

THE BUSHCARE BULLETIN

JULY 2022 - ISSUE 60



Bushcare Calendar

Date Event

JULY

13, 21 & 27 Nursery propagation

8 Scamper through the Jungle

19 Koala walk with Steve

22 Nursery gardening group

AUGUST

10, 18 & 24 Nursery propagation

13 Dyeing with natural dyes

26 Nursery gardening group

28 Bonnet Bay wildflower walk

31 Bushwhackers

SEPTEMBER

14, 15 & 28 Nursery propagation

7 Kingfisher Pools walk

18 The Bushcare Fair

23 Nursery gardening group

Cover image Waterfall at Alcheringa Reserve
- Bill Howse

Bushcare Update

By Jason Salmon

Welcome to the July edition of the Bushcare Bulletin and what a bumper edition it is. Filled with beautifully articulated write-ups from staff and volunteers alike, it makes my job a lot easier when surrounded by such wonderful talent. Also, a big thanks to Bill Howse who takes time out of his busy schedule to edit and publish the Bulletin.

As the cool weather has well and truly set in there is some respite from vigorous weed growth. Now is the perfect time to get on top of things prior to the spring flush which will come around quickly. If your site is sunny, why not fill that empty spot with some natives to save it going under to spring annual weeds.

We have some fantastic walks and events coming up. These activities are a great opportunity to see some of the Shire's hidden treasures and catch up with other Bushcare volunteers. I am pleased to announce that the Bushcare Fair will be held this year on the 18th September.

We are working hard to appoint a new Bushcare Officer soon. We know how important it is to maintain regularity with the monthly workdays and we all don't want to see the bushland health go backwards particularly after the wet weather and COVID-19 disruptions have allowed for vigorous unchecked weed growth.

Finally, keep an eye out for National Tree Day events coming up on the last Sunday in July.

Enjoy the Bulletin!

Weed Spotting Superstar

By Nathan Clare

Since joining Sutherland Council two years ago Linda has proven to be an eagle eye when it comes to finding and identifying weeds. Linda's impressive finds include parthenium weed (*Parthenium hysterophorus*) in Engadine, the first infestation to be found in Sydney, and Mexican feather grass (*Nassella tenuissima*) in Bangor. Both weeds are extremely high priority weeds due to the risk they pose to agriculture and our local environment and both are difficult to identify and don't really stand out, so she has done a great job noticing them!

Thanks to Linda, these weeds have been removed and prevented from spreading across Sutherland Shire and Sydney. Due to these two outstanding finds, Linda was nominated for the Buerckner Award by the Department of Primary Industries for "Outstanding contribution to the on ground control of weeds in NSW". Unfortunately she didn't win the award but it's a fantastic achievement to be nominated nonetheless and she's always a winner to us.



Linda with her award
- Cristine Breitenbach

Slug Superglue

By Peter Turbet

Bushcarers working on a damp day may be familiar with the Red Triangle Slug (*Triboniophorus graeffei*). It is usually seen in wet weather on trees where it feeds on microscopic algae. Found along the coast of Queensland and NSW, *T. graeffei* is Australia's largest native land slug and may grow up to 14 cm long. As with all native slugs, it has only two tentacles while introduced species have four. Inside the distinctive red triangle on its back is the slug's breathing pore or pneumostome.

A few years ago in the Watagan Mountains, researchers from The University of Newcastle made an interesting discovery about this gastropod's defence mechanism. On the branch of a tree, they found a green tree frog which had been attempting to feast on a Red Triangle Slug. The adhesive mucus exuded from the slug caused the frog to become stuck to the branch. This allowed the slug to slide away and the frog could not move for at least 24 hours!



Triboniophorus graeffei
- Bill Howse

As a wannabe citizen-scientist I thought I'd do an experiment to see how effective this sticky stuff is. On a rainy day at Alcheringa Reserve, I found a slug, rubbed my finger along its back several times and got a bead of goo on my fingertip. When I placed it against the tree trunk my finger stuck, and the mucus looked just like a glob of tacky Araldite before the bond strengthens. "Superglue" is bit of an exaggeration because I pulled my finger off quite easily. However, the mucus did not wash off readily and I could see how it might immobilise a frog or make it hard for a predatory bird to open its beak.

