

# CALEYI



## NORTHERN BEACHES GROUP

[austplants.com.au/northern-beaches](http://austplants.com.au/northern-beaches)

September 2021

**Australian Plants Society Northern Beaches**  
[northernbeaches@austplants.com.au](mailto:northernbeaches@austplants.com.au)

<b>President</b>	Dr Conny Harris 9451 3231
<b>Vice-President</b>	Russell Beardmore 0404 023 223
<b>Secretary</b>	vacant
<b>Minutes Secretary</b>	Eleanor Eakins 9451 1883
<b>Treasurer</b>	Lindy Monson 9953 7498
<b>Regional Delegate</b>	Harry Loots 9953 7498
<b>Librarian</b>	Jennifer McLean 9970 6528
<b>Website Administrator</b>	David Drage 9949 5179
<b>Membership Officer</b>	Jan Carnes 0416 101 327
<b>Talk Co-ordinator</b>	Russell Beardmore 0404 023 223
<b>Walk Co-ordinator</b>	Anne Gray 0466 309 181
<b>Catering Officer</b>	Georgine Jakobi 9981 7471
<b>Newsletter Editor</b>	Jane March 0407 220 380

### CALENDAR

As the **Covid-19 Delta** variant necessitates a further extension of Lock-down in NSW we have no current activity plans.

For up-dates please check our

**Facebook page**  
**Australian Plants Society Northern Beaches Group**

or website:  
[www.austplants.com.au/northern-beaches](http://www.austplants.com.au/northern-beaches)

Many thanks to our wonderful contributors - Conny Harris, Russell Beardmore.

If you have any photographs, articles, links or suggestions for CaleyI please feel free to send to/contact me Jane March [march@ozemail.com.au](mailto:march@ozemail.com.au) or 0407 220 380.

### PRESIDENTS MESSAGE

Conny Harris

I was delighted to find my stand of *Caladenia alba* reappear.

But are numbers declining? Should I burn a tiny patch?



After reading 'Fire Country' by Victor Steffensen my view of fire has been impressively changed.

I try to do some tiny patch burns to confirm his 'praction', as he calls it, according to the aboriginal elders. - unfortunately in the 360ha Hazard Reduction Burn above my place lots of dark brown smoke was released and, as Victor explains, that is a sign of a destructive rather than a healing fire.

Thin white smoke is the indicator for a cool bush regeneration promoting fire. As we will have to continue lockdown with even stricter restrictions, please check out the bush yourself and for those hours at home I definitely recommend reading 'Fire Country'.

## NORTH CURL CURL HEADLAND AUGUST 3

Russell Beardmore

The wildflowers everywhere are starting to look good.

This morning I decided to see what was happening on my favourite headland. The wonderful yellow of *Acacia longifolia* (sophorae?) is everywhere, but the *Acacia suaveolens* is on its last legs. It peaked a few weeks ago.



I spotted some other yellow flowers almost obscured by surrounding plants - a closer look showed it to be *Hibbertia riparia*. There was plenty of



*Dampiera stricta*, in places near the edge of the track and scattered throughout the area that was burnt a few years ago - the regeneration here is wonderful and while there are not a lot of flowers yet, it should be well worth another visit in a month or two's time.



Small plants of *Philothea buxifolia* are everywhere, in this zone, mostly just coming into bud - they will be spectacular when they all come out.



*Epacris longiflora* is in full bloom and the rich red flowers of *Grevillea speciosa* are on display right across the headland.



For me the highlight was *Zieria laevigata*. It is not particularly common but the plants I saw are at their peak - quite beautiful. I found just one specimen of *Pultenaea ferrugineum* just coming into flower - just two flowers but many more to come - this was in the heart of the regenerating zone.

We tend to walk past *Westringia fruticosa* without a second look but it is worth close inspection as the photo shows. (see next page. Ed.)

I will be returning to the headland regularly between now and the end of the year.



