Newsletter 31

Spring

2015

FRIENDS OF WAITE CONSERVATION RESERVE Inc.

COMING EVENTS

Walking Bees

1st Saturday & 3rd Sunday each month

November 1st &15th

December 5th
Gate 82
Entry off Hillside Road
Springfield

THE UNIVERSITY of ADELAIDE

President's message

After a colder-than-average winter and early spring, summer seems to have come with a rush with an un-seasonably hot October. And in spring, like for every season in the reserve, all thoughts turn to olives.

While our working bees have been concentrating on regenerating olives, the University has been employing contractors to continue the task of primary olive clearance in the area uphill and to the right of Gate 61 into Wild Dogs Glen. This is tough work with thousands of olive stems per hectare needing treatment.

The team do this by chain-sawing and burning the olives, then drilling holes in the stumps and filling them with herbicide. It is a slow, tedious and very expensive process, costing many $1000s per hectare. At current rates, the remaining olives will cost well over $1million to remove and take decades to achieve. There has to be a better way!

Basal bark spraying

Is this the technique to revolutionize olive control on our patch? A recent article in the spring issue of the *'Smalltalk'* newsletter certainly gives us something to think about. In it the Adelaide & Mt Lofty Ranges NRM Board reports on trials comparing the 'drill and fill' technique above with basal bark spraying. BBS involves spraying the lower trunk with a mixture of Garlon (Triclopyr) arboricide and Biosafe vegetable oil. The results are rather astounding with labour and total costs of BBS reportedly 8-12 times less than Drill &Fill

Questions remain however:

Their trials seemingly involved single olives accessible to spraying from all sides. Many of ours occur as dense multi-stemmed forests. How will the technique go when access is restricted?

They leave olives standing. We cut down and burn ours to aid follow-up treatment of seedlings and regeneration. Can we use BBS and then cut the olives down later? How much later?

AMLR NRM have been trialing this technique since 2007. We have seen stumps regenerate 10 years after treatment.
How good is the technique at killing olives really?

Triclopyr is a longer-lasting herbicide than our usual Glyphosate. What are the likely off-target effects of using it?

Peter Bird

In the Reserve

GREEN ARMY

It should be clear from the my President's page that the combined resources of the University and the Friends group are insufficient to keep up with the weedy invaders that bedevil our patch. While we concentrate on olives, the other weeds continue to dance rampant across our landscape.

The Green Army program is a Federal Government initiative which combines environmental work with training and employment opportunities for young people 17-24. Work crews of nine participants are overseen by a qualified team supervisor are employed for periods of up to 6 months.

The university with support from the Friends has recently submitted an application to the Green Army program in collaboration with Conservation Volunteers Australia. If our submission is successful, the reserve would host a team 4 days a week for two consecutive 6-monthly periods commencing in July 2016 and resulting in more than 10,000 hours of labour. Wow!

We should know around Christmas if we have the gig. If successful I would be keen to speak to members who might be interested in donating a half day here or there to help train the team in the broad range of ecological and practical skills that we as a Friends group possess.

Peter Bird

GREEN ARMY

LOCAL PEOPLE, LOCAL PROJECTS

WORKING BEE REPORT

Working bees continue to focus on follow-up control of seedlings and regenerating olives on the 95 hectares of reserve previously cleared of this transformative weed. To date 23 volunteers have spent 290 hours attending 12 working bees, re-treating 61 hectares. With four more working bees to go we have completed 65% of the area to be re-treated in 75% of the allocated working bees.

Along the way we have treated a number other perennial weeds such as hawthorn, blackberry, buckthorn, weed orchid and perennial veldt grass. As well, Andy and Annette have cleaned up the patch of false caper at the top of Wild Dogs Glen that we have chased for the past decade.

For all remaining working bees we meet at Springfield Gate down the bottom to avoid the fire risk of driving across paddocks of rapidly curing grasses. We'll continue to target olives in southern and western parts of the reserve. The final working bee is on Saturday 5th December

While on bushfire risk, **working bees will be cancelled if the bushfire rating is Severe or above.** Check the forecast the day before.

Working bees will resume in April next year – I'll alert the usual crew via email but for others, details will be in the new summer edition of the newsletter.

