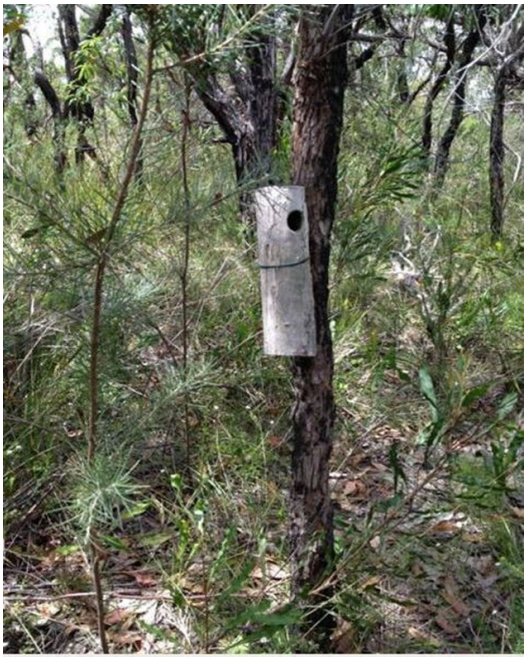
PNHA NEWS

Winter 2019 Issue 80

Pittwater Natural Heritage Association – thinking locally, acting locally

Roadworks on Mona Vale Road



We all know the saying: "you can't make an omelette without breaking eggs" so as we drive along Mona Vale Road we watch the clearing of bushland accepting that local biodiversity will be affected.

However PNHA is doing our best along with other concerned community members to see that the contractors take care to minimise the harm to local wildlife.

Recently we have been involved in a campaign for temporary fauna fencing to be erected along Mona Vale Road West as it passes the site where land is being cleared in preparation for the new road. The roadwork is displacing native wildlife, including swamp wallabies, a number of which have been killed on nearby roads.

The campaign is being led by Jacqui Marlow who has just informed us that the contractors have agreed to put temporary fauna exclusion fencing in place and will start installing it soon.

We have also been advised that nest boxes have been installed to compensate for loss of nest sites within the construction zone. Forty boxes have been installed around Mona Vale Road East and another forty around Mona Vale Road West.
Eastern Pygmy Possum nest box Photo: Pittwater Online News

Bahai Temple Project: Grevillea caleyi

Our current round of funding for the 2019 financial year has ended and we are awaiting a new contract to secure more funding for the next five years

The work that the contractors and PNHA volunteers have done to date has had excellent results with new seedlings springing up on the site.

As soon as the new contract is in place we will send out the list of dates for volunteer work mornings

PITTWATER NATURAL HERITAGE ASSOCIATION INC.
Protecting Pittwater's Environment

Want to get in touch?
pnhainfo@gmail.com
Find us on Facebook,and Instagram

PNHA Activities:

Birdwatching in Warriewood Wetland Sunday June 2

Still mild weather really helps us find birds, and so we did, 37 species in all. We were surprised to see several Royal Spoonbills foraging out in the open and flying about – an unusually close view for us. This one swept its sensitive broadtipped bill swiftly from side to searching by feel for invertebrate prey.

Another highlight was a pair of Rose Robins, near the Jim Rivett walk on the western side of Garden St.

Our group included two young boys, bird conservationists of the future, we hope. Booking through Eventbrite made organising this event easy.

Native Fuschia Epacris longiflora (Jan Marshall)

Coming Up: Free Guided Spring Wildflower Walk and Bird Watching, Ingleside

The Chiltern Track in Ku-ring-gai Chase NP is one of the best places for spring wildflowers and birds. Our guide Jan Marshall will identify some plants for us. We will stroll down towards McCarrs Creek Rd. Moderate fitness required. Not suitable for small children or strollers. Older children welcome.

Date: Sunday August 18, 10am -12. **Meet:** at start of Chiltern track on Chiltern Rd Ingleside, north of Cicada Glen Rd intersection. **Bring:** Binoculars if possible, hat, water and a snack**. Wear:** strong walking shoes suitable for bush fire trail.

