

FRIENDS OF WAITE CONSERVATION RESERVE Inc.



COMING EVENTS

Bushcare Days

June 3 & 18

July 1 & 16

August 5 & 20

September 2 & 17

Fungal Foray

July 22

See pages 2 & 3 for
details



THE UNIVERSITY
of ADELAIDE

President's page

This issue is very personal because it celebrates two Friends (& friends) who have contributed hugely to the reserve over a long period. Both were deservedly awarded Life Membership at the AGM.

Clint Garrett needs little introduction. He has served on the Committee for 12 years including as Newsletter Editor, Working Bee coordinator and Vice-President. He is the face of the reserve. Years of building and maintaining trails, seats, signage and other infrastructure, and monitoring visitation means he has engaged with many of the thousands of people who annually visit the reserve.

Clint was, and is, a teacher, always seeking to communicate to others and promote the reserve either face-to-face or via regular Facebook posts and newsletter articles on trail guidance, volunteer opportunities, things to see or simply its beauty. In the process, he not only adds to the enjoyment and knowledge of visitors, but has hugely boosted our volunteer numbers, memberships and donations.

Clint Garrett is awarded Honorary Life Membership in recognition of his 12 years of service to the Friends committee and for his sustained contributions to trail and infrastructure maintenance, visitor engagement, ecological restoration and promotion of the reserve.



Jennifer Gardner presents Clint Garrett and Peter Lang with Honorary Life Membership certificates.

Dr Peter Lang has been an active member of the Friends from their inception. He was on the committee for 14 years, and the university's reserve management group, always providing sound ecological advice. He has been a regular at working bees, along with wife Lynn, and has contributed to newsletters, nature walks and presentations.

But it is as a botanist, our personal botanist, for which he is best known. Peter has added hugely to our plant knowledge by meticulously recording, collecting, cataloguing, photographing and mapping the plants of the reserve, including importantly the weeds. His very detailed Flora List is a work of art, and anybody who has used the Atlas of Living Australia will know that the reserve is a hot-spot on the map, from the many records he has contributed.

Peter Lang is awarded Honorary Life Membership in recognition of his 14 years of service to the committee and for his important contributions to the ecological restoration and botanical and entomological knowledge of the reserve.

Pete Bird



FRIENDS OF WAITE CONSERVATION RESERVE

Where:

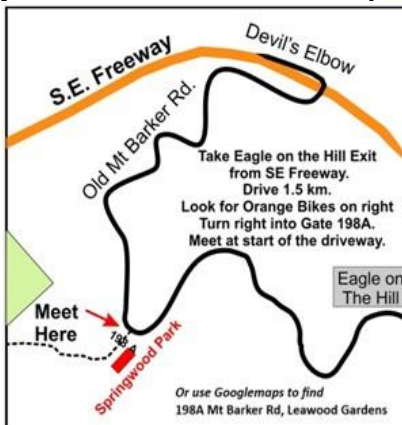
198A Mt Barker Rd
Leabrook Gardens

Fungi are a poorly known but important part of the biodiversity of Waite Conservation Reserve.

Join Teresa Lebel from the State Herbarium, mycologist Tijana Petrovic and members of the Adelaide Fungal Studies Group for a:

FUNGAL FORAY

Teresa will demonstrate tools to identify fungi - including iNaturalist - to help us to catalogue the species that occur in the reserve.



When:

Saturday
22 July 2023
10.00am - 12 noon

Enquiries:

Clint Garrett
0417 854 887



All welcome, but numbers limited

Please RSVP to info@friendsofwaitereserve.org.au by
14 July

Bring lunch for afterwards



THE UNIVERSITY
of ADELAIDE

Bushcare Days

Bushcare days, or Working bees occur every *first Saturday & third Sunday of the month 9.00am – 12.00noon*. In March we took to the plantain on Sarah's patch, looking good after 18 months of hard work. Thereafter we scaled the southern & western hills & dales hunting seedling olives, African daisy, hawthorn and various other weeds.

In April we moved uphill to Stone Reserve to chase the significant germination of olive seedlings. Eleven of us took out 2700 on our first outing!

For the next few months we continue to meet up top at Springwood Park (see map & directions). We'll plant trees for the first 2-3 then move onto our usual task of hunting various weed bulbs on Quartz Hill and other good patches.

All tools supplied. Reminders are emailed earlier the week of each Bushcare day.