Remember, the reserve is open year round, except as above, so visit in your own time. In summer it becomes a whole lot easier to spot those annoyingly healthy dark green olive seedlings amongst the yellowing and waning annual grasses. A pair of pliers in the back pocket aids the pulling seedlings in hard summer soils.

Peter Bird

Donkey orchids in Waite Conservation Reserve

Donkey Orchids or Double tails (genus *Diuris*) are represented in the Waite Conservation Reserve by three species, plus a few plants that are hybrids. *Diuris* are characterised by their two lateral sepals which form green to dark-coloured, narrow-linear "tails", quite distinct from the dorsal sepal and petal segments which are brightly coloured, usually in yellows and browns.

Fig 1. ***D. orientis***

The most abundant of these species in the reserve is *Diuris orientis,* the Common Donkey-orchid, also known as Wall-flower orchid on account of its muted tones suffused yellow, brown and purple. In good years, dense clonal patches of this species comprising hundreds of plants can be seen on Quartz Hill (Figs.1 & 2). *Diuris orientis* is thought to mimic native legumes such as Pultenaea which have similar coloured flowers.

Fig 2. ***D. orientis***

Less common in the reserve is *Diuris pardina* (Spotted Donkey-orchid or Leopard-orchid) which has the petals a somewhat pale yellow and distinctly blotched, especially on the underside. (Fig. 3).

Fig 3. ***D. pardina***

The third species is *Diuris behrii* (Cowslip orchid or Behr's Golden moth-orchid), with almost pure yellow flowers (Fig. 4). This is grassland and grassy-woodland specialist and is listed as a Vulnerable species in South Australia. We are most fortunate to have a small population of this species persisting in the reserve. Early colonists described fields golden-coloured by an abundance of this species, but it has severely declined throughout its range following grazing and invasion of its grassy habitat by alien plants.

Fig 4. ***D. behrii***

Orchids

Diuris behrii appears to mimic the Bulbine-lily (*Bulbine bulbosa*), (Fig 5) having flowers the same shade of yellow and a coincident flowering period, but offering the visiting insect no reward. Small native bees have been observed visiting flowers of both species in the Reserve.

