



October 2018

## Alice Springs Field Naturalists Club Newsletter



*Interesting rock formations at Tower Rock in Mac and Rose Chalmers Conservation Reserve catch the beautiful early morning light.*

*Read more about the Tower Rock trip on page 3.*

*Photo: Neil Woolcock.*

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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## NEWSLETTER

The next newsletter will be November 2018.

The deadline for the next newsletter will be 23 October 2018

Please send your contributions to Barb Gilfedder - [bifedders@gmail.com](mailto:bifedders@gmail.com)

### ALICE SPRINGS FIELD NATURALISTS CLUB



**Wednesday 10 October - General Meeting** at the lecture theatre in CDU higher education building at 7.00pm. **Kate Crossing** will give the presentation titled. **"Kiwirrkura Indigenous Protected Area Bilby management program and indigenous Bilby management across the central desert region."**



**Wednesday 14 November – General Meeting** at the lecture theatre in CDU higher education building at 7.00pm. **Jayne Brim Box**, Senior Scientist with the Department of Environment and Natural Resources has recently been working on areas along the Finke River, particularly Running Waters. She will give a presentation titled, **"Recent work at Running Waters and lessons learned for the broader Finke River."**



**Saturday 17 November, 10.00am.** **"What happens to all those plant specimens?" Visit the Alice Springs Herbarium with Peter Jobson to find out.** Turn left onto the service road just before the Alice Springs Desert Park car park. The herbarium is the building on the right just before the gate.

### AUSTRALIAN PLANTS SOCIETY ALICE SPRINGS

Contact: [apsalicesprings@yahoo.com.au](mailto:apsalicesprings@yahoo.com.au)

Wednesday 3 October 2018 at 7.30pm, **Karlee Foster** will presenting **"Flora of the Larapinta Trail"**. This will be held at Olive Pink Botanic Garden, outdoors near the gazebo with excellent AV equipment and a large screen. All welcome.

### ALICE SPRINGS FIELD NATURALISTS CLUB COMMITTEE

<b>President</b>	Barbara Gilfedder	8955 5452	<b>Treasurer</b>	Neil Woolcock	8955 1021
<b>Vice-President</b>	Lee Ryall	0417 401 237	<b>Property Officer</b>	Rosalie Breen	8952 3409
<b>Secretary</b>	Anne Pye	0438 388 012	<b>Public Officer</b>	Anne Pye	0438 388 012

**Committee Members:** Robyn Grey-Gardner 8952 2207, Margaret Friedel 0417 849 743, Simon Brown 0429 359 593

**Some other Club Responsibilities:** Newsletter - Barbara Gilfedder, Minutes Secretary - Connie Spencer, Facebook organiser - Colleen O'Malley, Website - Pamela Keil and Robyn Grey-Gardner

## Radios for convoy driving

Driving in convoy can be very difficult in the centre, especially on dirt roads when lots of dust is thrown up. I always stress in these situations that it is important to stop regularly, if possible at the end of a longish straight or on a rise, and check that the vehicle behind you is still there. If they don't come into view it is necessary to turn around and check where they are. They may have a problem! This action should progress up the line of vehicles to the leader, each driver being responsible for the vehicle following them.

It can be extremely useful to have a UHV radio, to keep in contact over short distances, which often needs to be line-of-sight. Many 4WD's have them fitted in the vehicle with a good antenna. Failing this a handheld radio can be a good substitute. It has been suggested that the club purchase some but the last meeting decided that it would be better if individuals had their own. Simon Brown researched what is available. To be any use, he recommends a minimum of 5W.

TJM quoted:

- (1) **GME 5W Handheld with car charger \$249**
- (2) **GME 5W Handheld with extras pack (belt clip, A.C. Charger, hand-mic etc.) \$319** (probably what I would purchase)
- (3) **2Pack GME 5W Handheld \$519**, probably no extra accessories included? (Not a regular shelf item, but happy to order)

Jim Lawrence also tells me that an external antenna is available for handheld radios. It attaches to the outside of the vehicle and is connected to the radio by a very thin wire that passes around the vehicle window. This would extend the range considerably.