Booking: https://www.eventbrite.com.au/e/spring-flower-walk-tickets-61770596517?utm_campaign=postpub&utm_medium=em&utm_source=sm&utm_content=viewevent
Places are limited to 20 participants, so book early. More information: pnhainfo@gmail.com or mob: 0403 908 042 if in doubt about weather on the day.

Final Field Day

Our project Restoring Sydney Freshwater Wetlands ended with the Field Day on May 25.

Funds from Greater Sydney Local Land Services and Northern Beaches Council have transformed this weedy mess, now planted with native vegetation to restore the wetland. Careel Creek Bushcare group and other welcome volunteers watered previous tubestock plantings and put in some more little native plants. Thanks very much to Karin Nippard our NBC supervisor and to our helpers. Passers-by comment with appreciation on the amazing changes.

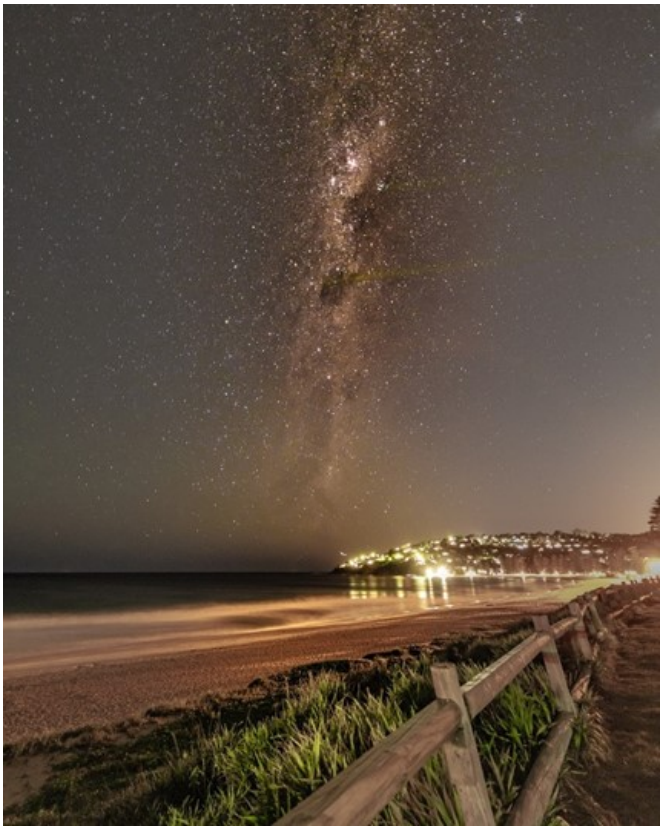
You can see this site beside Barrenjoey Rd, south of Etival St.

Thanks also to Alison Guesdon of Pittwater OnLine News for this article on the Careel Creek Bushcare group 1990-2019 and work to establish a native vegetation corridor between Careel Bay and Avalon Dunes.

http://www.pittwateronlinenews.com/profile-of-the-week.php

Heath-leafed Paperbark *Melaleuca ericifolia*

Our Night Sky



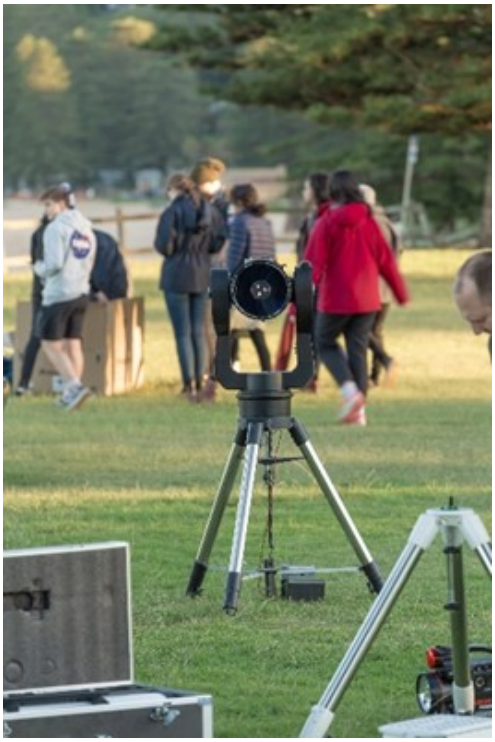
Have you ever gazed at the night sky and wondered where we came from? Why we are here, and if we're alone in the universe? I can almost guarantee you said yes. Fifty percent of our natural environment is the sky

