

Pittwater Nature

Issue 9 December 2021



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

INSIDE: 1. Nancy's Story - Mona Vale Dunes 2. Pittwater "pop up" Ferns 3. Australasian Figbird
3. Hotels for White's Seahorse 5. Sea Snake Rescues 6. Wasps 7. Lychee Stink Bugs
8. Plant Families 101: Malvaceae 9. Trivia Quiz 10. Hunting for Orchids in Ingleside Chase Reserve

A Life-changing Morning on Mona Vale Dunes – Nancy's story

We came back to Australia two years ago with my family, and it was the opportunity to head towards a new career for me.

I was not too sure where I was heading but what I knew is that it had something to do with nature, especially in Australia with such diverse and endemic fauna and flora. I was a carer for my son who had health issues and I needed some time out volunteering. I read a local magazine to learn more about the area and there was an article about a volunteering day for Bush planting on the Mona Vale Dunes organised by PNHA. Luckily, I was free and joined in. A total of 600 young tubestock were planted on that day. (June 17 2021)

What a wonderful experience as a first-timer! The group was very welcoming, I met passionate and like-minded people and what a spot to be caring for country. I used to walk the beautiful path around Mona Vale beach so taking part in caring and maintaining



Above: Mona Vale Bushcare group maintaining the site that inspired Nancy and at morning tea, December 2021

this area was quite appealing but also rewarding as I can enjoy seeing it grow every time I walk past it.

The experience was so wonderful that I decided to make it my occupation. Getting paid for doing what is meaningful to us is an amazing concept. Following this experience, I enrolled in a conservation and ecosystem management course to get the knowledge and the qualifications required to become a Bush Regenerator. I learnt during my course that follow-up weeding is an important part of any bush regeneration project as it helps the native plants to out-number the weeds. Unfortunately, it is a step where funding is often under estimated.

I would like to thank Marita for her availability, engagement and incredible knowledge, Toya (our supervisor) for her management skills and resourceful nature and Adam Burrowes, Northern Beaches Council, for organizing this day and making it a life changing experience!

Nancy R.

More Pittwater Native Ferns

“Pop up” ferns: These two pop up in damp areas, forming clumps that spread very little if at all.

Tender Brake, *Pteris tremula*.

While many ferns uncurl their fronds like a crozier as in the Birds Nest Fern below, the uncurling tips of the fronds on this one appear to be drooping - but no, that’s how it grows.



Fronds can be up to 1.5m long and look like a softer greener bracken.



Pteris tremula

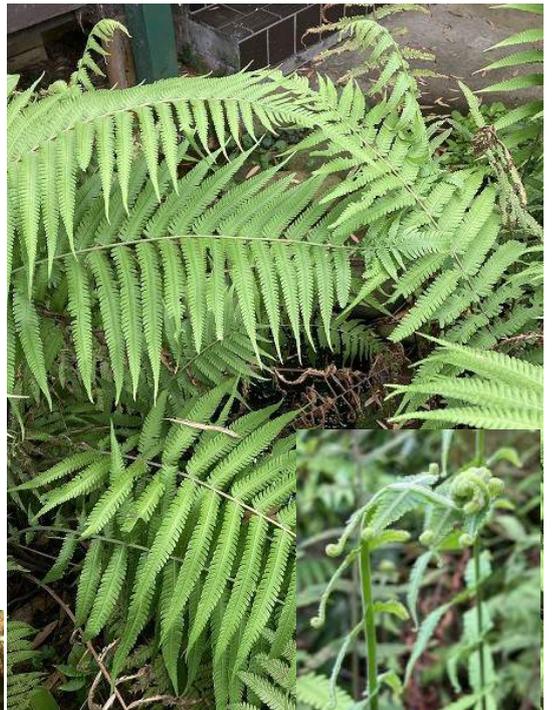


Fronds uncurling

Binung, *Cristella dentata*, right, has fronds up to 1m long. In dry times they brown off, but with rain new fronds quickly sprout.

If you can’t find these in local nurseries but a friend has them, get a few of the older fruiting fronds – with sporangia on the undersides of the fronds - and leave them lying about in damp shady places.