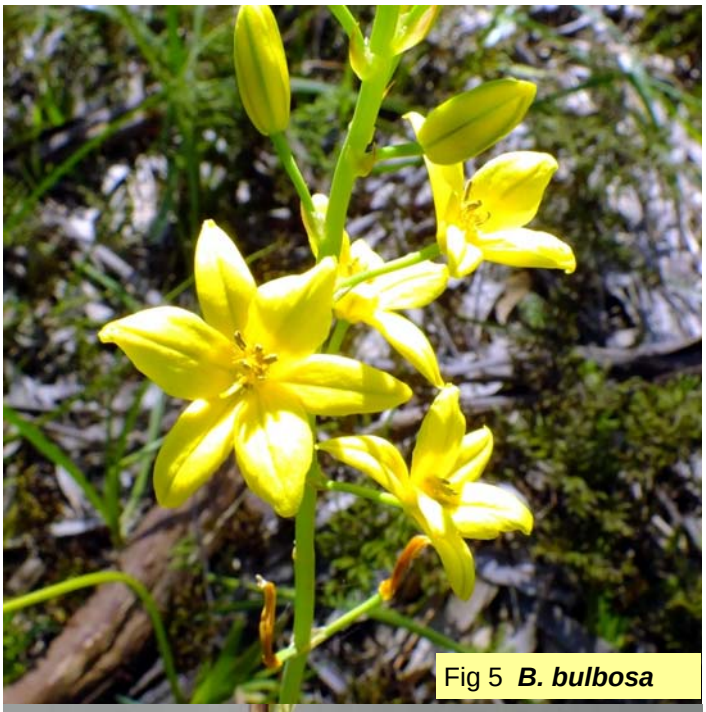


Fig 5 ***B. bulbosa***

Fig 6 ***D. behrii X pardina***

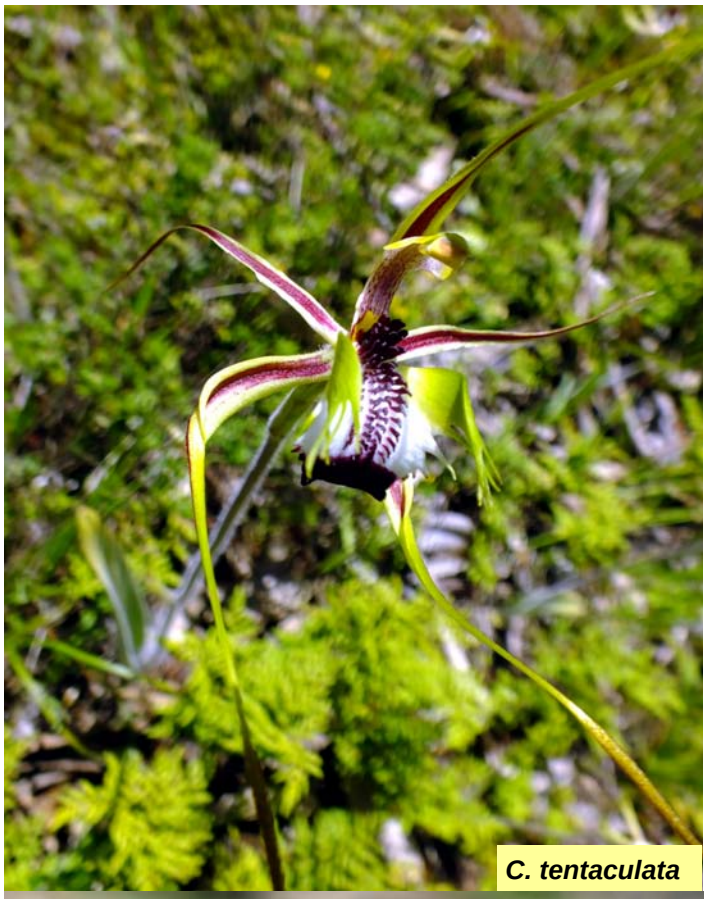
Also on quartz hill are some hybrid plants that appear to be a cross between *D. behrii* and *D. pardina* (Fig. 6)

Peter Lang

Photos 2,3,4 &6 Peter Lang
Photos 1 & 5 Clinton Garrett

It has been a good season for orchids in the reserve. There were 62 Caladenia tentaculata in one group on Quartz Hill. The specimen below is a particularly nice variety of the species
Caladenia carnea variety minor is uncommon and easily overlooked as it opens only briefly.

Clinton Garrett



C. tentaculata

C. carnea

Fan tailed Cuckoo— the harbinger of spring

The mournful oft-repeated call of the Fan-tailed Cuckoo was once the harbinger of spring on the Adelaide plains and in the nearby hills. This species is now rarely seen on the plains, but still hangs on in the Mt Lofty Ranges and has been heard recently in Waite Conservation Reserve. This medium-sized bird has a longish barred tail and lovely soft colouring. The back is blue-grey, the under-parts are apricot or chestnut and the large dark eye is circled by a bright yellow eye-ring.