For tens of thousands of years, humans have looked up to the night sky. Our ancestors saw patterns in the stars, used dark patches to create animals and knew intimately where the *wandering stars,* or planets, would be the next night. Unless it was cloudy, this was a bog standard, ordinary night of entertainment.

It is now, extraordinary. Something so rare, most will never experience it.

Bit by bit, we've removed ourselves from our night sky heritage to such a degree that we have almost no contact with it. Do *you* know what phase of the moon we're at now?

The endangered pygmy possum does. So do microbats, giant dragons, heath monitor lizards and logger head turtles. The light and dark cycle is their trigger to maintain their survival activities. Add one streetlight, one billboard, one upwardly lit palm tree, and this is disrupted.



Increasingly scientists are understanding just how detrimental artificial light at night really is. With links to pollination reduction, cancers and sleep disorders in humans, and low reproduction rates in species, ecologists, biologists, neurologists are joining astronomers in the call to policy-makers to drastically reduce light pollution. Artificial light at night is one of the most common and fastest growing types of environmental pollution, increasing at 6% per year globally, and identified as a key threat to biodiversity*.

Australia's First Dark Sky Park was designated by the International Dark-Sky Association in 2015. Now one of 108 parks around the world, the Warrumbungle National Park encourages and unites a grassroots movement to view the night sky as it was before the electric light. But for most people, the 4 to 6-hour drive makes it inaccessible to the greater majority.

With the support of PNHA, Northern Beaches Council have agreed to support the creation of an Urban Night Sky Park. 45km from the city, Governor Phillip Park and provides the perfect space to demonstrate good outdoor lighting, preserve our night time natural environment and bring people to the stars.

What is most exciting in this pursuit is the opportunity to benchmark best practice, environmentally-friendly lighting, to other councils, businesses and individuals. Once we get this area compliant, an impetus will grow to create others.

So, what does 'good lighting' mean and how can you help? Light pollution, unlike other such problems is one that can be eradicated quickly, and literally with the flick of a switch. You can help, by implementing in your own backyard:

1.fully shielded lights with no upward light spill 2.warm in colour (red, orange and deep yellows) 3. use only when required

Just like limiting your plastic bag use, it requires just a little bit of thought and a small commitment to preserve our night time environments, but the more stars we have, the better the biodiversity.

Author: Marnie Ogg – Director, Australasian Dark Sky Alliance. Images: Dark Sky Picnic, Palm Beach, March 2019, Marnie Ogg

Nature Engagement as Therapy

No doubt if you are reading this article in PNHA's newsletter, you are already engaged with nature to some extent.

However for many people, increasing urbanisation and the impact of the digital revolution on life has aggravated an estrangement from the natural environment. A profusion of research has demonstrated the positive effects of connection with nature on physical and mental health and more recently our governments at Federal[1] and State[2] level have recognised the need for strategies within the currently *healthy* population to prevent a decline in mental health. To this end, nature engagement has been identified internationally and locally[3] as an important component of well-being.

A "Nature Dose"

In Japan, Korea, the UK and Scandinavian countries, programs have been created to foster this connection between nature and people. Furthermore, from Scotland to Japan, 'prescriptions' for a 'nature dose' are now being written by doctors as a preliminary or complementary therapy for depression and anxiety. The science that supports this practice is compelling and growing with the long-awaited empirical research to identify and quantify an appropriate 'nature dose' recently published in the USA[4].

What's the right dose?

For those of us fortunate enough to live in Pittwater, we may feel we already know that time spent in our bushland and foreshores is just what we need for our own sense of wellbeing.

