



April 2014

## Alice Springs Field Naturalists Club Newsletter



Mount Sonder – Larapinta Trail #9. Photo by Rosalie Breen.

**Meetings are held on the second Wednesday of each month** (except December & January) at 7:00 PM at Higher Education Building at Charles Darwin University. Visitors are welcome.

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## NEXT NEWSLETTER

The deadline for the next newsletter is **Friday 25 April 2014**.  
Please send your contributions to the club email [contact@alicefieldnaturalists.org.au](mailto:contact@alicefieldnaturalists.org.au)  
Please send photos and text separately.

### ALICE SPRINGS FIELD NATURALISTS CLUB

- Wed 9 April Meeting** 7.00pm at Charles Darwin University Higher Education Building lecture theatre. Steven Priestley, Nursery manager at Alice Springs Desert Park on "Sand Country Wildflowers at the Desert Park"
- Fri-Sun 25-27 April Newhaven Reserve.** High Clearance 4 wheel drive desirable. Up to 750km return travel plus travel on Reserve could be another 250km. Fuel available at Tilmouth Well. This will be a limited numbers trip so important that you email Barb Gilfedder [bjfedders@gmail.com](mailto:bjfedders@gmail.com)
- Sat-Mon 3-5 May Henbury Station –** High clearance 4WD essential. Allow for 350km total, visiting Duck Swamp, Snake Hole and Weener Spring. This will be a limited numbers trip so important that you email Barb Gilfedder [bjfedders@gmail.com](mailto:bjfedders@gmail.com)
- Wed 14 May Meeting** 7.00pm at Charles Darwin University Higher Education Building lecture theatre. Speaker to be confirmed. Suggestions welcome.

### BIRDLIFE CENTRAL AUSTRALIA

Contact: [birdlifeca@gmail.com](mailto:birdlifeca@gmail.com)

- Thurs 10 Apr Farewell the Waders** 7:00 am. Join us before work for an excursion at the Alice Sewage Ponds to farewell the waders as they begin their journey back to the Northern hemisphere.
- Weds 23 Apr Meeting** 7:30pm at the Alice Springs Desert Park meeting room. Speaker: Pamela Keil on the use of wetlands in Central Australia by migratory waders.
- Weds 30 Apr Inaugural AGM.** 7:30pm at the Alice Springs Desert Park meeting room. Join us for our first AGM as we form our first committee. Contact us for more information or if you are interested in getting involved: [birdlifeca@gmail.com](mailto:birdlifeca@gmail.com)

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Please delete the xxx when emailing – their placement is an attempt to stop some spam emails.

# Mast Seeding and the Fire Ecology of Mulga (*Acacia aptaneura*)

Boyd Wright on 11 March; Report by Lee Ryall and photos by Boyd Wright

Boyd gave a fascinating talk on this subject, and started by explaining that 'masting' is the process whereby certain species of plant synchronize seed crops among populations at intermittent intervals. Many types of plants apparently do this - including certain types of bamboo, snow grasses (*Chionochloa* spp.) from New Zealand, European Beech and *Quercus* spp. (acorn) trees in the northern hemisphere, and many species of *Triodia* in central Australia. Some plants, such as the bamboo species *Phyllostachys bambusoides*, mast at intervals of up to 120 years, and are believed to have an internal calendar that dictates the seeding event. These bamboos die after seeding, and hence are termed 'semelparous' (flowering only once in their life-cycle). However, most other masting plants seed numerous times during their life cycle (iteroparous), and seed at shorter intervals. These plants generally rely on weather cues such as favourable growing season temperatures or high rainfall to initiate and synchronize mast events.



Mulga in Flower

There are several hypotheses about why plants mast, but the main one relates to predator satiation. This hypothesis goes something like this - during inter-mast intervals there are lean years when predators cannot rely on seeds as a food source, and as a result, population numbers of these animals are kept low for much of the time. However, when seeds do abound following a mast event, there are so many seeds that enough are able to escape predation to germinate and propagate the plant species. A specialized form of masting that Boyd also mentioned is environmentally predictive masting (EPM). This form of masting occurs in environments where seedling establishment conditions are favourable only in certain years, and plants satiate seed predators with mast seed crops in these years. This form of masting is most common in fire-prone habitats, where seedling conditions are favourable after fire due to low competition from fire-killed parent plants, improved light at the soil surface, and increased soil nutrients following ash addition to the soil. Examples of fire-related forms of EPM include post-fire flowering (which occurs in grass trees - Xanthorrhoeaceae) and pyrescent serotiny (in *Eucalyptus delegatensis*).