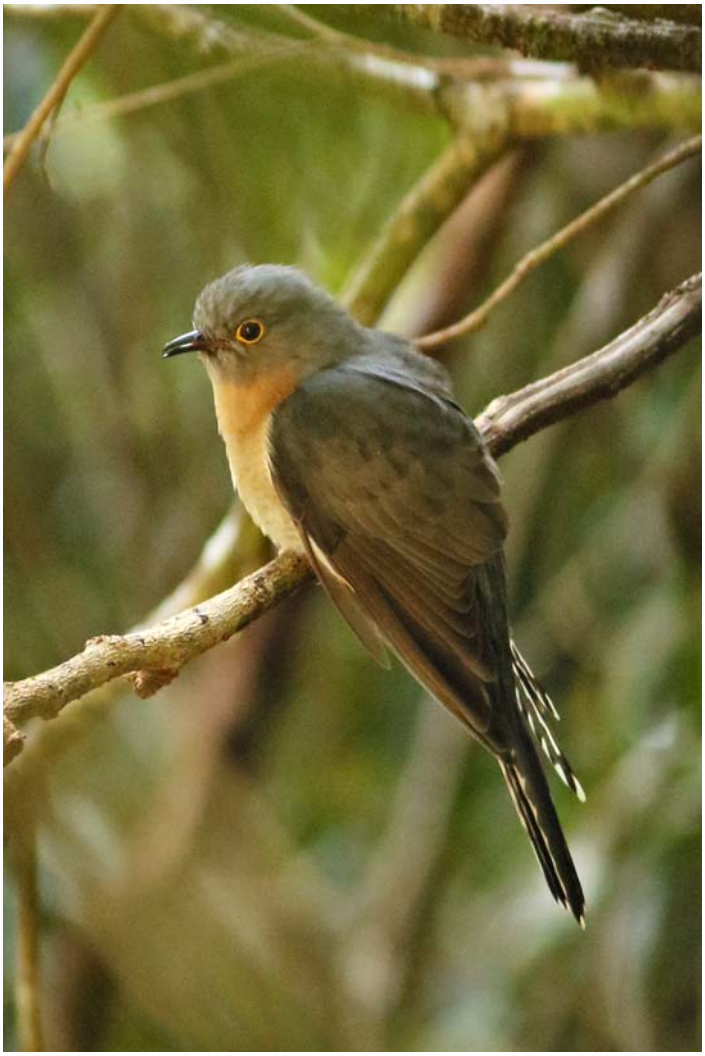
Fan-tails are usually seen singly, or in pairs during the breeding season, and generally are located by their far-carrying call which is a loud downward trill. All cuckoos tend to sit on exposed branches and sometimes atop tall trees so can be easy to see. They are not liked by other small birds due to their hawk-like silhouette in flight and their peculiar breeding ecology.

Most cuckoos in Australia, and the fan-tail is no exception, lay their eggs in other birds' nests and then let the host adults brood and feed their young. They are catholic in their choice of host, preferring the dome nests of fairy-wrens, scrub-wrens, heath-wrens and thornbills, but also using the cup nests of fan-tails, robins, whistlers and honeyeaters. The female cuckoo removes one of the host's eggs and, on hatching, the young cuckoo ejects the eggs and/or young of the host. One can only feel sorry for the poor little wren or thornbill feeding an increasingly gigantic 'offspring'.

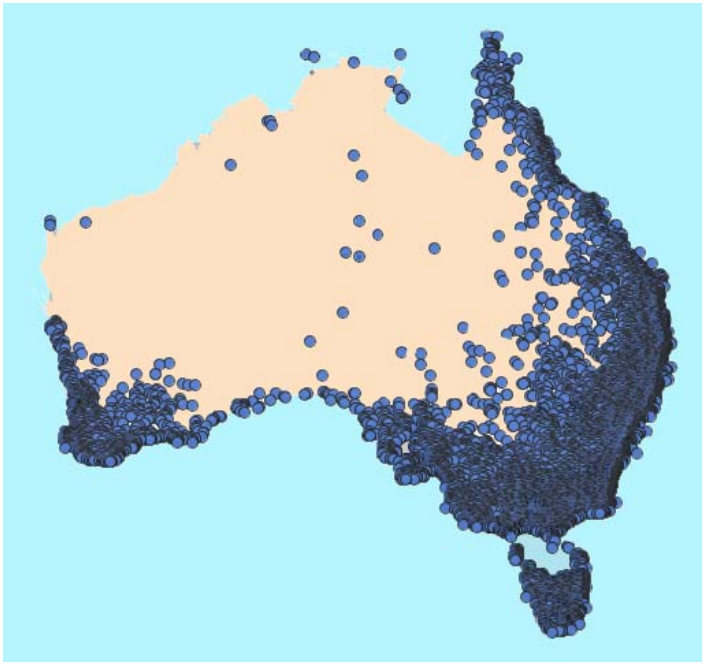
The Fan-tailed Cuckoo is one of a bevy of birds that migrate south during the spring and summer to breed then return to warmer climes during the cold southern winter. Occasionally birds will over-winter in southern latitudes and these may be mainly immature birds.