Pete Bird

Program

Sat 3 June
Sat 1 July
Sat 5 Aug
Sat 2 Sept

Sun 18 June
Sun 16 July
Sun 20 Aug
Sun 17 Sept



Kerry James and Liz Hawkins from University of Adelaide joined FWCR Rob Last for National Volunteer Week tree planting. Kerry is the Senior Volunteer Program Coordinator & Liz is Executive Director of Advancement which oversees volunteers with the university.

Join the Friends of Waite Conservation Reserve!

Ordinary membership \$15

The Membership/renewal form and details can be found at:

<https://friendsofwaitereserve.org.au/>

Forms can be submitted electronically or printed. Email: info@friendsofwaitereserve.org.au

Non-members are welcome at our activities

PRESIDENT'S REPORT – AGM 17 May 2023

Over the past year the Friends group has pursued a range of activities to support the *University of Adelaide* in the conservation & ecological restoration of the reserve, encouragement of its community use & enjoyment, and its promotion as a research & educational resource.

Among other things we:

- Continued our conservation & restoration efforts through ongoing weed control, specifically:
 - working to eradicate isolated populations – e.g. Coolatai Grass, Onion Weed & False Caper;
 - controlling specific weeds on our best patches, e.g. Cape Tulip on Quartz Hill;
 - controlling all weeds on Bushcare sites; and
 - whittling away at widespread but nightmare weeds, e.g. feral olive.
- On the olive front we received a *Revitalising Private Conservation* grant of \$10,890 enabling the university to employ workers to consolidate our long-term control program. The Friends followed up by dragging & burning the resultant olive piles.
- And we trained & supervised work by 40 *Urrbrae TAFE Horticulture* students in the dark art of olive control.
- We contributed \$2,000 to engage Grant Joseph to weave his magic spray-wand to carefully treat weeds on our best patches.
- On re-vegetation, we again worked with *Urrbrae TAFE* students & *City of Burnside* to help propagate & plant 1500 tubestock of 90 species.
- We embarked on a new project to mechanically direct-seed understorey on 2-ha of Stone Reserve planned for 2026. In preparation we organised for *Seeding Natives Inc.* to commence an intensive weed control program & for *Blackwood Seeds* to collect seed.

- In terms of monitoring, we completed a 3-yearly assessment of understorey condition on 51 quadrats.
- We also conducted our first Great Waite Bioblitz over 3 days in October. At last count we had uploaded 1600 observations of 550 species onto *iNaturalist*.



Grant trains TAFE students in backpack spraying techniques

- And we held a Fungal Foray with the Adelaide Fungal Studies Group led by the State Herbarium's Teresa Lebel.
- We monitored feral deer & conducted two successful control operations led by Andy Baker & Errol Mattig. We also oversaw a trial by the University's [Unmanned Research Aircraft Facility](#) to investigate the potential of drone-mounted thermal video to locate deer for improved management.
- Thanks to Meg, Clint & Glenn for producing our usual 4 newsletters & maintaining the website & Facebook page.
- We also launched our long-awaited App. Thanks to Jennifer Gardner & Marian McDuire for its development & to Uncle Fred Agius & Greg for a moving smoking ceremony.

PRESIDENT'S REPORT – AGM 18 May 2022 (continued)

- And we updated & re-printed the Waite Loop trail brochure with a \$1500 grant from *City of Mitcham*.
- Special thanks to Richard Brooks for his persistence in achieving tax deductibility by having us added to the *Register of Environmental Organisations*. Thanks also to those who generously contributed over \$6,000 in donations.

In all 70 volunteers contributed a record 5,700 hours of labour, equivalent to almost 3 full time workers worth \$266,000.

I'd especially like to thank our committee: Glenn Gale, Meg Robertson, Penny Paton, Grant Joseph, Simon Treloar & Richard Brooks. And thank you also to ex-officio, University manager Kate Delaporte for her cheerful assistance, support & tolerance of our rabble band, and to volunteer coordinator Erica Boyle.

Finally I'd like to single out Vice-President Clint Garrett for his ongoing super-human effort. In the past year Clint contributed an amazing 1400 volunteer hours, especially:

- Upgrading & making safe large sections of walking trail.
- Overseeing the installation of three new tables & seats; and
- Monitoring reserve visitation, last year estimated to be around 46,000 people, while engaging with a great many of them, in the process swelling their enjoyment & knowledge of the reserve & boosting our volunteer numbers, memberships & donations.

Pete Bird



Uncle Fred Agius prepares for the smoking ceremony at the launch of the Reserve App in November. Photo: Glenn Gale

On the Trail - Clint Garrett

The strong gully winds and a storm on 20th March have meant that there have been a lot of fallen branches and in 2 cases, whole trees that have fallen across the trails. The largest of these was in Koala Gully. Charlie and Clint removed enough of the branches to allow walkers to get past until such time as a tractor from Property Services was used to push the main trunk off of the trail.