A Eurasian slug species, *Arion subfuscus*, not closely related, has a similar method of deterring predators. Recently, after analysing the sticky secretion from *A. subfuscus*, a team at Harvard developed a synthetic adhesive that may be useful for sealing internal wounds, negating the need for stitches. One wonders if the goo from our Red Triangle Slug may have similar benefits.

Gardening Australia at the Nursery

By Cristine Breitenbach

Recently the Gardening Australia team came to the nursery to do part of the filming for an episode on Councils Greenweb program. Clarence Slockee the presenter came with a producer, soundman and two camera operators, they were keen to see how the nursery supports Greenweb by supplying on average 14000 tubestock per year to participants throughout the Shire.

An early start saw Clarence and I burning *Banksia serrata* (Old man Banksia) cones on a bbq under the fig, to extract the seed. Fire apparently makes for good television.

Thanks to our nursery propagation volunteers Ken, Rhonda and Michelle for making an extra appearance at the nursery, to take part in the filming. They were able to highlight the importance of the nursery and it's volunteers in the Greenweb program, while teaching Clarence the fine art of tubing *Doryanthes excelsa* (Gynea Lily) seedlings.

After leaving the nursery the film crew chatted with Geoff Doret (Greenweb Officer) about the program as they looked over maps of the area. The following day they spent in the Grays Point garden of a long term Greenweb participant Kent Elliot, to learn of the benefits of creating and maintaining the green corridors throughout the Shire.

Overall the team from Gardening Australia spent two full days covering both sites, from 7am-5.30pm, so it will be interesting to see how much of this actually makes it to screen time.



Filming at the Nursery - Cristine Breitenbach

Something in the Water

By Cristine Breitenbach



Iron oxidising bacteria
- Cristine Breitenbach



Iron oxidising bacteria
- Cristine Breitenbach

Rain, water, flooding, mould are all hot topics of conversation recently. While it does free us up from any hand watering, it's not necessarily great for all our plants. The excess water and lack of sunlight has seen some species like *Billardiera* and some *Acacias* die altogether. Others like *Correa* and *Zieria* are looking very long and leggy and our *Grevilleas* are suffering from black spot. Doesn't appear to slowing down the Flick weed though- a real nursery curse.

Close by though, in the creek/ drain that runs through the nursery another interesting phenomenon has been occurring. When the water is not running freely, the ground is so saturated that the water continues to pool and move slowly along and develop the most interesting orange hue.

This bright colour may look like a pollution spill or even toxic but it is naturally occurring and is created by non harmful iron oxidising bacteria. These bacteria oxidise the iron that is naturally present in some soils, ground water and the atmosphere to produce iron oxide or rust, which is insoluble. The particles can appear to be similar to rust and can seem quite solid. The colour disappears the next time a downpour occurs and shifts the particles along.

For plants, Iron is a micronutrient that is required for processes such as enzyme and chlorophyll production. When it occurs in excess it can cause bronzing of foliage and stunted root growth. High Iron levels can often be reduced by improving aeration and drainage of the soil. Iron deficiencies can occur when soil pH is too high or soils are overly wet. Plants that are deficient display chlorosis, whereby the leaves are yellow with dark green veins. It usually occurs on the newer growth and eventually cause all leaves to go yellow.

In the nursery, iron deficiencies often occur through winter to our *Banksia* species. Unfortunately we can't use our creek water to remedy this as the particles of iron are too large to be absorbed by the plants. We use Iron Chelates as a foliage spray to correct the deficiency. Chelates bind the iron so that it remains available in the solution and therefore can be absorbed by the plants.

Greenfleet Planting Day

By Jason Salmon

On Friday 20th May four members of the Bushland Unit Chad, Nathan, Bradley and myself were joined by over 40 supporters and partners of Greenfleet at Bonna Point, Kurnell with the shared plan to get down and dirty. That is, get close to the ground and dig holes in the dirt, lots of them.

Keyboards were swapped for picks and trowels and biros for buckets as the 40 hi-vis vest-clad folk set off to off-set their emissions.