But many don't know this, so, what does a 'nature dose' look like? This most recent study recommends 20-30 minutes, three times a week in a natural environment of your choosing. Interestingly, one of the greatest benefits, a 28% reduction in the stress-biomarker, amylase, was achieved with sitting, rather than walking in a natural environment.

To help find the right type of natural environment, theories of human evolutionary connection to nature support the following elements to create an *ideal* nature engagement: Prospect [eg, a view]; Refuge [eg, beneath a tree canopy]; Mystery [what lies beyond?]; Risk [it's worth exploring][5]. Pittwater abounds with such environments.

In those countries already supporting nature therapies, there has been concomitant support for natural areas[6]. This provides a powerful argument – in the face of increasing development pressures - for areas such as Pittwater to have natural bushland conserved and recognised not only for its intrinsic value and role in ecological services, but as a valuable contributor to human health and well-being.

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1. Fifth National Health Mental Health and Suicide Prevention Plan 2017-2022
2. NSW Strategic Framework and Workforce Plan for Mental Health 2018-22
3. Townsend M and Weerasuriya R. (2010). Beyond Blue to Green: The benefits of contact with nature for mental health and well-being, Beyond Blue Limited, Australia. Funded under the National Depression Initiative
4. Hunter MR, Gillespie BW and Chen SY-P (2019) Urban Nature Experiences Reduce Stress in the Context of Daily Life Based on Salivary Biomarkers. Front. Psychol. 10:722. Doi:10.3389/fpsyg.20190072
5. Browning, WD, Ryan, CO and Clancy JO (2014). 14 Patterns of Biophilic Design. New York: Terrapin Bright Green llc.
6. Wendling, Z A, Emerson, JW, Esty, DC, Levy, MA, de Sherbinin, A, et al. (2018).2018 Environmental Performance Index. New Haven, CT: Yale Center for Environmental Law & Policy.

Author Leigh McGaghey is a local landscape architect and environmental educator with a particular interest in raising awareness about *why we need nature.*

Streamwatch

Streamwatch was threatened with closure in June 2019, but good news! Following a petition with over 750 signatures, the citizen science program is to be taken over by the Greater Sydney Landcare Network.

Streamwatch is a cost effective program funded by Sydney Water since 1990 and managed by the Australian Museum since 2013. The Australian Museum and Sydney Water are funding the transition to Landcare.

Streamwatch volunteers monitor our waterways and deliver scientifically accurate data on water quality and biology, mentor students, alert authorities on pollution, collect litter, provide biosecurity surveillance and local stewardship

If you would like to take part in Streamwatch in the Northern Beaches area, contact Cecil Ellis: cecil@naturenavigation.com

McCarrs Creek at the Duck Ponds, on McCarrs Creek Rd. This urban creek has outstanding water quality and biodiversity.

Bees with Backpacks:

CSIROscope Blog May 31 2019

Honeybees pollinate a third of Australia's food crops. Losing them would cost the economy billions of dollars.

Bees are the world's most prolific pollinators of food crops, and the estimated value of pollination services from managed honey bees in Australia ranges up to **$6 billion** a year. These busy bees are an integral part of our economy and agricultural industry.

But global honey bee populations are declining due to a range of factors including agriculture intensification, the Varroa mite, bee pathogens, climate change, pesticides, and the reduction of natural habitats.

Swarm sensing

CSIRO researchers at Data61 have been studying bees and their behaviour for a number of years through our 'Bees with Backpacks' project. We're aiming to better understand the factors causing their decline and to help the beekeeping industry secure the future and health of our ecosystems.

We developed **micro-sensing technology** that can be placed on bees to track the time they spend from the hive, how far they travel and what they do — all important information in helping to understand risks to bee populations and addressing them. These high-tech micro-sensors (also known as backpacks) are manually fitted to bees and work in much the same way as a vehicle e-tag system, with strategically placed receivers identifying individual bees and recording their movements.

This tiny technology allows researchers to analyse the effects of stress factors including disease, pesticides, diet, air pollution, water contamination, and extreme weather on the movements of bees and their ability to pollinate.
We provide access to the micro-sensing technology in exchange for global bee data, which is then processed by our scientists to understand the drivers of bee decline. This arrangement is accelerating the pace of scientific discovery through joint analysis and the co-publishing of scientific papers.