## Mulga Masting



Boyd then discussed his research on *Acacia aptaneura* (the quick growing mulga variety with needle like phyllodes). This mulga species is a masting plant that produces very little seed in normal years, but after high rainfall periods is likely to produce seed in abundance. This raises seed numbers in the soil seedbank from almost nil during inter-mast periods, to between two and three thousand seeds per square metre in upper soil levels after masting. This means

that after predators- such as birds, rodents and especially ants- have eaten their fill, there are sufficient seeds available for seedlings to establish. However, the story is not quite that simple. Boyd's research also showed that mulga mast years only have strong impacts on seedling recruitment when they are synchronized with the occurrence of fire. This is because mulga seeds require heat for germination (with fires causing optimal levels of soil heating to induce germination of seeds), and because post-fire environments offer the previously mentioned advantages for establishing seedlings.



**Young Mulga sprouting after fire**

Boyd then put forward the idea that masting in mulga is a fire-related form of environmentally predictive masting, whereby seeding events are timed to coincide with periods of high fire likelihood. He explained that this seeding phenology might have been selected for over evolutionary time due to the natural link between high rainfall and fire that exists in arid Australia. As he explained it, selection processes in Australian deserts would have favoured mulga individuals that only produced large seed crops after exceptional rain years, as these plants would have been the ones most likely to satiate seed predators when fires occurred after high rainfall years. Hence, as mulga is fire-sensitive, these individuals would have been the ones to have a few extra seeds around to regenerate from after fires, and these would have been the ones most likely to pass on their genes through post-fire recruits. In contrast, mulga

plants that didn't seed 'in synch' with rain-driven fire cycles would have been knocked out over evolutionary time, as these individuals would have had little seed to recover from after fires.

Knowing very little about masting or mulga reproduction at the beginning of the night, I found Boyd's talk quite absorbing. From now on I will regard mulga with a new respect. Thanks Boyd for talking to us.

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## **The Mystery of the Pink Ribbons Solved by Rosalie Breen**

Towards the end of last year while walking along the Stuart Walk in the Telegraph Station Reserve, I noticed some Mulgas with pink ribbons tied to them but off into the bush. Pink ribbons are often used as a guide for running or mountain bike race guides, but don't go off the track. So I followed this little challenge, often pushing through the trees and ended up at the base of the hills in Spencer valley. Why, what for? It was a mystery.

Recently I received a Report "Telegraph Station Mountain Bike Track Investigation" dated Nov 2013. The maps given showed proposed realignments of existing tracks following the pink ribbon trail. Then a couple of weeks later there was a group of people working with mattocks and shovels along the pink ribbon trail.

Parks and Wildlife are endeavoring to make reserves more inviting for the public. Walking and Mountain Bike activities are one goal. The pink ribbon trail was for marking the survey lines for the deviations following contours, which will make it easier and have less impact on the environment to minimize erosion. A group from Tasmania, very experienced in track construction, has come to work and supervise the new tracks and upgrade some of the existing ones. The plan is to have a shared path for walkers and bikes as a round trip from Eastside right up to Wigleys.

I suppose it will be a good thing...

## Ormiston Gorge – Friday 28 Feb – Saturday 1 March – photos by Rosalie Breen

### Rhondda Tomlinson

Rosalie, Gavin, Connie and Rhondda camped the night at Ormiston Gorge. Up at 6:00am and by 6:30am we were headed off to intersect with the stage 9 Larapinta Trail.

Rosalie did find a box which we diagnosed as being a car count meter once a strip was stretched across the road. In this report I shall leave the plants to Connie and Rosalie, not sure what I am leaving to Gavin.

Even though we had all been many times to Ormiston we were reminded of the beauty of this area and it was reassuring that we were being kept under surveillance by Mt. Sonder. Both Rosalie and I took lots of photos of the sunrise and views of Mt. Sonder framed by the hills of the trail. At times the mountain did duck out of sight only to reappear more frequently the further away we walked.