## Learning to like lichens and liverworts

A talk presented and paraphrased by Colleen O'Malley

### So how alike are lichens and liverworts?

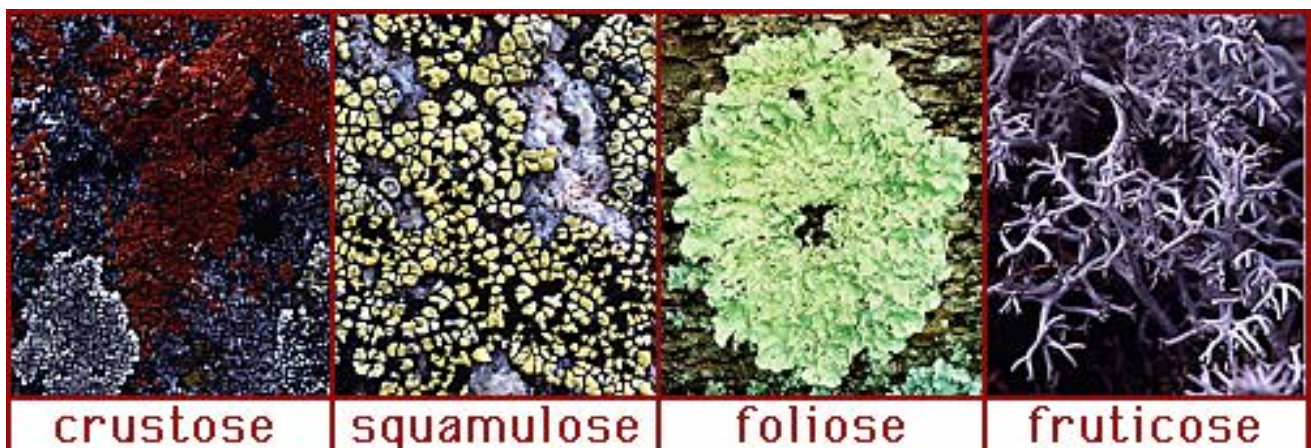
- Liverworts are in the Marchantiophyta division of the bryophyte group (non-vascular, spore producing, non-flowering plants) within the plant kingdom
- Lichens are not part of the plant kingdom at all. They are a symbiotic mix of a fungus (which provides the structure and absorbs nutrients) and an alga or cyanobacterium (which photosynthesise to provide nutrients)
- Both reproduce either vegetatively or sexually
- Both have cryptobiotic species: easily overlooked, but essential parts of most functioning ecosystems around the world



- There are over 28,000 lichen species worldwide compared to 7,000 species of liverworts. Australia hosts over 3,500 lichen species, and 850 liverwort species – with desert regions having well over 70 lichen or liverwort species
- Both lichens and liverworts are early colonisers of environments – eg first to establish after volcanic eruptions, fires or floods
- Lichens can fix atmospheric nitrogen and absorb mineral nutrients, making them an important source of food for animals in some environments – e.g. the Arctic – think caribou or reindeer.

### Life forms and reproduction

- There are four structurally different groups of lichens: crustose, squamulose, foliose and fruticose. These groups differ in appearance as well as in the way the fungal partner overlays or encases the algal component.





- Liverworts can be differentiated into two distinct groups: leafy liverworts (resembling mosses) or thallose liverworts (typically with flattened lobes). In Central Australia we mainly see the thallose types – and these are also the type seen around well-watered nursery areas (this is a weedy liverwort species).



- Both lichens and liverworts can reproduce asexually – often by fragmentation (a bit breaking off from the parent and going on to form another colony or plant) or by specialised structures – in lichens called *insidia* or *soredia* (see image below left) or in liverworts called *gemmae cups* (see image below right). This method essentially produces clones of the parent organism.



- Sexual reproduction in both lichens and liverworts involves production of spore in specialised spore-forming bodies (apothecium, perithecium or pycnidium in lichens) or sporophytes in liverworts (see images below).



- The fundamental difference is that in lichens sexual reproduction results in spores, which derive from the fungal partner only, so this form of reproduction does not lead to production of a new lichen colony, only of the fungus that forms part of the lichen structure.



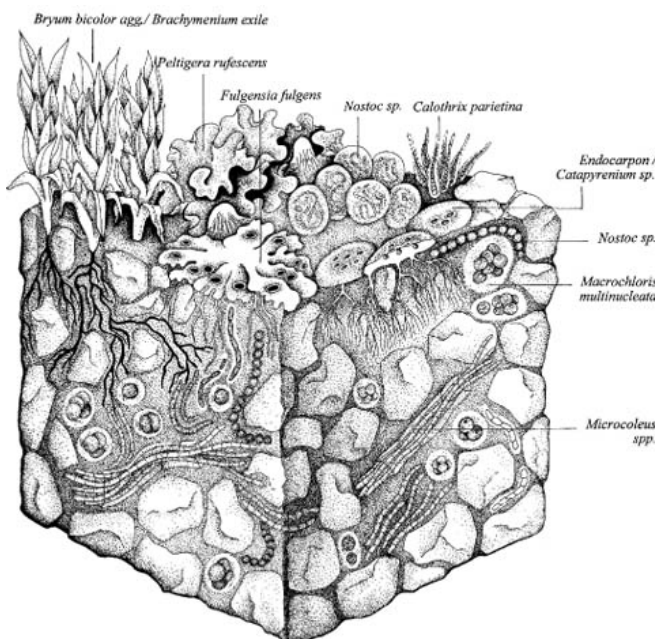
## Longevity and role as environmental sentinels