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>5 Back to school buzz:

Now, under a broader partnership between us and the Victorian Government's Department of Education and Training, we will be taking the 'Bees with Backpacks' program to a number of Tech Schools in Victoria – starting with Ballarat Tech School. Through the program students will learn about the scientific method, analyse Victorian bee datasets to explain local bee behaviour, and contribute their own data to the Global Initiative for Honey Bee Health.
Read more:
https://blog.csiro.au/bees-with-backpacks-fly-into-schools/

Interested in Australian Reptiles?

Here's a great way to find out more on line. http://www.arod.com.au/arod/

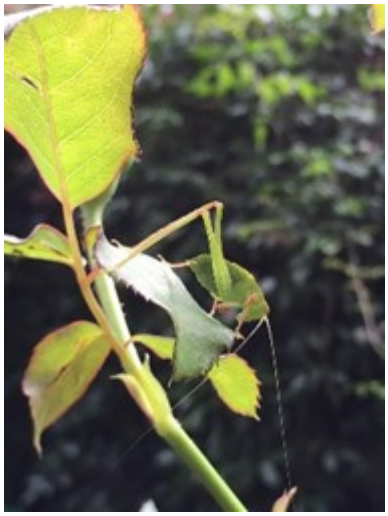
This searchable database provides information and images of a huge number of reptiles of all kinds, from tiny skinks to turtles and crocodiles.

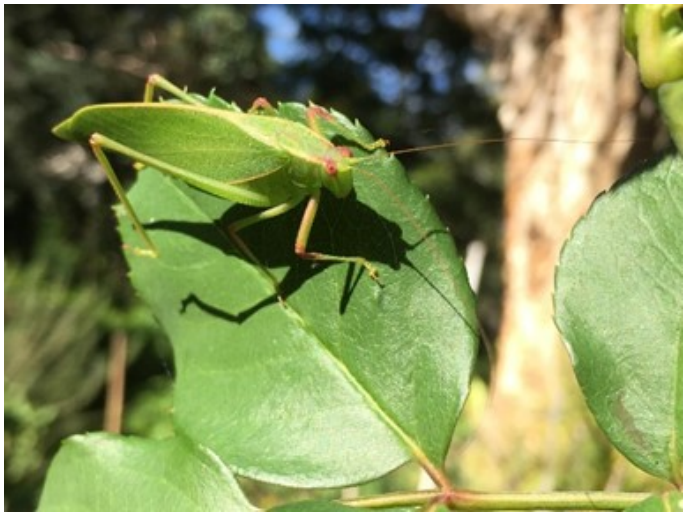
A Lace Monitor at Pitttwater YHA

Wildlife in the 'Burbs

Two Katydids *Caedicia simplex* of different ages on a rose bush. As a juvenile, left, its wings are mere buds, but after its final moult to adulthood, right, it's up, up and away.

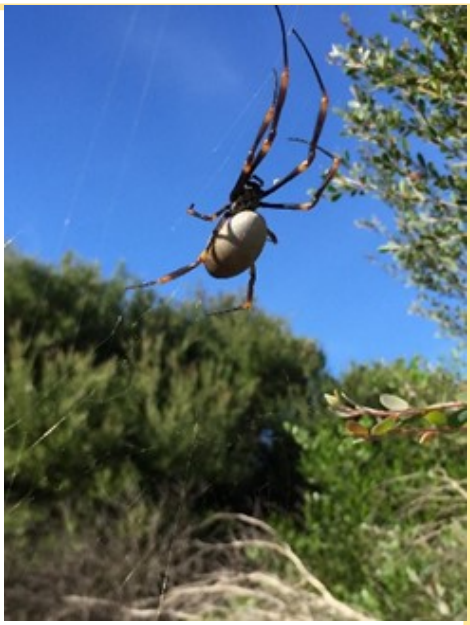
Not content with leaves, the Katydids loved munching on the buds but they also will feed on various other garden and native plants. The long delicate antennae show it's not a grass hopper (which has short antennae) despite its long legs and athletic ability. The colour can match the plant it feeds on eg pink on pink stems and leaves. Both Grasshoppers and Katydids are members of the Orthoptera order of insects, meaning they have straight wings.
More info: https://australianmuseum.net.au/learn/animals/insects/common-garden-katydid/