The morning was starting to warm up and only after a couple of hours we turned back to retrace our steps and appreciate the scenery that was happening behind us. We stopped for a short while in the river bed where there were several large pools of water. Rosalie call out “Letter box”, I was thinking the heat had gotten to her but there high up in a tree was a nesting box. Not sure if the box was in use but the location was picturesque with the river gums, partially dry river bed and the reflection pools at the base of the trees.

Thank you Connie, it was a perfect morning. A bit of a shame that others were not there to enjoy as well.



Mt Sonder – photo by Rhondda Tomlinson



### Connie Spencer

Here is a surprise for everyone! I’m not going to mention the plants or the scenery that were seen on our camp, early morning walk and swim at Ormiston Gorge!

Whilst sitting on the rocks at the edge of the waterhole after a very refreshing swim a large fly settled on me. The term “March Fly” was mentioned and Gavin with his typical dry sense of humour pointed out that it was March! I swiped it away quickly so I didn’t examine in great detail but I remembered a talk that Stuart Traynor gave some years ago where he said that the term “March Fly” was confusing in Australia and not much to do with the month of March and is probably a hangover from our English ancestry.

“March flies” in Australia are in the Tabanidae family (biting flies) whereas “March flies” in other English-speaking countries are in the Bibionidae family (non-biting flies). They both occur in warm weather and start to appear around March in the Northern Hemisphere whereas in Australia March is getting towards the end of the warm weather.

Horse fly is the most widely used English common name for members of the Tabanidae family but common names aside – within Australia biting flies (other than mosquitoes) do not transmit diseases to humans but they are renowned for painful bites and annoying habits during the summer months in general. March flies only live 3-4 weeks and it is only the females that seek blood meals; males feed on nectar and plant juices. They are abundant in moist forests and woodlands and can be annoying particularly near water.

## Rosalie Breen

When walking on the Larapinta trail you need to watch where you put your feet. There are a couple of advantages to this. 1- You need to stop, to take in the view or review the trail, therefore necessitating a rest. 2- You get a good idea of the rocks you are walking over. In this case, first we rock hopped across the river (no water) where there's a wonderful assortment of rocks washed down, polished and with beautiful colours and patterns. When we started to climb it was quartzite paths, though at one spot tortured and much folded schist rock was exposed. Further along as the track progressed we were walking on limestone or dolomite – more beautiful colours and patterns. The dolomite rock forms, massive vertical walls on the north side, some like weathered Inca walls.

Or maybe they are the Walls of Jericho waiting for us to trumpet past. There were two sets one behind the other in two different red hues. These were originally silt laid down under water, hardened with time and pressure of overlying deposits, then folding, uplifting and erosion of surrounding soils left the beds vertical and isolated. These formations can be seen each side of Larapinta Drive especially around Ellery.



Ormiston has had good rains, so the waterhole was quite full, biggest I've seen, and extended right across the river bed. Ghost Gum walk and Pound walk were closed for round walks. It was picture postcard perfect. Good for a swim and cool down. Beside the path to the waterhole which once had been planted, was a show of native herbs and grasses including a couple of healthy clumps of Comelina, blue flowers among lush deep green leaves. On the Larapinta 9 track which we walked, most flowers had passed their prime but close to the river a species of Twinleaf was prevalent looking very happy, large and bright green leaves. An army of bloodwoods could be seen marching up and down the mainly grassed hills to the south of the track. The walk crossed many gullies, often shady with mallees and exotically perfumed with the Jasmine flowering.

The kiosk is open for business. Their coffee is advertised as best between Alice Springs and Glen Helen! A family lives in the Rangers house and is the camp managers. The oldest of the three little boys told me he was one of the management team. Second one could get a job chatting to and informing visitors. Number three was only six weeks so limited in his contribution. We had a very relaxed trip, evening camping was quiet. The toilets at night with its light were a smorgasbord of insects, and you needed to check before sitting down for little red tree frogs. It being still hot during the day a walk starting at 6 o'clock in the morning caught the morning light and the cool part of the day. Can recommend a visit there, day or overnight.

Gavan's comment was, Good walk, but we were well warmed up after three hours of it. That beautiful waterhole in the gorge was just what we needed.