Walkers

So far this year January 1 to April 30th, we have had 13,620 walkers past the counters at Gates 61 and 88. This is less than the 15,346 for the corresponding period last year. The drop in numbers can be partly explained by the week-long closure for the deer issue, which coincided with the March long weekend.

On April 16th the Five Peaks Run organised by Trail Running SA used the Sheoak Loop and the Yurrebilla Trail as part of the course. 552 runners took part, with the fittest of them running 42 kilometres from Norton Summit to Belair.



There are still a few spots in Wild Dogs Glen where steps are needed. In recent times 6 more have been added. The photo shows a large step with a single rise and a paved section. The edge of the track was falling apart at this point and had a significant off slope.



Now that there has been some rain, work on the trail will become easier. I have found that moist soil packs better than dry soil. Moist soil is also a lot easier to dig than dry, hard packed soil.

There are 2 relatively short sections in Netherby Gully still to be fixed and a section on the Sheoak Loop that will need to be re-enforced

Walkers really appreciate the work that has been done.

Photos: Clint Garrett

Lerps - *Clint Garrett*

In Autumn as you have walked on the trails you might have noticed a scattering of miniature white snowflakes on the ground. They are lerps, which have fallen from a nearby Grey Box tree.



A lerp is a sugary/waxy shell that a small sap sucking insect called a psyllid builds to protect itself. In the photo, you can see a young psyllid at an early stage of developing with its lerp. Nearby is a well developed lerp of the size that you will find on the ground when the adult psyllid has left its protection.

In most years, the amount of damage done by the psyllids is not great. The damaged leaf eventually falls and new growth replaces it. But in some years, the infestation can be so high that it really does stress the tree.

The psyllid which produces these lerps seems to be specific for Grey Box. I checked nearby SA Blue Bums and Red Gums and could not find any lerps of this type on them.

The sweet waxy lerp is food for birds such as pardalotes, thornbills and honeyeaters. I was pleasantly surprised to see a group of White-winged Choughs working over a section of trail for lerps which had fallen to the ground. After the Choughs had done their job, there were no lerps where they had been, but plenty of lerps on adjacent areas. I have also watched Australian Magpies and Little Ravens pecking the ground to collect lerps. On one occasion a Little Raven was seen walking along a dead branch so that it could pick off the lerps from leaves that were growing close by.

Having a diverse understory which encourages a diversity of birds and predatory insects would seem to be a strategy for minimizing psyllid damage.



Those tough Dyeballs (Fungi) - Tijana Petrovic

“... Dyeballs are all the more important in these environments where trees struggle to glean what they need from the nutrient-poor soils.”

Underground Lovers (Alison Pouliot, 2023)

Species of *Pisolithus* (Dyeball) are one of the less attractive fungi from the outside that either pushes up through the soil or sits on the ground like a ball (Fig. 1A). From the inside, this tough fungus is a piece of art – it is packed with pea-sized, yellow to whitish or tan to khaki spore chambers embedded in a blackish gel (Fig. 1B). When your fingers run over it, they become covered in a gooey tar-like substance that stains your hands yellow. *Pisolithus* species are not easy to differentiate, as they often take on the colours of the soils they are growing in, and the spore ornamentation can change drastically as the fruitbodies and spores mature.

Pisolithus species form ‘partnerships’ (i.e. ectomycorrhizal associations) with a broad range of woody plants including *Eucalyptus* and *Acacia* species, improving their vigour and survival. *Pisolithus* species unlock nutrients in soils and organic matter, and supply nutrients and water to their woody partners. In return its plant partners share sugars produced through photosynthesis with the *Pisolithus*. The northern hemisphere *Pisolithus* species are frequently added to commercial inocula of mixed mycorrhizal fungi, and used by home gardeners, councils and foresters to try [to aid establishment and promote growth of](#) exotic trees. However, no commercial inocula containing native *Pisolithus* species to help establishment and improve growth of native trees in Australia are available.

In the *Waite Conservation Reserve*, *Pisolithus* sp. has been found in the proximity of the Quartz Hill Stone Quarry, growing out of disturbed and undisturbed soil, and along Ridge Trail where the soil is compacted (Gate 88). While still in the soil and not fully developed, it can be easily mistaken for another mycorrhizal genus, *Scleroderma* sp. (Fig. 1C, D), which fruitbodies can also often be noticed along walking tracks. A cross section of a fruitbody gives a clue which genus it is. *Pisolithus* sp. has multiple small chambers at different stages of maturity with the most immature toward the base (Fig. 1B), a thin skin that wears away and khaki-brown spores that blow away in the wind. *Scleroderma* sp. has a single chamber with dark black spores all at the same stage (Fig. 1D), and thick skin that cracks to expose the spores.