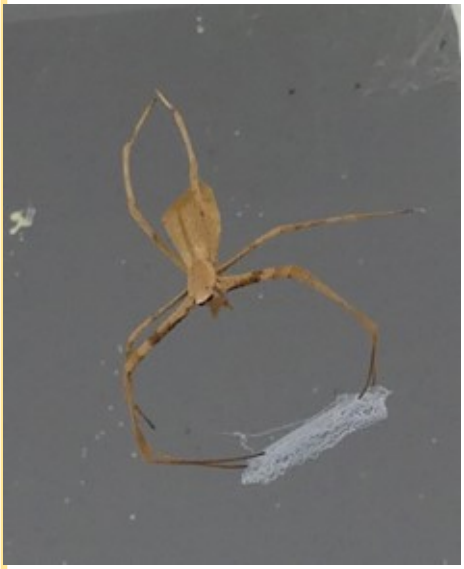


Echidna investigates the shoreline of McCarrs Creek near Wirreanda Creek. Image: Edna Blanchard

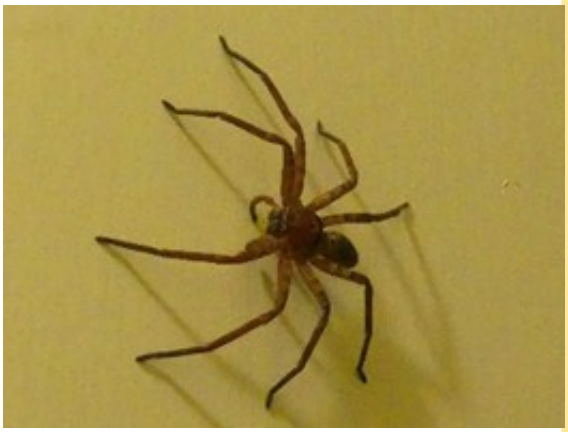
SPIDERS - some bigger locals



Golden Orb Spider (female) on Mona Vale Dunes. We wonder if these are less common than in the past. Though large, this spider is not aggressive or dangerous. It stays in its golden web all day, highly visible but defended from predators by its warning bright colours.



Netcasting spider (female) This spider captures prey by waiting until prey comes within reach, then leaping to enmesh the prey in this net held between its two front pairs of legs. It has excellent vision.



Huntsman spiders (probably Huntsladies sometimes) don't use webs to capture prey but chase with great vision and speed. Several species are around but they are well camouflaged, more usually on trees than in the house.

If we see spiders, we can be glad that 1. it means their invertebrate prey is abundant, and 2. they are limiting insects such as mosquitoes we don't much like. Their appetite for insects is enormous. Most spiders are harmless to people providing we don't try to handle them. They are more afraid

Membership Application

I would like to join Pittwater Natural Heritage Association. I agree with the PNHA's aims: raising awareness of and preserving our unique Pittwater natural environment.

Name:.....

Signed:.....

Address:.....**P/Code** …….....

Email:.....

Ph:..... **Date**:.....

Newsletters are emailed to members and posted on our webpage. Membership fee: $20 or $10 pensioner/student. To pay your membership, you can deposit electronically into our account at the Commonwealth Bank: BSB 062 208, account no.10168467. **Type your surname in the reference box so we know who the membership is for.** Alternatively make cheque payable to**: Pittwater Natural Heritage Association** or **PNHA.** Post cheque payable to **Pittwater Natural Heritage Association** to PNHA, PO Box 187, Avalon Beach NSW 2107.

Contact Details: 0439 409 202 or 0404 171 940

Email: pnhainfo@gmail.com **Web page: pnha.org.au**

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