Or you can try fern propagation from spores. This is an interesting process. The instructions make it look harder than it actually is. Have a go! <https://www.anbg.gov.au/ferns/fern.spore.prop.html>



Cristella fronds uncurling



Cristella dentata



Pteris tremula

“Fruiting fronds”, left, are those bearing sporangia, the brown structures on the underneath of the older fronds. Spores develop inside these sporangia, falling out like brown dust when ripe. You can see spores if you leave some of these fronds on a sheet of white paper for a day or two.

Australasian Figbird *Sphecotheres vieilloti*

You've probably heard this bird but maybe never seen it. And no wonder because it's greenish or speckled, about the size of a large leaf of a Moreton Bay Fig, and usually keeps itself well concealed among canopy foliage. A variety



of fruit as well as figs are eaten.

You can often hear them in Mona Vale, in the big Hill's Figs outside the Library in Park St and in Dunbar Park Avalon.

Hear the calls: <https://www.youtube.com/watch?v=8KFaSWZEInU>

The male has red bare skin around his eyes. Birds from northern Queensland have a more yellow breast.

Left: Male, Neil Fifer

Right: Female, Rod Warnock



White's Seahorse *Hippocampus whitei*

We couldn't resist sharing this information about White's Seahorse, also known as the Sydney Seahorse, a threatened species. It was the idea of a "seahorse hotel" that got us intrigued.

Bob Hunt, Northern Beaches Council Environment Officer – Coast and Catchments, explained why this seahorse needs hotels.

White's Seahorse occurs at depths of 1 - 15m and is found using a range of habitat types both natural and artificial. Natural habitats include *Posidonia australis* seagrass, soft coral (*Dendronephthya australis*) also known as Cauliflower Coral, and sponges. Juveniles also use the macroalgae *Sargassum* sp. and gorgonians (*Euplexaura* sp.).

Within Sydney Harbour and Pittwater seahorses are generally found on artificial structures such as tidal pool nets and jetty pylons which provide a complex habitat of epibiota. (That's organisms that live on the surface of another organism, or on these artificial structures) *H. whitei* are generally found on the bottom panels of the net within about 1m of the seabed. In both areas boat moorings have degraded *Posidonia* beds and increased fragmentation.

Seahorses living in tidal pools occurs most commonly in areas of Pittwater and Sydney Harbour where natural habitat has been lost. However, NBC has to maintain tidal pools and nets keeping them safe for public use. This can destroy the seahorses' habitat. What to do?



White's Seahorse on Cauliflower Coral *Dendronephthya australis*.

Image University of Newcastle

Guidelines for cleaning of tidal pool nets to minimise harm to the seahorses were developed in 2009 (Harasti et al., 2010), however Harasti (senior researcher at DPI Fisheries) reported that councils rarely implemented them.

Harasti is also responsible for trialling “seahorse hotels” in Port Stephens in 2018/19. The hotels are made from reo mesh or galvanised steel panels and measuring 1m x 1m x ~0.6m. Old mesh net is hung inside the hotel and is allowed to soak prior to

deployment so that marine epibiota (marine flora and fauna) can begin to colonise the structure. The hotels were deployed in Port Stephens following decline in White’s Seahorse natural habitat (e.g. soft coral *Dendronephthya australis*) and were successful in attracting seahorses, which led to mating and breeding.

Bob said Council has constructed and installed seahorse hotels at tidal pools within Pittwater and Sydney Harbour and the intention is that they will eventually be deployed at all tidal pools Council manages.

What other conservation initiatives are going on?

Bob explained Council is collaborating with DPI Fisheries to erect signage at key locations around the Northern Beaches LGA to inform the community of the significance and sensitivity of White’s seahorse and *Posidonia australis* seagrass.

Another significant initiative is the White’s seahorse breeding and recovery project involving SEA LIFE Sydney Aquarium, University of Technology (UTS) and DPI Fisheries. A seahorse breeding facility was established at SEA LIFE Sydney Aquarium and *H. whitei* have been successfully bred in captivity. Seahorse hotels have been deployed adjacent to *Posidonia* beds at various locations in Sydney Harbour, including near Fairlight Beach and Little Manly. Captive bred juveniles have been tagged and released into these hotels and a monitoring program commenced to assess their growth, survival and breeding. Surveys at Clifton Gardens have observed some of captive bred juveniles are now successfully breeding.