## Another Echidna point (see last month's newsletter) – Report by Rosalie Breen

On the recent Spencer Hill challenge climb I was thrilled to almost step on the droppings of an echidna. Almost, because I did not destroy the long tube of the scat, and that I actually found evidence of an echidna living so close to town and in one of my favourite places. The scat was quite fresh more brown colour, a few days later it was grey. The shiny remains of ants and probably beetles were easily visible.

Another new thing in the area is a notice mounted at Telegraph station entrances about dingoes, to warn people of their presence and how to behave if you meet one:



**Editors note:** If you want to know more about Dingos and would like to meet the young Dingos at Desert Park, make sure you head out to the Park for the new Dingo presentation. Their new enclosure is currently being built, but the Dingos are on display in the cinema every afternoon starting at 1:30 (doors close once the show starts so make sure you arrive early enough to get through the gate and don't forget your Territorian Pass).

**ALICE SPRINGS FIELD NATURALISTS CLUB INCORPORATED**  
**Minutes of the general meeting at Higher Education Building**  
**Charles Darwin University – Wednesday 12 March 2014**

Following a presentation by Boyd Wright on *Fire cycles and rainfall affecting arid Australian plants*  
Thanks to Lee Ryall for note taking and Wendy and Ian Mann for supper

**Meeting opened** at 8:30pm

**Present** as per attendance book - 30 members and visitors and 6 apologies.

**Previous minutes** accepted by the meeting.

**Correspondence In/Out**

- Email to Jackson Ankers at CDU telling him computer and projector worked well. Air conditioning switch did not work.
- Letter of support for Community Geographic Domain website sent to Joy Taylor as agreed to at the February meeting.
- New email contact address sent to Patricia Rademaker, Alice Springs Town Council for their records.
- Also new email contact address to Susie Pendle, Parks and Wildlife Communications Officer.
- Received emails from Joe Schofield at Newhaven, and Paul and Lesley Hartwig of Henbury. Plans for trips to these locations on consecutive long weekends 25-27 April and 3-5 May can go ahead. Both limited vehicle numbers. Email Barb to express your interest.
- At Rosalie's suggestion. Barb sent a birthday card to Jose Petrick for her 90<sup>th</sup> birthday. Received a lovely thank you email back from her.
- Thank you card to Jenny Purdie, last month's speaker.
- Received February & March 2014 newsletters from The Western Australian Naturalists' Club Inc.
- Received correspondence regarding the *Australian Natural History Medallion* for 2014. ASFNC nominated Peter Latz last year and although we were not successful in 2013 the nomination stands for three years.
- Invoice from Austcover for Public Liability Insurance received. Meeting approved payment of \$380.
- Invoice from Australia Post for post office box rental - \$107. Lee questioned the amount. Jill to look into before paying.

**Treasurer's Report**

Balance as 31 January 2014	\$3,771.90
Plus deposits to 28 February 2014	<u>15.00</u>
	\$3,786.90
Less expenditure to 28 February 2014	<u>90.00</u>
	\$3,696.90
Plus petty cash	<u>8.20</u>
Balance 12 March 2014	<u>\$3,705.10</u>

**General Business**

- Lecture theatre booked for 24 June for an extra meeting with Brian Timms talk.
- Connie will deliver a hanging basket of parakeelya to Ray Prunty of Standley Chasm on Thurs 13 March 2014 as a thank you for end-of year breakfast.
- Send newsletter contributions this month to Pam Keil, not Barb.
- Thank you to Connie for being secretary whilst Cecily is away.
- Congratulations to Cec and Dave Sutton on the birth of their twin grandsons.

**Past Trips:**

- Intertexta Forest – Connie reported that 6 members wandered through the forest followed by breakfast on the edge of a claypan. Most interesting was the overwhelming perfume of the flowering Native jasmine and a flowering Mulga bean climber.
- Ormiston overnight – Connie reported that there were only 4 members for this excursion. It included a good 6 km walk followed by a refreshing swim.
- Spencer Hill – Rosalie leader. Only 3 members for this early morning walk. Echidna scats found.

**Future Trips**

- Sun 23 March – Native Gap and Aileron pub for lunch. Essential you contact Connie if intending to participate.

**Next meeting Wed April 9** – Steven Priestley talking about Desert Park sand country wild flowers.

**Scribe** - No volunteers at this time. **Supper** - Connie