## ALBANY ROYAL BOTANICAL GARDENS WILL BE 'BETTER THAN KINGS PARK' SAYS LEADING BOTANIST

ABC Great Southern April 2021 Tom Edwards

Albany is set to become home to world-class royal botanical gardens that will be the envy of Perth, according to an internationally renowned botanist. The development located in the heart of the south coast city will be the first royal botanical gardens outside of WA's capital.

University of Western Australia director of biodiversity **Stephen Hopper** – who is a key advisor for the project – says in many ways the gardens will be better than at Kings Park.

"In terms of the landscape, the amount of native vegetation and some of the rich aspects of Noongar cultural heritage that are right on the doorstep and could be shared with visitors," he said. "This is a superb place ... I would see this as one of the must-do visits on the list of half a dozen places in the world to see top-class botanic gardens."



### Plant diversity 'gone rampant'



The evergreen kangaroo paw is found in abundance on the future site of the gardens. (ABC Great Southern: Tom Edwards)



The south-west of WA is recognised as one of the most significant temperate regions in the world. Half of the plant species found in the region exist nowhere else on the planet. The granite rocks that form the low hills around Albany are a quarter of the age of the Earth itself – more than a billion years old.

"Albany is a hotspot within a hotspot," Professor Hopper said. "If you take the broader Albany district ... [there are] 3,000 species of plants." That's more than double what's in the entire UK.



The intricate leaf venation of the oval-leaf hakea. (ABC Great Southern: Tom Edwards)

Thankyou Russell for these beautiful images of the North Curl Curl Headland native plants.

"It's plant diversity gone rampant and evolved in isolation."

Among the native plants found in abundance at the future garden site is the Australian bluebell (its Indigenous name is cummuck), the oval-leaf hakea, and the evergreen kangaroo paw (its Indigenous name is koroylbardang).

Another example is *Banksia formosa* – a leafy shrub with bright orange flowers located just metres from the National Anzac Centre.

"People would die in Kings Park to have a species like this so gloriously colourful, just 5m off the edge of the bushland," Professor Hopper said.

### Planned park to feature Noongar history

The planned botanic gardens are part of a broader plan to develop a 242-hectare site encompassing Mt Adelaide and Mt Clarence to the east of Albany's CBD.

Raised walkways and trails will take visitors through native bush interspersed with dramatic coastal views of Princess Royal Harbour and King George Sound.



Professor Hopper says Albany's botanic gardens have the potential to become one of the best in the world. ABC Great Southern: Tom Edwards

The City of Albany is currently developing a detailed report based on public comments submitted during community consultation on a draft plan earlier this year.

Professor Hopper — who was a director of Kings Park Botanic Gardens and the Royal Botanic Gardens in Kew, London — said the region's unique Indigenous history should be central to the visitor experience.

"There are elders in the community who love sharing and are proud of their culture," he said. "I think part of the development of the botanic gardens is bridging the cultural divide and inviting a genuine dialogue and respect for the fact that people have lived here for 50,000 years — not just 200."

While it will take decades to complete, construction on the gardens should start in the next few years. Professor Hopper says the project will be a legacy that lasts for centuries to come.

## INSECT-KILLING PLANT FOUND BY AUSTRALIAN HIGHWAY IS NEW TO SCIENCE

www.newscientist.com August 10, 2021 Penny Sarchet

A newly described species of wild tobacco that scientists found growing next to a highway truck stop in Western Australia is covered in sticky glands that trap and kill small insects, including gnats, aphids and flies.

While a range of carnivorous plants are known across the plant kingdom,



*Nicotiana insecticida* has sticky hairs that trap insects. Maarten Christenhusz

this is the first wild tobacco plant discovered to kill insects. Dubbed *Nicotiana insecticida*, it was uncovered by a project looking for tobacco plants across Australia.