Reference: Harasti, D., Glasby, T.M. & Martin-Smith, K.M. (2010). Striking a balance between retaining populations of protected seahorses and maintaining swimming nets. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 20:159–166.

More information: 18 Seahorse hotels off Clifton Gardens beach: <https://www.uts.edu.au/news/health-science/new-hotels-suite-haven-baby-seahorses#:~:text=Prepare%20hotels%20in%20March%202020,and%20released%20into%20Sydney%20Harbour.>

What’s happening next? <https://www.dpi.nsw.gov.au/fishing/species-protection/current-threatened-species-projects/current-projects-on-whites-seahorse2>



Two tagged juvenile White's Seahorse living on a seahorse hotel 4 months after deployment (Image D. Harasti)

That May Not Be Seaweed Rubbing Against Your Leg...

Not only does Pittwater have incredible bush fauna, but we also have some pretty amazing marine creatures, too. Weedy sea dragons, spotted wobbegongs, nudibranchs etc. But people are often quite astounded to discover that we get sea snakes in our waters as well! And occasionally they get washed up onto our beaches if they are unwell.

Just like any other animal, sea snakes need our assistance when they are injured or sick.

If you find a sea snake out of the water and lying on the sand, please DO NOT throw it back into the water!

A beached sea snake requires urgent assistance from a wildlife rescue organisation and - as they are venomous - must only be handled by trained personnel. Our contact numbers are listed below.

The sea snake we are most likely to encounter on Sydney's beaches is the Yellow-bellied sea snake (*Pelamis platurus*) but we have also rescued Elegant sea snakes (*Hydrophis elegans*) which live much further north, though, so are less commonly encountered.

Sea snakes - like land snakes - breath air via an elongated lung. Their bodies, however, are much more adapted to marine life - they are laterally compressed (flattened on both sides) their tails are paddle-shaped, their nostrils are valve-like, their ventral (belly) scales are significantly reduced etc.



Yellow-bellied sea snake



Elegant sea snake being tubed for examination



Gooseneck barnacles on a sea snake

People are often surprised to learn that sea snakes drink fresh water. Yellow-bellied sea snakes are referred to as 'pelagic' meaning that they live out in open water - far from coasts and reefs. So how do they find fresh water to drink? Biologists have discovered that they keep hydrated by drinking 'lenses' of fresh water that form on the surface of the sea after rain.

It is often noted that sea snakes can be covered in epibiota such as gooseneck barnacles. They can also be susceptible to algal fouling.

Treating sea snakes can be tricky but our volunteer vets have the appropriate equipment and medication to begin a treatment plan. They are also in contact with the right personnel to offer guidance.

Please remember - don't throw them back into the sea if they are on the sand. Please call: **Sydney Wildlife Rescue 9413 4300** or **Australian Seabird Rescue (Central Coast) 0438 862 676**. Most of our Pittwater Lifeguards know to contact us if a member of the public reports a beached sea snake to them.

WASPS

We all love Bees. So how come Wasps, their very close relations, get a bad press? Yes, some of them will sting if you disturb their nest. Most are quite harmless – to us. There could be about 12 000 wasp species in Australia, compared to over 1700 species of native bees.

Quite a few of both occur in Pittwater.

Wasps are important in our ecosystem. They can be several centimetres long, or a few millimetres. They pollinate flowers, including figs. They prey on other insects and on spiders, which become food for their larva.