- The oldest fossil lichen is Early Devonian (about 400 million years old) from near Aberdeen, Scotland, and recently (in the last decade) fossilized liverwort spores were found in Argentina, dating to around 470 million years ago, making liverworts the most ancient of the land plants.
- Lichens can be very long lived – an arctic specimen of *Rhisocarpon geographicum* was found to be about 9000 years old!
- During the industrial revolution (1700s) lichens had all but disappeared from parts of Europe, after careful research it was found that a build-up of sulphur dioxide (from burning coal in industrial processes and to heat homes) in the atmosphere was the cause.
- Lichens are also sensitive to increased nitrogen levels (eg. nitrous oxide from vehicle exhaust etc. and ammonia gases from agricultural emissions), and they are now widely used as a bioindicator for declining air quality worldwide – with foliose and fruticose types being more sensitive than crustose types.



## Lichens and liverworts play a critical role in soil crusts in arid areas

- In healthy arid and semi-arid regions around the world liverworts, lichens, mosses and algae grow together and form a crust on the surface of soils
- This soil crust plays an important role in stabilising soils, aiding filtration of rain water, and adding nutrients to otherwise nutrient-poor soils
- Trampling of soil by cows and camels, proliferation of vehicle tracks and severe wildfires can destroy the soil crust leading to widespread erosion and dust storms





The images below show just a small selection of the liverwort (top row) and lichen species (bottom row) that you can find around the Alice Springs region (note I have not attempted to identify species, as I am still learning myself and so don't want to lead anyone astray!




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### Two interesting Insects from Bob Read



**Praying Mantis** - While going through old images I found a nice shot of a Praying Mantis taken on a walk at Hamilton Downs in 2007. I uploaded it to the Bowerbird website (<http://www.bowerbird.org.au/>) and someone was able to identify it as *Trachymantis obesa*. This appears to be the first image of a living specimen of this species in the public domain. I wonder how many images Field Nats have in their files that could usefully be uploaded to Bowerbird.



**Cricket** - This odd looking Cricket was scuttling away from a control burn near the Murray Downs Road. I posted the image on Bowerbird where it was identified as in the genus *Myara*, family Gryllidae. This specimen is a nymph, the adults are fully-winged. The ALA has no records of this genus in the NT, but I suspect that it may be quite common, just hard to find. According to Otte (1983) "Members of the genus ... *Myara* inhabit mainly tree trunks in Mallee scrub, Mulga scrub and savannah woodland where they hide under bark in the daytime. Males sing either during the day or at night." This may be one of the species we often hear calling at night, as on the recent trip to Newhaven.

#### REFERENCE

Otte, D. & Alexander, R.D., 1983. THE AUSTRALIAN CRICKETS (ORTHOPTERA: GRYLLIDAE). Academy of Natural Sciences of Philadelphia Monograph 22. Online at [https://books.google.com.au/books?id=Pkv0RnAM6WUC&pg=PA258&source=gbs\\_toc\\_r&cad=3#v=onepage&q&f=false](https://books.google.com.au/books?id=Pkv0RnAM6WUC&pg=PA258&source=gbs_toc_r&cad=3#v=onepage&q&f=false)



## Tower Rock trip - September 14 - 16

By Neil Woolcock - Photos by Neil, Connie and Marg Friedel

Tower Rock is in the Mac and Rose Chalmers Conservation Reserve, about 315km north east of Alice Springs, north up the Binns Track off the Plenty Highway, 20km past Harts Range.

We had a nice, mixed group of enthusiastic adventurers come along. Neil (with guest Bob Cooper) met up with Connie Spencer and Marg Friedel at the Sargent Street corner at 9:30am on Friday, then headed north up the Stuart Highway to the Plenty Highway turnoff. From there we headed to Gemtree for a fuel top-up. Gemtree now has the re-constructed old Mt.Riddock timber homestead in its grounds. It's worth a look, particularly the information panels inside which show a lot of interesting information about the nearby stations and homesteads and the people who pioneered the area.