Some 1500 holes were dug and in said holes we planted 1500 native plants comprising of grasses like Blady grass, Dianella and Lomandra the last two not being grasses but somewhat grass like. Shrubs including Acacia, Westringea and Correa and canopy species of Banksia, Casuarina and Eucalyptus.



Planting Day - Alese Watson

It was a fun-filled morning that could have been quite the opposite as the event was preceded and followed by exceptionally heavy rain with a very fortunately timed, two-hour window where the sky didn't resemble a river.

This most recent planting complements previous Greenfleet plantings at Bonna Point with almost annual planting events going back to 2017. The participants always get a real thrill out of giving something back to nature and this is further boosted when they see previous plantings thriving.

Greenfleet Australia have been in operation for over 25 years and have planted 9.97 million native plants. It is wonderful to be able to support this organisation.

The Fray

Bushcare's Shire partners are active all year round and continue to host events. All welcome volunteers to help run the programs that help protect the Shire's natural areas. Contact the groups direct if you wish to find out more information or participate

AUSTRALIAN PLANTS SOCIETY

(SUTHERLAND GROUP)

Sutherland APS group, meet the 3rd Wednesday of each month, 7.45pm at the Gynea Community Centre, 39 Gynea Bay Rd, Gynea.

Facebook: <https://www.facebook.com/APS.Sutherland>

Website: <http://austplants.com.au/Sutherland>

Contact Ralph Cartwright on 9548 1074



MENAI WILDFLOWER GROUP

Meetings and propagation workshops are held at the Illawong Fire Station For activities check out our Website and Facebook page.

Website: www.menaiwildflower.austplants.com.au



BOTANY BAY BUSY BEES

The group meet and work on the mornings of the 2nd & 4th Thursdays of the month, excluding December & January, 9.00am to noon at various locations within the park. Habitats range from coastal heath to tall woodland. Morning tea is provided and tools supplied. Call Kamay Botany Bay National Park to enquire: 9668 2010. The group meet at the visitors centre in the Park.



ROYAL NATIONAL PARK (FRIENDS OF THE ROYAL)

If you are interested in our program please contact Royal Area office on 9542 0632 or email: royal.nationalpark@environment.nsw.gov.au. For

more about Friends of Royal check their web page: www.friendsofroyal.org.au/

Bushcare Basket Case

By Bradley van Luyt

Some people say you'd have to be crazy to do Bushcare, nutty as a fruit cake, a real basket case. I guess they were right when some seasoned volunteers (and prospective volunteers too!) attended a workshop on basket making with Carmen Sandy. Carmen taught us how to make mats and baskets using our old favourite *Lomandra longifolia*. Eight of us had a great morning getting extra fiddly with this very familiar plant. Carmen started our workshop with an Acknowledgment of Country and then a good chat about her background and the importance of basketry in Aboriginal Australian history and culture. She then introduced us to Lomandra. One of its common names is Spiny Mat Rush. We all know Lomandra pretty well. We know it's strappy and spiny but I bet few of us that have planted it, crawled around it and dug great clumps of Asparagus Fern out of the middle of it have used it as a weaving material. Carmen had great bunches of the stuff prepared for work. It had been dried somewhat then split into strips about 3mm wide. Carmen uses a pin to split the stuff but she said that a more traditional method is to use ones thumbnail. I gave it a go, pinching twixt forefinger and thumbnail and then pulling along the grain. All of sudden I had two thin strips of Lomandra. Success!! Carmen told us about some of her teachers and how she wanted to continue the craft and pass it on to younger generations, preserving it for all time. And so to weaving. Carmen made it look so easy. You take the blunt end of your piece ie the base end of the leaf and because it is thicker and stiffer than the pointy end of the leaf you can use like a needle. You take said "needle" end and then make a bit of a knot and loop and then you put this bit under here and then it comes back through the other bit and you keep going until you have a basket, mat, fish trap or wall hanging. Easy!!! Easy... Easy??? I tried and tried again and found that I wasn't quite getting it. My mum was a great at knitting and crochet but despite my craftiness in other pursuits I don't seem to have picked up mum's skill with fibre. "So, around like this? And then back through like that??" Yes, Carmen said I was doing fine. She also said that weaving was usually done by women so maybe that was my problem. I'll use it as a good excuse from my basketry ineptitude anyway.

