THE GECKO

Edition 15
April 2017

Welcome to the April 2017 edition of The Gecko.

Like last quarter, this quarter was dominated by the weather. But instead of fires, we had rain – lots of rain. While good for the plants, it also brought problems – weeds, lots of weeds!

We also received some disturbing results from testing conducted on a Southern Boobook found dead in our bushland. See pages three and four for the results and how you can help their survival in suburbia.

January to March 2017

29 January 2017
The weather forecast for our first group activity of the year was for rain, mainly in the morning. As is the way with the world, it rained between 9am and 10am – the hour we were in the bushland seed collecting.

The rain may have reduced our ability to collect a full range of species, but didn't dampen the enthusiasm of the seven members who came along.

We restricted ourselves to collecting Banksias as they have big seeds and cones that are easy to handle in the wet. When we had examined all of the trees we could find, we looked at previous plantings we had done in the reserve. Given that these seedlings had not received any care or attention at all since being planted, we were pleased to see so many looking healthy.


Seed collecting in the rain.

Due to the rain, morning tea was held under a nearby gazebo (the rain stopped as soon as we moved away from the bushland). While there, a tiger crane fly, *Nephrotoma australasiae*, came to make our acquaintance. It stayed on the balustrade and allowed us all to have a good look and take many, many photographs.


Tiger crane fly, Nephrotoma australasiae.

26 February 2017
Our annual general meeting was attended by six members. The chairperson's report and financial statements were read and all positions were declared vacant.

Electing a new committee was a quick affair with all positions only receiving one nomination and that nominee being elected unopposed. The committee until next year is:
Chairperson – Sian
Vice chairperson – Kade

Secretary – Jelena
Treasurer – Sian

Two ordinary committee members were also elected – Barbara and Sara.

26 March 2017
An early morning shower didn't stop seven volunteers meeting to weed lovegrass. The sky threatened at times, but the rain stayed away and we enjoyed the cool conditions.

Several animals were disturbed as we removed the weeds and we marvelled at the range of cockroaches uncovered. It was agreed that native cockroaches don't elicit the same response as the introduced varieties commonly found in houses.

After 90 minutes of work, conversation and admiring nature we were satisfied that our 19 bags of weeds earned us a break. Thanks go to Jelena and Rosemary for providing morning tea for us.


Some of the team hard at work.

A big THANK YOU goes to Barbara M, Bev, Florian, Jelena, Kade, Megan, Omar, Rosemary, Sian, Stephanie, Tehlia, Ubaydah, Zaid and the City of Canning's Natural Areas Team for helping out in the bushland and with these activities.

Upcoming events

April - weeding
May - weeding
June - weeding or planting depending on the weather.

Details of some activities are yet to be finalised but will be distributed by email and advertised on our website.

Also this quarter

Ronnie and Barbara represented the group at an event held by Perth NRM. At this event we were awarded with a Champions of Living Landscapes Certificate.

This certificate was presented to groups who have participated in all three years of the Community Capacity in NRM survey. The surveys help Perth NRM provide services in the areas needed by groups such as ours.

Ronnie, front row, far right, collects our certificate.

Summer started slowly and our lakes stayed full of water until late December. As the lakes started to dry up through January, we followed the waterline and planted sedges in the mud as the levels dropped.

We did our last planting on January 28 and the following day it started to rain. Nearly 50mm fell and was welcomed as it gave the early January plantings a much needed drink and put a bit of water in the bottom of the lakes.

Then, a little over a week later, it started raining again. This time, though, the rain kept coming with 130mm falling in 3 days – most of it in just one day.

The lakes filled to overflowing with the main lake bursting its banks and flowing onto a path. Everyone agreed that they had not seen the water levels so high before.


The lake has burst its banks.

It took several days, but the lakes did return to their normal winter levels. Unfortunately, many of the sedges remained under water. We have our fingers crossed that they can hold their breath until they either grow to the surface or water levels recede again.


The sedges are planted into a dry lake bed.


Two days later only the tips of the sedges can be seen.

The rain was better news for our other plants as they received a good watering at one of the toughest times of year. Plants that looked like they might not have made it through the summer changed their outlook on life in a matter of days.