Pisolithus sp. contains a pigment (the blackish gel) that is suitable for dyeing and can be a natural alternative to toxic synthetic dyes. However, there

are conservation concerns if large quantities of dyeballs (fruitbodies) are collected. It is best to collect young dyeballs when the thin skin is still intact, place them in hot water, wait for a colour change and then put wool or silk in. Wool and silk usually yield lovely shades of brown and gold, respectively.

Pisolithus sp. was once used as a food by different First Nations people. For example, the Walmadjari people of the Kimberley region (WA) called dyeballs *jurntujarti* and prepared them by removing skin and any powdery spores, then slicing the firm interior and toasting it on coals (Pouliot, 2023). Interestingly, young dyeballs with a tarry consistency were used on wounds too.



Figure 1. *Pisolithus* sp. (A-B),
Scleroderma sp. (C-D)

Dear Reader, thank you for reading this text about *Pisolithus* species (Dyeball). If you would like to find and learn more about native *Pisolithus* species and other fungi in the *Waite CR*, please come along to the fungi foray led by mycologist Dr Teresa Lebel on July 22nd, 2023. Teresa has revised *Pisolithus* species from Australasia, and formally described two new *Pisolithus* species, one from Australia and one from New Zealand. ([\(17\) \(PDF\) Two new species of Pisolithus \(Sclerodermataceae\) from Australasia, and an assessment of the confused nomenclature of P. tinctorius \(researchgate.net\)](#)).



False Caper *Euphorbia terracina*

This issue's weed is one we have pursued for many years ... & still it persists. Time to knock it out. False Caper is one of several species of *Euphorbia* in the reserve. It is a winter growing perennial, native to the Mediterranean region. The stems exude a milky sap which contains cyanide & is poisonous to livestock. It is a declared pest in SA.

Identification

Plant: smooth erect branched perennial to 50 cm

Stems: several red-brown; exudes milky sap when damaged

Leaves: alternate, dull green, linear & without stems, to 30mm; whorls of 5 at base of flower stems

Flowers: tiny yellow inside cup; 2 yellowish floral leaves below

Fruit: rounded green capsule with 3 seeds

Roots: fibrous, creeping to 30 cm deep

Similar species: one of 3 *Euphorbia* species in the reserve, two weeds & one native. All others are smaller.

Current locations

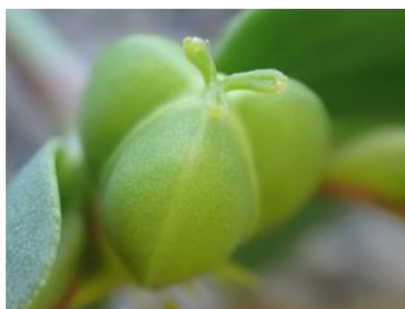
Above Wild Dog's Glen track / Old Coach Rd junction;
40m west of large SA Water tank off Tanks Track;
Southern Easement Track, north of Netherby Knoll;
on boundary with Freeway below Union Quarry.

Monitoring & control

High seed production & long-lived seeds require regular, ongoing vigilance. Seeds mostly germinate autumn-winter so check infestations regularly from early winter until Christmas.

Carefully search entire area looking for characteristic red-brown stems & yellowish foliage. Pull & bag all plants. Grasp low on the stem; plants regrow if broken off.

Wear gloves to avoid the sap which can irritate the skin & eyes. Report new infestations.



Flower, developing fruit and milky sap

Guiding scouts

On a beautiful Friday evening 3 March we hosted the **Second Adelaide scout group** for a bushwalk with leaders Christie, Brett & Liam. After a quick introduction to *iNaturalist* the 15 scouts were let loose to discover plants & animals en route to Netherby Spur. After a spectacular dusk viewing from the spur, we trooped downhill to the SA Water tank to survey moths & other insects coming to a UV light. Then back to Gate 82 to meet parents by 9.00pm.

Architectural landscapers

For the third year running Scott Hawken brought his University of Adelaide **Landscape Architecture ecology class** for vegetation studies. Sixteen students walked the Loop Trail on 31 March looking at why plants grow where they do. The students returned in teams the following week to map plant distributions and topography along selected transects through the reserve.