Like many craft based activities there were periods of silence as we concentrated on the task at hand but there were also great bursts of chattiness as a technique finally clicked and various congratulatory sounds came from around the room. And, with heads down and fingers busy we talked. We talked about the importance of baskets to Aboriginal Australians both as a useful utensil and as a continuation of culture. We discussed the importance of using natural materials instead of synthetic materials. The benefits of working with your hands and how it helps your head were also discussed. Just I say "spoons are good for you" think we can quite rightly say that baskets are good for you too.

Basket weaving is just one on the increasing number of workshops we are running at Bushcare attempting to use craft to reacquaint people with their natural areas. Working with Woody Weeds, Native Bee Hotels with Bill and Natural Dyeing with Weeds with our volunteer Diane Townley are just some of the ways that we can highlight the importance of our natural areas,



Lomandra basket - Bradley van Luyt

having them as a source of materials for our crafts. If we can use craft as the hook to get them in and raise awareness about our program then maybe we can get more volunteers form a sector of society that is perhaps unfamiliar with Bushcare and indeed the bush just around the corner form them.

Enough typing, back to weaving

...Now, I think I twist this bit and then it goes back over my thumb and under here and if I hold my tongue just right and cross my eyes I can get this bit around here and.....ugh, buggered it again...

Seed Dormancy

By Lloyd Hedges

Most of us have taken a packet of vegetable seeds, scattered some on a damp garden bed, covered them up then enjoyed a warm satisfied feeling when 2 or 3 weeks later a mass of seedlings pushed their way into the sunshine.

This quick, near 100% germination is not natural though. It is the result of thousands of years of selective breeding where we have selected the seeds and genes of the most desirable plants to sow next year. Most plants have mechanisms to ensure that all the seed does not germinate at the same time as that could lead to a local collapse of the species if a disaster like fire or drought strikes.

Due to the unpredictable nature of our climate many Australian plants have developed complex methods of ensuring that their seeds germinate at the time when they have the maximum chance of survival.

Some store their seed in the canopy (often called serotiny) in hardened outer cases that preserves them against drying out, predators and fires. They often remain there for many years until released by fires or the death of the branch they reside on. Then they germinate readily once good rain arrives. Eucalyptus, Banksia and Hakea are examples.

The seed of other genera like Acacias and Fabaceae have a very hard but variable outer coating that resists the entry of water and predators. This wears at different rates so preventing germination of them all at once. This is called physical dormancy.

There are other germination inhibitory mechanisms. Physiological is the most common. It is a form of chemical dormancy that will prevent germination even when water and oxygen can enter the embryo. Factors that have a role to play in terminating this kind of dormancy include light/darkness, after ripening period, smoke, ambient temperature and the seasonal day/night temperature cycle.

We have a long way to go in getting to understand these mechanisms and how we can get around them and germinate seed in the nursery. At present we can only reliably germinate the seeds of about 30% of the species we have in the local bush.

At the MWFG we are putting money into research to solve these problems. They have some very bright people in UNSW Centre for Ecosystem Science who deserve more support.

In 2015 we were fortunate to hear about some of the fabled Pink flannel flowers (*Actinotus forsythii*) in flower and got taken to see them. We collected seed and after a year of trials managed to get a good germination. Might sound like a long time of negative results but we were very happy that such a cryptic species responded so quickly for, in the wild it germinated so rarely that many people who had lived in its area for years had never seen it.

This -Fire ephemeral- usually spends the majority of its time as a seed. We are talking about many decades. You could consider being a seed is its natural state. Then when the season is propitious it decides it is time. It germinates, grows, sets seed and dies within a year.



Actinotus forsythii - Lloyd Hedges

What Lies Beneath

By Emma Brame

There is great opportunity to see some interesting and unusual things in all stages of propagation in the nursery. From the many different types of seed, to how different plants can look when the first cotyledons germinate, to a seedling and to a mature specimen, or even the difference between propagating seeds vs cuttings. One of the unusual things we get to see is not generally visible and is underneath the surface. I'm taking about the different type of root systems and usually when potting up, I get a good look at them.