However, the rain has germinated thousands of caltrop, *Tribulus terrestris*, seedlings. This is a terrible weed which has spiny seed capsules strong enough to puncture tyres (another common name for this plant is puncture vine). Since the rain, we have found outbreaks of this plant in areas where it was not previously known and in areas where we haven't seen it for many years. Our hope is that we can find and remove all of the seedlings before they can set seed.

Tuesday group
You are welcome to join the Tuesday group on a casual basis or as a regular commitment. This group is currently meeting at 8am every Tuesday. This quarter the Tuesday group has been busy weeding.

Watering group
You can also join our watering group. This group takes bottles of water into the bush and hand waters our seedlings every two weeks (the City of Canning waters on the alternate week).

The watering group is currently meeting on Tuesday mornings at 9am and Wednesday evenings at 5pm. Days and times may change as the plants' needs change and as the sun sets earlier.

Contact Sian at fqpbushland@gmail.com to find out where and when to meet for either of these groups.

Boobooks and mouse poison

In 2015 we were asked to keep our eyes peeled for Southern Boobooks, *Ninox boobook*, dead or alive, as Mike Lohr is researching the reasons for their decline across their range. Mike's study looks at the threats they face including inbreeding, nest hollow loss, the disease toxoplasmosis and poisoning through rodenticides (mouse poison).

In May 2016 Sian found a dead boobook in the bushland near Station Street, East Cannington. Mike was called and collected the bird. Mike was able to determine from the bird's plumage that it was less than one year old. The bird didn't show any external sign of injury or other reason for it being dead.

Back in the lab, Mike dissected the bird and recently had samples tested. The results came back showing that this bird had four different rodenticides in its body. The levels of two of these poisons were so high that they were likely the cause of the bird's death.


Southern Boobook.

So how did the boobook die from mouse poison? First we need to understand how mouse poison works on rodents.

Most mouse poisons consist of an anticoagulant. This stops the blood of the mouse from clotting (it works the same for rats and other rodents, but we'll just refer to mice here). Over a period of days the mouse experiences internal bleeding before it dies from the effects of blood loss.

Southern Boobook.

In general, there are two main types of mouse poison, commonly referred to as 1st generation and 2nd generation rodenticides. The 1st generation poisons require the mouse to take several meals of the bait before it receives a lethal dose. The 2nd generation, and most readily available, poisons only require the mouse to have one meal for a lethal dose.

In reality, though, as it takes a few days to die, the mouse will take several meals from the 2nd generation poison. This leads to it having several times the lethal dose in its system. If it is then eaten by another animal, like a boobook, that poison is transferred to the second animal.

This way the boobook gets a dose of poison far in excess of that necessary to kill a mouse. If the boobook eats several mice that have each eaten rodenticide, it quickly accumulates poison at levels high enough to kill itself. This is how our boobook would have gained four different rodenticides in its body – through eating several mice, each of which had probably eaten a different type of bait (though some baits have two poisons in them).

With the 1st generation rodenticides, because it takes several meals to consume a lethal dose, the mouse will usually have lower levels of the poison in its system when it is eaten. These poisons are also more quickly eliminated from the body and are weaker to begin with. Therefore the boobook, and any other rodent predator, will receive a much lower dose and have a better chance of surviving.

To help reduce the incidence of secondary poisoning, look for products with warfarin or coumatetralyl as the active ingredients. A quick check of a major hardware chain revealed a few products containing the 1st generation rodenticides were available, but they were vastly outnumbered by the 2nd generation poisons. You need to read the labels as some brands use different ingredients in different products. Or go the old fashioned way and use a trap.

Mike is still collecting dead boobooks so, if you find one, seal it in a plastic bag and pop it in the freezer. Make a note of when and where you found it (GPS points from Google Maps is fine) and contact Mike on 0407 147 901 or m.lohr@ecu.edu.au to arrange collection. You can also follow Mike's study on facebook - https://www.facebook.com/groups/boobooksWA/ .

Many thanks go to Mike for his assistance in preparing this story.