Weed warriors

“I think we’re running out of olives” said Clint. Would it be so, I thought. Turns out Clint was referring only to olives of a suitable size-class for tree-popping. This was one of five weed control techniques demonstrated to 40 **Urrbrae TAFE Horticulture students** over two days in March, the others being Basal Bark Treatment, Drill & Fill, Backpack spraying olive regrowth and General weed spray techniques.

Thanks to demonstrating Friends Meg Byrt, Clint, Penny, Simon and Grant and to TAFE lecturers Giles Goldney, Mareya Dashorst & Greg White in what has become a regular and productive collaboration. In all it resulted in 157 hours of weed control, mostly whacking olives. It all helps!

Rock stars

Geologist Colin Conor is showing no signs of slowing down, leading two walks in the reserve and providing this summary: This was the wrap-up geological stop of the Sheoak Loop tour for members of the **Field Geology Club**. The fascinating rocks are of the Urrbrae Ridge quartzite, but more fascinating was the pictured unfazed monotreme who stole the show while a particular learned gentleman (Colin) was trying to point out important geological features. The lesson is to avoid serious matters on the First of April! Seriously though, some 35 members of the **Geological Society of Australia** and Field Geology Club appreciated the decent weather on the afternoons of 31 March and 1 April to study the rocky outcrops of the Sheoak Loop and enjoy the scenic walk.



Plants for possible reintroduction

There are several plant species not now found, that either formerly occurred in the reserve, or whose past presence is unconfirmed. It is not surprising that some plants no longer occur on our patch considering its history of clearing & intensive grazing, originally by sheep & now by overabundant deer & kangaroos. It seems reasonable that we should consider reintroducing some of these from existing local populations to restore or bolster our biodiversity. Here are four plants worth considering:

Elegant Spear-grass *Austrostipa elegantissima*

Family Gramineae

Early record, precise location unknown but not now present. Widespread, palatable species likely eradicated by livestock. Tubestock plantings in Carrick Hill failed to survive probably due to kangaroo/deer grazing. Often grows inside protection of dense shrubs. Peter Lang reports it can become weedy in the absence of grazing.

Photo of seeds from Carrick Hill planting



Hard Mat-rush *Lomandra multiflora ssp. dura*

Family Liliaceae

One of five species of Lomandra originally in the reserve, the other species are still present. Previously recorded from Pultenaea Hill (Hardy Block West) but not confirmed in recent years. Abundant in parts of Belair National Park & records from Grey box woodland communities in the foothills such as Springbank and Shepherd's Hill.

Flowering plant from Belair NP



Little Sword-sedge *Lepidosperma curtisiae*

Family Cyperaceae

Early unconfirmed record by Waldo Bushman from north-eastern slopes of Urrbrae Ridge in vicinity of *Pultenaea daphnoides* site. No recent records. Occurs western Belair NP where plants are heavily grazed by kangaroos. Consider for Stone Reserve direct seeding area proposed for fencing.

Heavily grazed plant from Belair NP



Austral Bear's Ear *Cymbonotus preissianus*

Family Compositae

Suitable habitat but no confirmed records. Known from Cleland, Belair & close by in Randell Reserve, Mitcham. Grows as a ground-hugging rosette of leaves, suggesting it may survive grazing better than some other plants if it can be established.

.....Photo by Jason van Weenen, Mt Magnificent CP



Pete Bird with thanks to Peter Lang

Pete's Nature Diary

Daisy confirmed

Rough Groundsel *Senecio hispidulus* has been on our Flora List for 20 years, after 40 plants were seen by Waldo Bushman near the boundary on the Urrbrae Ridge track in 2003. This daisy has remained as an unconfirmed record ever since ...until recently when a single plant was confirmed on Sheoak Slope in April - our fifth native groundsel.

Groundsels are also known as fireweeds due to their preference for bare areas following fire. This one had emerged where Grant & Paul had cleared olives a couple of months earlier, perhaps years after the seed had blown in. Not a plant to pass up such an opportunity!

BTW Google tells me that the name groundsel probably derives from Old English words 'gund' meaning pus & 'swelgen' to swallow, with reference to its medicinal use in poultices.

Pete Bird



FWCR contacts

President: Peter Bird (0418-853 -834) pjbird1@bigpond.com

Secretary: Glenn Gale (0428-812-902)

Newsletter editor: Meg Robertson

Committee: Kate Delaporte, Grant Joseph, Penny Paton, Meg Robertson, Clint Garrett, Simon Treloar

Address: Friends of Waite Conservation Reserve, University of Adelaide, Waite Campus,
PMB 1, GLEN OSMOND 5064 **Phone:** 8313-7405

Email: info@friendsofwaitereserve.org.au **Website:** <https://friendsofwaitereserve.org.au/>

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