Roots are often an overlooked part of a plant. Not only do they anchor the plant into the ground, they are the part of the plant responsible for uptake and absorption of water and nutrients, they help move these two vital things up the stem as well as store reserves. Roots can also help prevent soil erosion. There are two main types of roots systems, a tap root system which is found in dicots and fibrous roots found in monocots. Dicots require more care when tubing up as it is very important the tap root goes straight down to ensure a healthy plant which will develop a strong root system able to support the plant and to prevent it strangling itself.

It is very interesting to see the root systems and the patterns they form. It is also interesting to learn why plants have different root systems and how they have evolved to help our Australian natives survive in our very nutrient-poor soils. Here are a few examples I have observed in the nursery.

Proteoid

Many plants from the Proteaceae family (Banksias, Hakeas and Grevilleas) develop proteoid roots. These roots look like finely matted clusters of roots with outwards growth. This increases the root surface area. In the bush they will also grow up into leaf litter. These special roots allow the plant to take up more nutrients in very low fertile soils.



Proteoid roots - Emma Brame



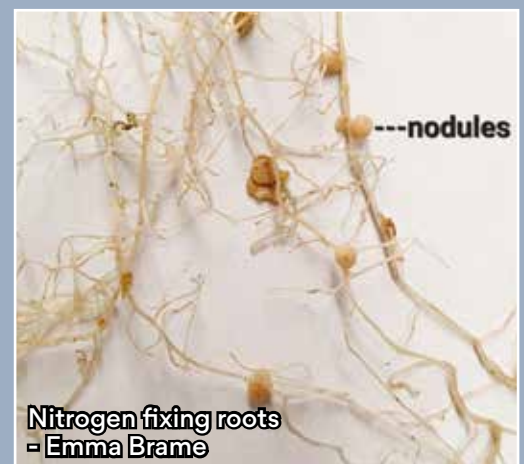
Contractile

Xanthorrhoea species (Grass tree) are one of Australia's most successful and long-lived plants and that's due to their contractile root system which allows them to shrink. This root system allows the already protected growing point of the plant to be pulled 10 cm or more below the surface protecting it from bush fires. During the first few years of growing, this root system also helps pull the plant to the correct soil depth.

Contractile roots - Emma Brame

Nitrogen fixing

Acacia species (Wattles) have developed nitrogen fixing nodules on their root. This is helped along by a symbiotic relationship with a bacteria called rhizobia. The nodules are able to convert atmospheric nitrogen to a form the plant can take up. If you have ever propagated Wattles, you would have smelt something odd. This is the presence of the bacteria. This evolution has helped Wattles survive in sandy soils which are nitrogen poor.



Nitrogen fixing roots - Emma Brame



Rhizosheath

Recently I discovered why *Haemodorum planifolium* gets its common name, Strap-leaved Bloodroot. *Haemodorum* is thought to be Greek for blood red and the roots are certainly blood red in colour as you can see from the picture. The red colour can also be seen on the base of mature plants. The root system on this plant are able to adhere soil particles to the root surface by fine hairs and mucilage (a thick glue-like substance produced by nearly all plants). This is known as a rhizosheath and helps the plants cope better with water stress, nitrogen and phosphorus deficiencies and soil acidity.

Rhizosheath roots
- Emma Brame

Epiphyte

Asplenium australasicum (Birds nest fern) are epiphytes. This means they can grow with no attachment to the ground, for example, in tree branches. They are not, however, parasitic and use their own ways to source nutrients and water. The habit of this fern acts like a big funnel. The crown of fronds catches leaves, debris and water. The leaf matter slowly builds up over time and decays. The furry roots grow up into the lower layer of the leaf matter and extracts nutrients from here to survive and continue to grow. As Birds nests ferns are epiphytic, it's important to use a well-drained soil and that the roots don't have wet feet as they will rot.