Cuckoos are noted for their consumption of caterpillars and particularly the hairy varieties of moths and butterflies. Fan-tails also eat other insects and their larvae, including grass-hoppers, beetles and such-like. They feed mainly on the ground but also glean from twigs, trunks and leaves in bushes and trees.

Penny Paton



Fan tailed Cuckoo
Tom Hunt photograph



Distribution of Fan tailed Cuckoo
Modified from Atlas of Living Australia

Elena Kondrlova

Hello, my name is Elena Kondrlova and I work as an Assistant Professor at the Department of Bio_Meteorology and Hydrology at the Slovak University of Agriculture in Nitra, Slovakia. Our research focuses on climate change, gas emissions, soil erosion, soil physics and water balance modeling. Our main aim is to use modern research methods to contribute to Climate Change mitigation and the sustainable use of natural resources.

Slovakia is a beautiful country located in the heart of Europe with different weather conditions and has a very different environment in comparison with South Australia. Because of Climate Change, average annual temperatures are higher than they used to be 20 years ago, and I am sure that you have noticed that there were heat-waves that threatened Europe last winter (their summer) when temperatures reached up to 45°C.

There are a lot of watercourses originating in Slovakia, so in the past the country did not have problems with water scarcity. But the changing pattern of rainfall distribution has lead to sudden torrential rainfall events that very often result in floods. At the same time more and more of our farmers have to deal with droughts during the growing season. The location of Slovakia in Central Europe makes winter time always challenging, since the amount of snow and temperatures depend on the prevailing winds. The continental weather from the East and North brings rather dry and very cold winter days while the oceanic weather from the West results in wet and mild winter-days. But mostly it is something in between, so we never know what we will get.

It was always my dream to come to Australia, mainly because of different landscapes (ocean, beaches, outback) but also because of different animal and plant species. So when I have learned about the fellowship opportunity at my university, I made my dream to come true. Thanks to Prof. Wayne Meyer from the Adelaide University, who was so nice to approve my collaboration proposal, I was able to come here for 5 months.

During my research visit I mainly collaborated on the Ozflux project under guidance of Prof. Meyer. I worked on processing of eddy covariance data and analyzing and modelling the water balance trend at Calperum station near Renmark. My fellowship also included visits to Plant & Food Research in Palmerston North, New Zealand and to the University of Newcastle. These were opportunities for networking and getting more experience in measuring and modeling of soil erosion intensity.

While working at University of Adelaide I was based at Waite Campus and from my office I had nice view on Waite Conservation Reserve. Since I like hiking a lot, my first steps during my free time lead to this picturesque place. This woodland is such a different kind of ecosystem from our forests! I enjoyed walking along the pathways, exploring (for me) alien species of plants and taking opportunity to meet some of the reserve inhabitants. One day I took a leaflet, which I found at the Wild Dogs Glen entry and I decided to take part in the next Working Bee. It was such a great decision! I got a chance to meet small but so nice and welcoming group of people, who are really dedicated to preservation of the native species. Everyone was very helpful and in one day I learned about various techniques how to fight spreading olive seedlings.

Elena showing that she quickly learnt how to remove olives.

Joining the group was very good opportunity to learn more about the woodland ecosystem and introduced species that might be OK in Slovakia or elsewhere else, but mean harm for native Australian species. Moreover, we have explored the hidden parts of the reserve and while pulling thousands of smaller and bigger seedlings we have had nice chat and fun. Although my fellowship did not last for long, I was very happy to give a helping hand to the group. I have to say that there was feeling of satisfaction whenever I walked through the reserve after another productive working bee. At the end of my stay, my participation in working bees was crowned by great farewell dinner in the lovely surroundings of the Adelaide Hills. So I would like to thank all of you working bee helpers for your warm welcoming and nice time.

Thank you for fare welling me in great style, as well as for the memories that I have taken back to Slovakia. I hope that the members will persist in their activities and I wish them a lot of new helping hands.

Best wishes from Slovakia.

Elena Kondrlova

Elena at her farewell dinner at Windy Point

Walking Bees

There are just 3 walking bees left for the year. November 1st and 15th and December 5th.

As you can gather from Elena's contribution, it is a good way to learn about our reserve, while doing something which is really useful. The bonus is that you get to see views like the one below and sometimes meet the locals.

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