The team, which included Mark Chase of London's Royal Botanic Gardens, Kew, collected seeds from the insecticidal plant at a truck stop on the Northwest Coastal Highway, and then cultivated them at Kew, where the plants went on to develop the same sticky glandular hairs and to kill insects inside the greenhouses.

The insect-ensnaring hairs resemble those on carnivorous sundew plants, but it isn't clear if the plant extracts any food from the insects it kills. "We have no evidence that there is any nutritional benefit to the plant," says Chase, who adds that the team is arranging some tests to see whether the plant absorbs any nutrients.

But even if it doesn't absorb nutrients, killing insects in this way could still be beneficial for *N. insecticida*. "It definitely protects the plants from insects like aphids," says Chase.

The plants may also benefit when the dead insects decay. Chase says the species may be like South African *Roridula* plants, which kill insects in the same way. "There is a bug that lives on these plants and is not trapped by the sticky hairs. It eats the trapped insects and defecates on the ground, and the plant benefits from this," says Chase. However, there is no evidence yet that this is what happens with *N. insecticida*.

The plant hasn't yet been approved for commercial use by Australia, and the terms of the collecting permits issued to botanists like Chase strictly prohibit them from developing commercial applications. However, Chase says *N. insecticida* is fairly easy to grow and could perhaps be used as a biological control agent for killing aphids and fungus gnats in greenhouses.

The species is one of seven new-to-science species of *Nicotiana* described by the team. The others include *Nicotiana salina*, which grows along salt lakes on the eastern edge of the Western Australian wheatbelt, and *Nicotiana walpa* in the Uluru-Kata Tjuta National Park in the Northern Territory, which only grows after storms strike the desert.

It has been a busy week for insecticidal plants – a study published on Monday revealed that a plant that grows in bogs along the west coast of North America uses its flowers to eat insects. Before now, researchers had no idea that *Triantha occidentalis* was carnivorous.

Journal reference: Curtis's Botanical Magazine, DOI: 10.1111/curt.12402

Read more: <https://www.newscientist.com/article/2286616-insect-killing-plant-found-by-australian-highway-is-new-to-science/#ixzz73lpAEQJn>

## PLANNING TO PLANT AN AUSTRALIAN NATIVE LIKE WATTLE? READ THIS FIRST — YOU MIGHT BE SPREADING A WEED

The Conversation August 18, 2021 Singarayer Florentine, Professor (Restoration Ecologist), Federation University Australia



Coastal wattle. Dr David Chael, Author provided

Australian native plants are having a moment in the sun, with more of us seeking out and planting native species than in the past. Our gardens — and our social media feeds — are brimming with beautiful Australian native blooms.

But not all Australian native species belong in all Australian environments. In fact, many have become pests in places far from their original homes. They can crowd out other native endemic species, affect the local balance of insects and other animals, wreck soils and even increase fire risk.

Here are three Australian native plants that have become invasive species after ending up in places they don't belong.

### **Sydney golden wattle (*Acacia longifolia subsp. longifolia*)**

Originally extending from East Gippsland in Victoria up about as far as Brisbane in Queensland, this species is undoubtedly photogenic. It's also an invasive weed in parts of Victoria, South Australia and Western Australia.

It was spread across the nation by well-meaning gardeners who saw it as a charming ornamental plant. However, its seeds made their way into the wild and took off — it's what's known in my field as "a garden escapee".

Like many weeds, this species can capitalise on a natural disaster; after fire it can send out shoots from its base. Acacias are often one of the first species to sprout following a bushfire. They're now completely dominant and spreading in many areas.

Seeds of Sydney golden wattle can last in the soil for many decades, long after the parent plants have died. The heat from a fire cracks the hard seed coat, allowing water to enter and germination to take off.

In the Grampians, in Victoria, Sydney golden wattle is causing terrible soil problems. Many native plants endemic to this area don't like high levels of soil nitrogen, but *Acacia longifolia subsp. longifolia* is a nitrogen-fixing plant.