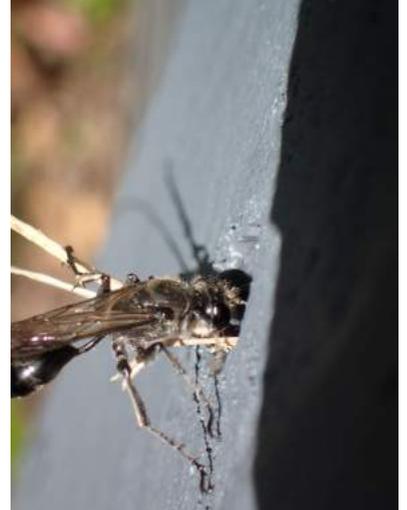
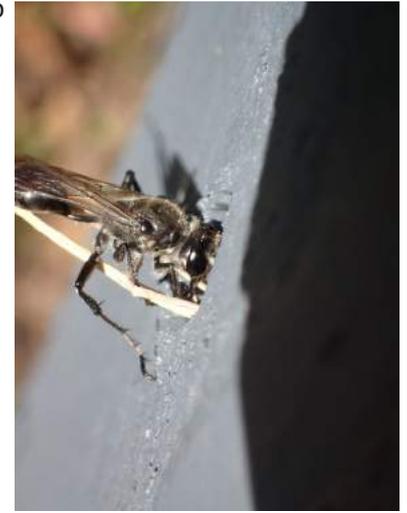
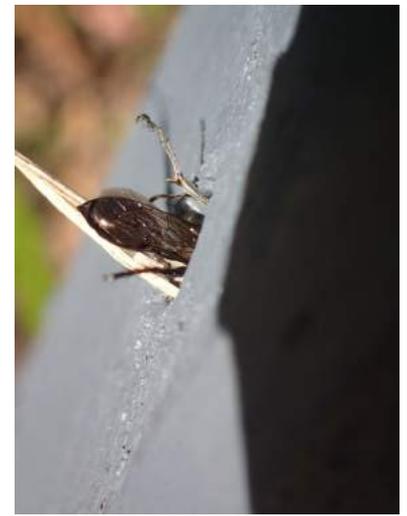
Some background information: Wasps belong to the insect order **Hymenoptera**, along with bees and ants. Wasps also are divided into families. The family Sphecidae includes mostly medium to large solitary wasps that hunt spiders or insects to feed their offspring. The adults generally feed on nectar or other sweet fluids. The insect order **Orthoptera** contains grasshoppers and katydids. There are so many insects that the exact identity of many is not known, so they are referred to by the family they belong to plus “sp.” meaning an unknown species. Now, for Gary’s wasp report:

On December 13 I photographed a sphecidae sp. wasp stuffing a cavity in our gate post with grass (see photos right). I believe they lay an egg/eggs at the back of the chamber then deposit a stunned orthopterid next to it for the emerging larva to feed on, finally packing grass in front. It’s odd to see a blade of grass go by in the air, held by the wasp. It seems they only use grasshoppers and katydids for larval food.

The shot below left was taken a few years ago in our yard. The sphecid wasp filled most of the chambers of a “bee hotel” I put up.



Below left, another sphecid wasp, a Mud-dauber Wasp, probably *Sceliphron laetum*, and its mud nest on the wall under the eaves of a house. Paralyzed spiders or insects are stuffed into the holes for the larva to feed on.



References:

An Introduction to Australian Insects. Hadlington and Johnston NSW University Press 1990

A Field Guide to Insects of Australia. Zborowski and Storey. Reed 1995

Have a look at the excellent Aussie Bee website: <https://www.aussiebee.com.au/>

also: <https://www.aussiebee.com.au/wasp-photos.html>

Stink Bugs on Tuckeroos

The Lychee Stink Bug *Lyramorpha rosea* is an unwelcome insect on Tuckeroos. At North Avalon shops recently, these bugs were falling from the trees onto café customers at the



outdoor tables. As do many bugs they defend themselves with a nasty smelly squirt from the tail end. This fluid can injure your eyes.



Wingless juvenile

Bugs have sucking mouthparts. As juveniles these bugs are wingless and brightly coloured. They congregate in groups on the trunks of the trees, sucking the sap. They are a major problem for Lychee growers.



Winged adult

Why would they be interested in Tuckeroos? Because this tree is in the same plant family as Lychees, Sapindaceae, or the Soapberry family. In 2018, 19 Tuckeroos in a Yamba street were replaced with Water Gums, stink bug infestation being one of the reasons.

Plant Families 101

Family Malvaceae - hibiscus and mallows

This family contains about 244 genera with 4225 known species worldwide. As well as the familiar garden shrub Hibiscus, other family members of economic importance are okra, cotton, cacao (source of chocolate, so **VERY** important) and durian.

