

# Pittwater Nature

Issue 7 August 2021



News and stories from Bushcarers, Wildlife carers, Community and home gardens

## We all love frogs

But sadly, mass frog deaths are currently occurring, mostly along the east coast of Australia. Over the last few months, lethargic frogs can be observed out in the middle of the day, their skins discoloured. Dead and dying frogs are being reported widely, their deaths at present a dreadful mystery.

Frogs are an integral part of healthy Australian ecosystems. While they are usually small and unseen, they're an important thread in the food web, and a kind of environmental glue that keeps ecosystems functioning. Healthy frog populations are usually a good indication of a healthy environment.

The full story here: <https://www.abc.net.au/news/2021-07-29/dead-shrivelled-frogs-turning-up-eastern-australia-help-find-why/100331042>



Dead Green Tree Frog. Suzanne McGovern



The Australian Museum's Herpetology department is working closely with the Australian Registry of Wildlife Health and government biosecurity and environment agencies to understand the scale of the deaths, leading the research to understand the likely causes.

You can help this research by being a citizen scientist and using the free **Frog ID** app. Frogs are usually calling unseen, but each frog species' call is unique and a sure means of identifying it. You forward your recording to the Frog ID folk who'll listen, then reply to let you know the species. All records are added to a database.

Many thousands of recordings made so far have provided valuable information about which frogs live where, and when, all over Australia.

You can make a donation towards research into this mystery cause of death by going to:

<https://australian.museum/get-involved/citizen-science/frogid/appeal-save-australias-frogs/>

## Some Pittwater frogs



Perons Tree Frog. Gary Harris

Giant Burrowing Frog. Chris Jolly



Brown Striped Marsh Frog

We care for our natural world in the Pittwater area, by looking after bushland, caring for wildlife, producing sustainable food in community gardens, and at home.

Pittwater Natural Heritage Association (PNHA) is publishing this newsletter to help us keep in touch and encourage each other in our various volunteer activities.

We welcome your contributions. Contact us: [pnhainfo@gmail.com](mailto:pnhainfo@gmail.com) and on Facebook

## Eastern Osprey *Pandion cristatus*

Two big birds live along Pittwater shores. You can tell an Osprey from a White Bellied Sea Eagle even from a distance because it's much smaller, and with a different profile.

Its wings are sharply bowed, right, unlike the eagle's broad soaring upswept wings, below, raven in pursuit.

Image: Neil Fifer



It's listed as Vulnerable in NSW. How to help this species: <https://www.environment.nsw.gov.au/savingourspeciesapp/project.aspx?ProfileID=10585>

Several Osprey pairs have their large stick nests in our area. These are often on high man-made structures such as light poles or communications towers.

Margaret Woods sent us these Osprey photos as she has been watching them hunting and feeding along the shore near North Narrabeen. Unleashed dogs have bothered the birds feeding on the rocks.

Ospreys occur in every continent except Antarctica, either breeding or wintering. Our species does not migrate. It's only since the early 2000s that Ospreys have been nesting in our area.

They catch fish by plunging headfirst into the water, then struggling up to the surface to fly off with prey gripped with both talons, fish in line with the body. Maybe an aerodynamic advantage?



See more: <https://www.birdlife.org.au/bird-profile/eastern-osprey>



## White-bellied Sea Eagle

*Haliaeetus leucogaster*

The much bigger White-bellied Sea Eagle hunts by snatching fish from the water surface. Prey includes fish, penguins, turtles, sea snakes, birds, mammals and carrion. Young Sea-Eagles are brown as juveniles then slowly become to resemble adults in a patchwork manner, acquiring the complete adult plumage by their fourth year.

Right: Sea Eagle has stolen an Osprey's fish over Long Reef on August 27.

Image: Neil Fifer



See more: <https://www.birdlife.org.au/bird-profile/white-bellied-sea-eagle>

## Spotted Pardalote *Pardalotus punctatus*



About as different as birds can be from each other, one of our tiniest birds is the **Spotted Pardalote**.

Mostly you know it's around by its squeaky call high in eucalypt foliage where it feeds on psyllids and other tiny insects. It helps to keep a balance between trees and insects that could harm the tree if too abundant.

Bronwyn Clarke found this male busy building his nest in a burrow he and his mate have excavated beside the Chiltern Trail in Kuringgai NP.

Can you spot this tunnel entrance in the roadside embankment in Waratah Rd Ingleside? When we were making the video about the lovely bushland in this road, we were looking for Spiny Crayfish holes we knew were there. But a tiny bird shot out, a **Spotted Pardalote** disturbed from its nesting activities.