In other words, it increases the nitrogen in the soil and changes the soil nutrient status and even physical aspects of the soil. It can grow tall and produce a lot of foliage, which reduces the amount of light coming to the ground. That makes it harder for native species lower to the ground to survive.

This is a major challenge, especially in biodiversity-rich places like the Grampians.

### **Coast wattle (*Acacia longifolia subsp. sophorae*)**

The blooms on *Acacia longifolia subsp. sophorae* (Coast wattle) look more or less the same as many other wattles, but the leaves are a bit shorter and stubbier.

Originally, Coast wattle occurred along the east coast from western Victoria — up about as far as Brisbane and down south as far as Tasmania (where Sydney golden wattle did not occur naturally).



*Acacia longifolia subsp. sophorae*, also known as 'Coastal Wattle', has shorter, stubby leaves. Tatters ♫/Flickr, CC BY

It was originally restricted to sandy sites at the top of beaches but has been deliberately planted as a "sand-binder" in other sites. It's also naturally spread into heathlands inland of the beaches and is now causing huge problems around our coasts.

Like the earlier example, it dominates local ecosystems and displaces native species endemic to the area (particularly in our species-rich heathlands), which affects local insect habitats. It is also now modifying natural sand dune patterns.

It is increasing fire risk by changing heathland plant profiles from mostly short shrubs of limited bulk to tall, dense shrublands with much higher fuel levels.

### **Coast teatree (*Leptospermum laevigatum*)**

As with Coast wattle, Coast teatree was formerly restricted to a narrow strip on sandy soils just above the beaches of south-eastern Australia. But it has now spread into nearby heathlands and woodlands. It's even reached as far as Western Australia.



Coast teatree, *Leptospermum laevigatum*, is now an invasive species in some areas. Flickr/Margaret Donald, CC BY

This teatree plant is now considered an invasive species in parts of Victoria and South Australia. Although the mature plants are usually killed by fire, the seeds are abundant and very good at surviving; they pop out of their capsules after fires.



.Leptospermum. Dr David Chael

They are high-density plants that burn quickly in a fire. They are very quick to take over and push out endemic species.

For example, parts of the Wilson's Prom National Park in Victoria, which was originally a Banksia woodland, have now been converted almost to a teatree monoculture. It is very sad.

### A call to action

Authorities are trying their best to keep these and other native invasive species under control, but in some cases things may never go back to the way they were. Sometimes, the best you can hope for is just to strike a balance between native and invasive species.

When you do landcare restoration work or home gardening, I urge you to look up the plant history and see if the species you're thinking of planting is listed as one that might cause problems in future.

When you go to purchase from a nursery or plant centre, be cautious. Think twice before you bring something into your garden. Too many species have "jumped the garden fence" and now cost us a great deal in control efforts and in native species loss.

Lots of apps, such as PlantNet, can help you identify plants and see what is native to your area.

Australia has spent billions trying to control invasive species and environmental weeds. Anything you can do to help is a bonus.

## FACEBOOK PAGES FOR COVID LOCKDOWN DIVERSIONARY THERAPY

Starting, of course, with our home page. That's not very helpful at present since we have no activities planned. However you are welcome to upload images of local discoveries to share with others.

There are many more APS pages but all link up to the NSW.

Australian Plants Society Northern Beaches Group

Australian Plants Society NSW

Australian Plants Society NSW Members Forum

Australian Plants Society - Central Coast Group

Australian Plants Society - Macarthur Group

Australian Native Plants Society - Australia

Australian Native Plant Enthusiasts forum

Australian Indigenous Plants Identification

Australian Native Orchids

Banksia lovers group

Fungi of the Sydney Region

NSW Native Plants Identification

Wildflower Society of Western Australia

Australian Butterflies & Moths

Australian Mammal watching

Bee Aware of Your Native Bees (Australia)

BirdLife Australia

Entomology Australia



North Head recovery pic. Heather Miles