Epiphytic roots - Emma Brame

Glorious Gecko

By Polly Simmonds

While working at Darook Park recently we spotted a critter we don't see very often (maybe because they're usually active at night and hide in the day). This one lept off the wall in front of me, then proceeded to freeze and do its impression of a piece of curled bark, still showing up nicely against the Trad in the background. It'd hissed at Chris a little earlier. It has rough, scaly skin and a brown or grey, mottled pattern that resembles the sandstone habitat where it lives. It usually feeds at night and shelters during the day in crevices or under rocks. Like skinks, they discard their tails as a means of escape if attacked.



Gecko - Polly Simmonds

Before I came along and disturbed it, it'd been catching some sun on the vertical brick wall. Geckos have amazing feet, with a number of specializations that enable their surfaces to adhere to almost any type of material.

Their feet have many microscopic hairs, (setae) that each have thousands of tiny triangle shaped structures called spatula, which increase the surface contact area and adhere to the surface and increase the Van der Waals forces - the distance-dependent attraction between atoms or molecules - between its feet and the surface. A gecko can hold up to about 300 pounds with these specialised microscopic structures.

BUSHCARE WORKDAYS

Workdays can be cancelled at short notice. (B) etc after the time denotes the first initial of the Bushcare Officer responsible for the group.

1ST SATURDAY

Lucas Heights Conservation Area, 8.00am (J)
Gunnamatta Park 8.30am (Bill)
Wanda Beach, Cronulla 8.30am (S)
Whitton Street, Heathcote 8:30am (B)
Alcheringa Reserve, Miranda 12.30pm (S)
Columbine Close, Loftus 1:00pm (B)
Tea Tree Place, Kirrawee 1.00pm (Bill)

2ND SATURDAY

Fremantle Place, Yarrawarrah 8.00am (B)
Forbes Creek, Woronora 8:30am (Bill)
Freya St, Kareela 8:30am (S)
Struen Marie Reserve, Kareela 10:30am (S)
Drysdale Place Res., Kareela 1:00pm (Bill)
Yarra Vista Court, Yarrawarrah 1.00pm (B)

3RD SATURDAY

Burraneer Park, Caringbah 8.30 am (J)
Corinth Road, Heathcote 8.30am (B)
Hall Drive Reserve, Menai 8.30am (S)
Beauford Park, Caringbah 1.00pm (J)
Bangaroo, Bangor, 1.00pm (B)
Sesquicentenary Pk, Heathcote 12.30pm (S)

4TH SATURDAY

Bottle Creek, Heathcote 8.30am (B)
Akuna Avenue Oval, Bangor 8.30am (S)
Maandowie Reserve, Loftus 8:30am (Bill)
The Esplanade, Cronulla Point 8.30am (J)
Gooyong Reserve, Bangor 12.30pm (S)
Ninth Avenue North, Loftus 1.00pm (B)
Crescent Creek, Woronora 1.00pm (Bill)
Various reserves, Maianbar 1.30pm (J)

1ST SUNDAY

Carina Bay, Como 8:00am (J),
Bass & Flinders Point, Cronulla 8.30am (Bill)
Myra Creek, Loftus 8.30am (B)
Burnum Burnum Sanct., Jannali 9.00am (S)
Joseph Banks Native Plant Reserve 9.30am (J)
John McKinn Park, Cronulla 1.00pm (Bill)
Oyster Creek Gully, Jannali 1:00pm (J)
Upper Forbes Creek, Engadine 1:00pm (B)
Kingswood Road, Engadine 1.00pm (S)

2ND SUNDAY

Caravan Head Res., Oyster Bay 8:30am (B)
Kareena Park, Caringbah 8.30 (S)
Fernleigh Road Res, Caringbah 9:00am (Bill)
Forbes Creek South, Engadine 1:00pm (B)
Kareela Reserve, Kareela 1.00pm (Bill)
Ingrid Rd/Anitra Reserve, Kareela 1.00pm (S)

3RD SUNDAY

Prince Edward Park, Woronora 8:30am (Bill)
Hakea Street, Yarrawarrah, 8.30am (B)
Honeysuckle Reserve, Jannali 8:30am (J)
Paruna Reserve, Como West 9.00am (S)
Grays Point Reserve 12.30pm (J)
Nelson Street, Engadine 1:00pm (B)