Waratah Rd Ingleside bushland video:

<https://youtu.be/-Ugi9xFjuSw>





# Plant Families 101: Fabaceae - Peas and Beans

This family's name **Fabaceae** come from the Latin word for bean – **fava**. An older name was Papilionaceae based on the Latin for butterfly, *papilio*. It features about 765 genera and nearly 20,000 species of trees, shrubs, vines, and herbs.

It is the third-largest land plant family in number of species, behind only the Orchids, Orchidaceae and Daisies, Asteraceae.

How can you pick a member of this plant family?

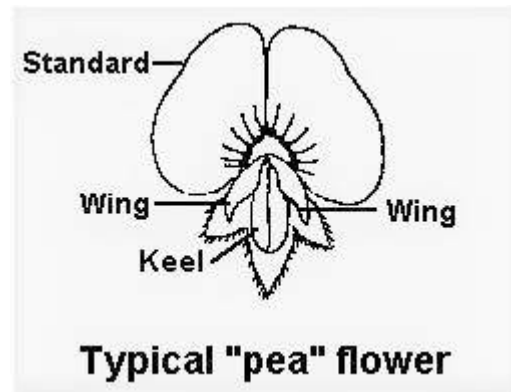


Image from the Australian Native Plant Society <http://anpsa.org.au/peas1.html>

- \* Flower with petals arranged as in this template, left

- \* Often has compound leaves—three or more leaflets on one stem

- \* Fruit is a legume or pod with seeds along one inside edge.

To us botanists the **fruit** is the part of the plant that contains the seeds.

Botanists now include several subfamilies in the huge Fabaceae family. Among these are genera such as Acacia (wattles), Senna, Cassia and the garden plants Sweet Pea, Wisteria and Bauhinia, and these all include many species.

We are already quite familiar with nutritious food from this family in vegetables such as peas, green beans, dried beans, lentils and peanuts.

**How come this plant family is so huge, so widespread and so successful almost all over the world?**

One reason is that on the roots of most species are nodules containing **Rhizobium** bacteria which can fix atmospheric nitrogen in forms the plant can use. This major plant nutrient enables the plant to grow fast and thrive in very poor soil.



Indigofera australis



Seed pods on Sweet-scented Wattle







Many native pea species grow in Pittwater bushland. They can thrive in soils very low in nutrients.

Some are **climbers**

Right: Dusky Coral Pea  
*Kennedia rubicunda*

Left: False Sarsaparilla  
*Hardenbergia violacea*



Many are **shrubs** with yellow, or yellow and orange flowers.

Left: *Dillwynia retorta*. Dillwynias have distinctively widespread standard petals.

### Foliage variations.

Leaves absent in adult plants:  
*Bossiaea scolopendria*.



The woody shrub Dogwood *Jacksonia scoparia* in Avalon Golf Course bushland. It only has leaves when a small seedling or after pruning.

Adult wattle foliage – can be either a compound leaf: Sunshine Wattle, *Acacia terminalis*, below, or a phyllode – modified leaf stem or petiole: Spike Wattle *Acacia oxycedrus*



Jacksonia: Broad leaves on twiggy stems after pruning or damage to the trunk





Two colourful and exotic and **UNWELCOME** Pea Family plants:



Easter Cassia *Senna pendula* left, and Cockspur Coral Tree *Erythrina crista-galli* are local weeds.

For lovers of the perfect lawn, clovers can be a pest, though loved by bees. Clovers, medics and vetches introduced for pasture and soil nitrogen fixing capabilities can be minor environmental weeds.



**Bush Tucker? Not for everyone.**

From Surgeon John White's Journal of a Voyage to New South Wales, August 23 1788, on an excursion to Broken Bay:

*As we proceeded along the sandy beach, we gathered some beans, which grew on a small creeping substance not unlike a vine. They were well tasted, and very similar to the English long-pod bean. At the place where we halted, we had them boiled, and we all eat very heartily of them. Half an hour after, the governor and I were seized with a violent vomiting. We drank warm water, which, carrying the load freely from our stomachs, gave us immediate relief. Two other gentlemen of the party ate as freely of them as we had done, without feeling the smallest inconvenience or bad effect. About this place we got some raspberries; but they had not that pleasant tartness peculiar to those in Europe.*



We don't know exactly which sandy beach that was, but they ate Beach Beans, *Canavalia rosea*, found on the Palm Beach Dunes, not far south of Barrenjoey headland, now struggling amongst asparagus fern.

You can read the whole of the journal here: <http://gutenberg.net.au/ebooks03/0301531h.html>

It is a fascinating account of the voyage from England to New South Wales with the First Fleet. An appendix describes local flora and fauna, many of which have since changed their names, but the pictures are recognisable and are a record of species in pre-European times.