Genera and species are grouped in families on the basis of their flower structure, and the Malvaceae flower is a distinctive one. Here is a section through a Norfolk Island Hibiscus flower. The five petals surround the central column consisting of the style (female part) surrounded by the stamens (male part) pressed together to form a tube.

We have quite a few representatives in our area.

The tree Norfolk Island Hibiscus *Lagunaria patersonia* obviously isn't a native. It used to be planted on the coast because it is an attractive and salt tolerant tree. But the prickly fibres in the seed capsules can cause problems.



It has become a weed. Bush regenerators can spot seedlings when quite small because the petiole of the leaf has a distinctive kink. You can see it along Careel Creek in Avalon near the netball courts and skate park.

Illawarra Flame tree

Brachychiton acerifolius

Another member of the Malvaceae family.

For some reason a lot have flowered this year. Flowering occurs every few years, not annually. Possibly the long dry spell over winter has had some effect. Not limited to the Illawarra area despite its name, it grows in the wild in rainforests from the Illawarra north into Queensland. It may not be considered native to the Pittwater area, however, and a lot of seedlings pop up where they're not wanted.

Its close relative the Kurrajong *Brachychiton populneus* grows in drier inland areas. Some are found in the Pittwater area. A very big one grew near the intersection of Hudson Pde and Riverview Rd in Clareville until cut down about 20 years for a development. It is thought that Aborigines introduced them to the coast because the bark produced useful fibre. More about Flame Trees: <http://anpsa.org.au/b-ace.html>

This beauty was along Booralie Rd in Duffys Forest.



Native to the coast north of about Port Macquarie, **Beach Hibiscus *Hibiscus tileaceus***, right, was planted at the far northern end of the Hitchcock Park playing fields. Where branches touch the ground, roots develop and it forms dense thickets. You can see it at the Etival St dog park. A form with maroon-green foliage also occurs.



Local natives:

Native Rosella *Hibiscus heterophyllus*, left. A tall shrub, this grows in Avalon in both Toongari and Catalpa Reserves. Colour varies, can be bright pink.



Swamp Hibiscus *Hibiscus diversifolius*.

A small straggly shrub, right, this grows beside the track around Narrabeen Lagoon about 100m east of the Middle Creek parking area, also east of the Hitchcock Park soccer field parking area.

Left: A minor exotic weed in the Pittwater area: Paddy's Lucerne *Sida rhombifolia*.



Trivial Pursuit Quiz: Answers next page.

1.Orthopterid:

- a. specialist dentist
- b. insect with 4 wings the same length eg grasshopper.
- c. a correct pronunciation

2.Ovipositor:

- a. insect's organ for depositing eggs
- b. disease of sheep
- c. part of a drone

3.Pelagic:

- a. living in open water
- b. migratory
- c. disease of the scalp

4.Sporangia:

- a. mental health condition
- b. skin problem of spaniels
- c. containing fern spores

5.Crozier:

- a. type of BBQ,
- b. bishop's staff
- c. curled young fern frond

6. What's this?

- a. ancient Egyptian broach
- b. fossilised blueberries
- c. currawong vomit



Hunting for Orchids in Ingleside Chase Reserve on December 28 2021

We strolled about 250m down the track from the entrance on Ingleside Rd and found more than orchids.



Hooded Orchid *Cryptostylis erecta*



Hyacinth Orchid *Dipodium variegatum*



Fringed Lily *Thysanotus sp.*



Also along the track:

Plum Pine *Podocarpus spinulosus*

The uncommon straggly plants are either male or female. This female is bearing a succulent dark blue receptacle on the end of which grows the seed. The receptacle is attractive to birds and edible to humans. The Podocarpaceae family is from old Gondwana, represented by many magnificent tree species especially in New Zealand and the Pacific. The new growth is bright green, an identifying feature just now.

Reference: p. 322, Field Guide to the Native Plants of Sydney. 3rd Edition. Les Robinson

Trivial Pursuit Quiz Answers

1b, 2a, 3a, 4c, 5b AND 5c, 6c: A Currawong has ejected indigestible Blueberry Ash berry skin and seeds.

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*** and Facebook <https://www.facebook.com/PNHAaus/>