4TH SUNDAY

Darook Park, Cronulla 8.30am (Bill)
The Glen Reserve, Bonnet Bay 8:30am (S)
Savilles Creek, Kirrawee 8.30am (J)
Lantana Rd Res (Banksia), Engadine 1.00pm (S)
Marina Crescent, Gymea Bay 1.00pm (J)
Rutherford Reserve, Burraneer, 1.00pm (Bill)

1ST MONDAY

Taren Point Shorebird, Taren Point 9.00am (S)
Brigalow Place, Engadine 1:00pm (S)

2ND MONDAY

Delta St, Sutherland 9.00am (Bill)
Koolangara Res, Bonnet Bay 9:00am (S)

3RD MONDAY

Port Hacking Rd Res., Sylvania 9.00am (S)
Australia Rd, Barden Ridge 9.00am (Bill)

4TH MONDAY

Loftus St, Bundeena 9.00am (Bill)
Young Street Reserve, Sylvania 9.00am (S)

1ST TUESDAY

Dunoon Place Reserve, Bangor 9.00am (Bill)
Menai Conservation Park, Menai 9.00am (S)
Surrey Place, Kirrawee 1.00pm (Bill)

2ND TUESDAY

Lilli Pilli Point Reserve 9.00am (Bill)

3RD TUESDAY

Forest Grove Drive, Menai 9.00am (S)
Kareena Park, Caringbah 9:00am (Bill)
Corea Street Reserve, Sylvania 1.00pm (S)
Darook Park Sth, Cronulla 1.00pm (Bill)

4TH TUESDAY

Lilli Pilli Point Reserve 9.00am (S)
Hungry Point Res, Cronulla 12.30pm (S)

1ST WEDNESDAY

Windy Point, Cronulla 8.30am (S)
Bundeena Reserve, Bundeena 9.00am (J)
Prices Reserve South, Woronora 9.00am (Bill)
Simpson Rd, Bundeena 11.30am (J)

2ND WEDNESDAY

Cabbage Tree Point, Bundeena 9.00am (B)
Constables Point, Maianbar 9.00am (J)
Green Point Rd Res, Oyster Bay 9.00am (S)
Alcheringa Reserve 9.00am (Bill)
Gooyong Reserve, Bangor 1.00pm (Bill)

3RD WEDNESDAY

Croston Rd, Engadine 9.00am (B)
Albert Delardes Reserve, Illawong 9.00am (S)
ANSTO, Blue Trail, Lucas Heights 12.00pm (J)
Dunwell Avenue, Loftus 1.00pm (B)



Don't forget our Facebook page. It is a hub to share information, photographs and video amongst users. Log onto Facebook, search 'Sutherland Shire Bushcare' and 'like' the page.

To join Bushcare please go to

<https://www.sutherlandshire.nsw.gov.au/Bushcare-Volunteers>



4TH WEDNESDAY

Forest & Corella Roads, Kirrawee 9.00am (B)
Newcombe Street, Maianbar 9.00am (J)
Wattlebird Reserve, Caringbah 9:00am (Bill)

1ST THURSDAY

Kareela Golf Course 7.00am (J)
Joseph Banks Native Plant Reserve 9.00am (J)
Louden Avenue, Illawong 9.00am (B)

2ND THURSDAY

Kareela Golf Course 7.00am (J)
Parc Menai 8.30am (B)

3RD THURSDAY

Kareela Golf Course 7.00am (J)
Eighth Avenue, Loftus 8:30am (B)
Savilles Creek Reserve, Kirrawee 9.00am (J)

4TH THURSDAY

Kareela Golf Course 7.00am (J)

1ST FRIDAY

Coonong Creek Reserve, Gymea 8:30am (J)
Ewey Creek, Miranda 8.30am (B)

2ND FRIDAY

Ninth Avenue Reserve, Loftus 9.00am (B)

3RD FRIDAY

Farrer Place, Oyster Bay 8.30am (B)
Kyogle Place, Grays Point 8.30am (J)
Gunnamatta Foreshore, Cronulla 1.00pm (J)

4TH FRIDAY

Kiora Road South, Yowie Bay 8:30am (B)
Shiprock Reserve, Lilli Pilli 9.00am (J)
Community Nursery, Gymea 9:00am



Banksia cone- Emma Brame

Bushland Activity

Bookings are essential and made on Council's website. NOTE: For events in National Parks entry fee applies.