Les Robinson, in *Field Guide to the Native Plants of Sydney*, quotes this journal but adds that roasted, the beans were bush tucker for Aborigines.

For an excellent article about Australian Native Peas see: <http://anpsa.org.au/peas1.html>

For a list of Pea Family species worldwide see: <https://www.britannica.com/topic/list-of-plants-in-the-family-Fabaceae-2021803m>



**Biodiversity in the Garden.** Mantis Lacewings, right, chase prey with their spiny forelegs, as does a the Praying Mantis, below. The use of forelegs to catch prey is an example of parallel evolution, as the two insects are not closely related and are in different Orders of Insects, Neuroptera and Mantodea respectively.



The body size of insects is limited by their need to absorb oxygen through spiracles, as they don't have lungs. Giant dragonflies existed when the Earth's atmosphere contained much higher levels of oxygen than today. If these two were much bigger would they still be cute?

## Avalon Community Gardens

### JULY 2021

**Avalon Community Garden** is delighted to guide three Barrenjoey High school boys in year 9 for their Duke of Edinburgh award program which includes thirteen hours of Environmental Community Service (currently interrupted for two of the participants due to COVID lockdown).

Their duties include preparing soil for seed propagation, planting and watering seedlings, recycling food and garden waste for the compost, building rabbit proof fences around many plots and digging holes for posts, making mulch, spreading compost on garden beds and mulching around trees.

As well as harvesting olives they learned about pruning in a way that maximizes next year's crop, cleared away pruned tree branches - always endless chores which are required in our Garden.

We enjoy their company, enthusiasm and laughter and appreciate their assistance which is of great benefit to our members too.

Very well done to the boys and we hope they have learnt, are learning a little about sustainability and the joy of gardening. We look forward to seeing them achieve their Duke of Edinburgh Award and hope they will continue to join us occasionally after completion.

**Helen Saunders**  
Vice President ACG  
0418 251 480

We look forward to welcoming new members. Please see our website [avaloncommunitygarden.wordpress.com](https://avaloncommunitygarden.wordpress.com)



Fruit and veggies grow here safe from possums, fruit fly and other unhelpful visitors. Watering is from the rainwater tanks beside the school hall.

## Sydney Wildlife's Mobile Care Unit Winter Patients

Every season presents its challenges with regards to wildlife.

Spring is the time for reptiles to start emerging from brumation\*, marsupial joeys are beginning to take little adventures out of mum's pouch, birds are fledging and people are starting to enjoy the slightly longer days again. Of course, with the fledging of chicks comes the inevitable 'kidnapping' of those little ones that are wearing their L-Plates and learning to fly. Snakes are not greeted with the welcome they deserve when they start searching for a mate and with more people moving about, the roads become tricky for wildlife, such as wallabies, to navigate.

Summer is when the lace monitors start finding chook-pens irresistible, joeys start to become more independent and venture further from the safety of their mums and the overly hot weather can lead to heat-stress for flying foxes. The likelihood of fires starting up is a major concern and a general lack of shade and water for heat-affected wildlife is another worry.

Autumn is when the winds seem to become wild and unpredictable and we often find discombobulated birds and gliders that have either been blown off-course or blown out of their trees completely. Also, as the falling of darkness starts to coincide with peak traffic times, our crepuscular\* critters get into trouble crossing roads.

Winter is supposedly our 'quiet' time. With most reptiles in brumation, birds busy with nesting and people staying home more than usual, we are meant to have a bit of a break... But, of course, echidnas decided that winter is the perfect time for mating and their 'love trains' can lead them into danger. Also, food is a bit more scarce for possums so they end up venturing further afield and getting into danger. The winter rain brings out snails which are a great source of food, but some come with parasitic diseases which cause havoc for the animals that eat them. As a result, the patients we see most regularly in the van over winter are echidnas, possums and snail-eating birds such as tawny frogmouths.

\* for your next Trivial Pursuit Night: Brumation—reptiles' cold weather resting time. Crepuscular—early evening and early dawn.



Echidna treatment



Radiograph



Good to go!

Echidnas generally present with trauma-related injuries as a result of wandering onto roads and being hit by cars. Fractures of the beak are most common. These can be very difficult to treat as they cannot be splinted but - depending on the severity of the fracture - they can recover.



Brushtail possums seem to suffer considerably from stress and this manifests itself in a number of ways - most notably, in the form of stress dermatitis.

The stress of competing for territory, food and other resources can result in this exudative dermatitis which - if left untreated - can result in blindness and/or death.



The good news is that it is very treatable - if caught in time. This beautiful little possum made a wonderful recovery, thanks to our volunteer vets and his amazing carer.



