet Russell

A bit of humour

While I have tried to keep these newsletters free of coronavirus news, I thought I'd share this latest thought of mine of what should probably be the anthem song of the coronavirus pandemic. This is, and appropriately sung by the band, The Police: Don't Stand So Close To Me.

Hope you are all keeping safe and I believe by current statistics, that Australia is in a very good position to have this virus under control and to get life back to normal very soon.

Members may not know this but this is the very area of Commonwealth health in which I worked for 20 years before my retirement, so I am very aware of the very good quarantine procedures we have in place.

For a comparison, in 2009 we had the 'swine flu' pandemic, during which Australia had just over 37,000 cases, with none of the current restrictions in place. There were only 188 deaths as this virus was not as deadly as covid-19. However, with the restrictions now in place we have had just over 7,000 cases of covid-19, with 102 deaths, but showing that while this virus is way more deadly than the flu virus, the measures put in place by our governments has significantly reduced the spread of the disease and the death rate.

Let's all be patient with our current restrictions and we should all get back to normal life very soon.



Field Naturalists' Association of Canberra Inc.

Who are the Field Naturalists?

The Field Naturalists' Association of Canberra (FNAC) was formed in 1981. Our aim is to foster interest in natural history by means of meetings and regular field outings. Meetings are usually held on the first Thursday of each month. Outings range from weekend rambles to long weekends away. Activities are advertised in our monthly newsletter. We emphasise informality and the enjoyment of nature. New members are always welcome. If you wish to join FNAC, please fill in the member application below and send it in with your subscription to the FNAC Treasurer at the address below.

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Monthly meeting venue: Jan Anderson Seminar Room, R. N. Robertson Building, Biology Place, Australian National University

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MEMBERSHIP APPLICATION OR RENEWAL

Family name: First name:

If a family membership, please include the first names of other members of the family:

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