Free Courses and Workshops

DYEING WORKSHOP

**Saturday 13 August
10:00am - 3:00pm**

Learn the basics of natural dyeing using a range of plant materials, including some seasonal weeds. We will cover mordanting and other treatments to help the fibres retain their colour; making basic dye baths and decorative techniques.

Special Events

SCAMPER THROUGH THE JUNGLE

**Friday 8 July
9:30am - 11:30am**

Our "Scamper through the Jungle" Bushcare event has become our most successful school holidays activity for kids. And it's free! Form a small team or pair and collect clues as you race through the amazing gardens of the Joseph Banks Native Plants Reserve. Recommended for primary school ages, parents are welcome to accompany their children on this activity. Registration is required, the race will have a staggered start over 3 time periods.

TO BOOK GO TO:
www.sutherlandshire.nsw.gov.au
**AND SEARCH FOR
BUSHCARE EVENTS**

BONNET BAY WILDFLOWER WALK

**Sunday 28 August
10:00am - 3:00pm**

Join Bushcare for a guided walk through the bushland reserves of Bonnet Bay where we will enjoy the spectacular display of wildflowers. There will be a wildlife display and a free sausage sizzle at lunch, supplied by Bushcare. All activities start from Bonnet Bay Public School.

BUSH WHACKERS

**Wednesday 31 August
9:00am - 12:00pm
Ewey Creek, Miranda**

Bushcare. What is it all about? If you're curious, come along to Bush Whackers at Ewey Creek, Miranda. Meet the whole Bushcare team. This special Bushcare event is the perfect excuse to get out and meet new people, learn about the Shire's beautiful bushland and get some exercise. All equipment, gloves and morning tea will be provided.

BUSHCARE FAIR 2022

**Sunday 18 September
10:00am - 3:00pm
Location: Parc Menai.**

This biannual event with displays, demonstrations, giveaways and a sausage sizzle. This event helps us engage the wider community and brings all our Bushcare partners together. Come along to this event and meet with representatives from Bushcare, Greenweb, the Community Nursery, Menai Wildflower Group, Rural Fire Service, Wires and many more.



Kunzea capitata - Emma Brame

Bushwalks and Guided Nature Walks



KOALA WALK WITH STEVE

**Tuesday 19 July
9:00am - 12:00pm**

Join Bushcare volunteer and recent koala expert citizen scientist Steve Anyon-Smith on a neck cranking meander through the bushland of Lucas Heights Conservation Area. This walk will be moderate and not always on formed tracks.

KINGFISHER POOLS WALK

**Wednesday 7 September
8:00am - 12:00pm**

Join Bushcare for a guided walk along the Bullawarring walking track through Heathcote National Park with noted nature expert Steve Anyon-Smith. Bring binoculars if you have them, water and morning tea. This track is graded 4. Bookings are essential.

Boneseed Time

By Nathan Clare

It's that time of year again when Boneseed (*Chrysanthemoides monilifera subsp. monilifera*) is in flower, allowing us to easily identify plants that may have been by unnoticed during the year. Boneseed is a subspecies of Bitou Bush that is not restricted to the coast and will happily grow in both disturbed and undisturbed sites. Seeing the impact of its sibling, Bitou Bush, on coastal environments, Boneseed has been placed under a total eradication order across New South Wales under the Biosecurity Act. As such Boneseed is Sutherland Councils number one priority weed with the aim to prevent it from becoming widespread. So between August – November take a second look at any yellow flowers you may see around the Sutherland Shire and report any boneseed to Sutherland Shire Councils Invasive Species Officers on 9710 0333. For identifying characteristics and further information on Boneseed visit the Weedwise website and search for boneseed or visit the link <https://weeds.dpi.nsw.gov.au/Weeds/Boneseed>



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And follow the prompts

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