As mentioned above, the winter rains bring out the snails and slugs. Whilst this seems like a good thing for the animals that eat these gastropods, they can also cause a disease known as Rat Lungworm disease - or Angiostrongyliasis. It is a disease caused by a parasitic lungworm which belongs to the nematode (roundworm) family. It is believed to have arrived in Australia via introduced rat species.

The adult worms are found in rats which then excrete the parasite's larvae in their faeces. When snails or slugs come into contact with the infected rat faeces, they become infected. Wildlife then ingest these infected animals and become infected themselves.



It is a difficult disease to diagnose and often we can only look for clinical signs such as ataxia (abnormal gait), muscle wasting and ascending paresis (rapid paralysis moving upwards from the legs). Sometimes it is only possible to confirm the disease post mortem. In tawny frogmouths the most common presentation of an affected individual is the inability to clench its feet and falling forward onto its head with wings splayed. We also test their 'righting reflex' which involves placing the bird on its back and seeing if it can right itself. Treatment can help - but only if the disease is diagnosed early and treatment is commenced immediately.

diately.

A combination of 3 different medications used over a period of 4 weeks saw this Tawny Frogmouth go from moribund to mettlesome! After the 3rd phase of the treatment plan (which was administered to ensure that he didn't suffer a relapse) he spent some time in our Sydney Wildlife Rehabilitation Facility to re-build his muscle strength and ensure that he was 'match-fit' for his return to the wild.

The key to the success of most patients' recovery is early intervention. If you see an animal that doesn't seem quite right to you, please call Sydney Wildlife Rescue on 9413 4300 for advice.

We treat native wildlife free of charge. If you love our work, please support us and visit [www.sydneywildlife.org.au](http://www.sydneywildlife.org.au)  
Photos by Margaret G Woods, E.Laginestra and Lynleigh Greig. Radiograph image by Allambie Vet.



## Covid has shut down Bushcare

**This is doubly frustrating.** We miss looking after our bushland sites and each other's company, and what's more, we have to watch weeds enjoying going gangbusters. But our weed control allies are still at work.

**Lantana** is one for which several biocontrols have been introduced. Since 1914, 32 biological control agents (insects and diseases) have been introduced. 19 have become established and help to reduce lantana in some areas.

The **lantana rust** (*Prospodium tuberculatum*) was introduced from Brazil in 2001. It attacks the pink-flowering Lantana, the variety in our area. It appears to tolerate a range of climatic conditions. (**Rust** is a type of fungus in this case.)

### Insects:

**Leaf mining beetles** *Uroplata girardi* and *Octotoma scabripennis* are most effective. Larvae of both these insects feed on lantana leaves. This slows growth and reduces flowering.

The **leafsucking bug** *Teleonemia scrupulosa* also feeds on leaves.

The **lantana seed fly**, *Ophiomyia lantanae*, attacks flowers, fruit and seed. Adults feed on the flowers. Larvae feed on fruits and seeds.

These insects have already spread throughout areas they will colonise. Look for bugs or larvae on both sides of the leaves, or insects on the flowers, fruit or stems. These insects may cause damage at some times of the year and no damage at other times.

We're not sure which is attacking this lantana at right, found by Kerry Smith but we're pleased to see how sick it looks.

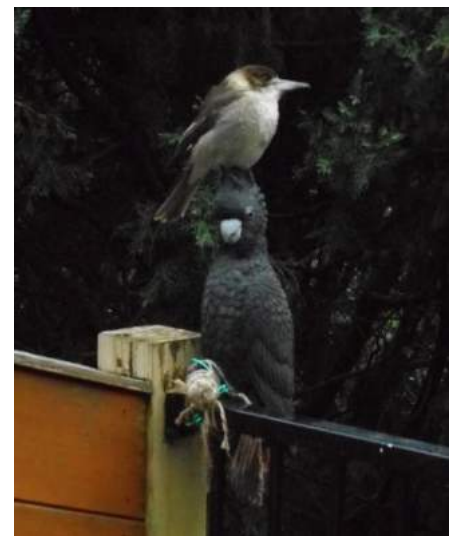
See more: <https://weeds.dpi.nsw.gov.au/Weeds/Lantana>



### Avalon Powerful Owl

Chelsey Baker found this one taking a break from family duties. The Avalon owl family is nesting again this year in one of the reserves.

Sylvia Saszczak's plastic black cockatoo didn't faze this **Grey Butcherbird**.



### PNHA's Mission Statement:

***To promote and facilitate the enhancement and understanding of the natural heritage and ecological systems within the Pittwater area.***

The PNHA vision is:

***An engaged and aware community working to conserve and enhance its natural heritage.***

**Find us: [pnha.org.au](http://pnha.org.au) and Facebook <https://www.facebook.com/PNHAaus/>**