Heading further east we reached Atitjere and stopped for lunch at a gazebo on the road leading into the community. This gazebo has several information boards giving a good insight into the extensive mica mining that was carried out in this region from the 1890's up until the 1960's. Mica became important during the war as an ideal material for electrical insulation.

After lunch it was a short 20km drive to the Tower Rock turn-off. We stopped in the dry bed of the Plenty River, admiring a beautiful River Red Gum, before continuing on to Box Hole crater, where Anne Pye and Jill Brew caught up with us. With an expanded group we walked around the crater rim. Connie spotted a Capparis, later identified as *C. lasiantha*, with lovely small white flowers. This creeper was quite abundant, climbing up many of the bushes around the crater. An interesting mistletoe and a pretty *Calotis kempei* were also in flower.

We left the crater and doubled back about 9km to the turn-off to Tower Rock. A store run by MacDonal Homestead on Mt. Swan station had a sign up advertising beds, fuel and drinks so we decided to head there and see what it was like. There were some German back-packers looking after the place and none seemed to know much about it, but it was interesting to see and a good place to buy an ice-cream before the final leg into Tower Rock.

A sketch given out by Gemtree only shows one way in and this is the way we went. The Mac and Rose Chalmers Conservation Reserve information bulletin (probably over 10 years since it was updated) shows roads going in a loop but we weren't sure the right hand access road, which goes past MacDonal Downs station, was still open (I can confirm that it is, and it is apparently in better condition than the left road).

Up until this point the road would have been quite suitable for 2WD cars, but this track up to Tower Rock had long stretches of deep and soft bulldust, and I was glad to be able to use 4WD. Coming out a few days later we passed a carload of aborigines who seemed at ease tackling the track in a Ford Falcon. Finally we reached the Tower Rock Reserve and were quite blown away by the extensive rock formations as we drove in. We passed a campsite with a mum and lots of kids, plus some 'open air' long drop toilets, and headed on to see what campsite options were around. We found some nice, sheltered sites right beside the rocky hills and set up camp about 5:00pm. As some of us had suspected, the mum was Leanne Johnson and her 5 children. She'd headed up independently and made good time to get there and start setting up before the rest of us arrived. I guess she got the jump on us when we were exploring Box Hole crater. Leanne decided to move her camp to a spot nearer to the rest of us.







The sun began to set on a slightly weary but enthusiastic bunch of campers. Connie was deputised by the trip leader to get up early the next morning and take sunrise photos for the newsletter, but the leader was not surprised to find on Saturday morning that this had not happened, so he had to do that job himself. Connie was not repentant.



Saturday morning was still and sunny and perfect for a walk to the cairn on the top of Tower Rock. As we got near the top we spotted a dust cloud rapidly approaching and correctly identified it as Jim and Marg Lawrence. They caught up with us at the cairn, and the group was now complete.

The weather forecast had predicted wind on Saturday, and about 10:30am we noticed dust right across the southern horizon, so finished taking our photos and began our descent. When the wind and dust arrived it wasn't too bad, but did give the sky a whitish hue, which wasn't so good for photography.

At the base of the Tower Rock climb is the grave site of Mac and Rose Chalmers. A wonderful epitaph had been placed there by their daughter.



Everyone relaxed around the campsite for the next few hours.

A walk was planned for 4:00pm to go around to the west side of Tower Rock and get some sundown photos. We all headed down a track past the gravesite again. The fearless leader directed the ladies to turn north, but rebellion surfaced and the leader was once again ignored as the group continued on down the track. Jim and I were forced to tag humbly along behind. Eventually the group turned around, and re-asserting my control I stated that I was now definitely heading along the west side of Tower Rock to get some sunset photos.

With some grumbling and comments that they would only go a short way the ladies came along.



The scenery on the west side is as expected equally as rugged and beautiful as the east side and the group began to take more of an interest. Again the leader's control was lost as it became clear that once on a course these ladies cannot be swayed and so we finished up going right around the rocky peak to get back to the campsite, rather than just walking in a short way and then returning to camp. This circle walk is well worth doing. The 'track' is quite clear as there are metal markers with painted yellow tops showing the best route to take.

We all made it back to camp about 5:30pm in good time to have some drinks and nibbles before preparing dinner.



After a windy night, Anne and Jill, Jim and Marg and Leanne and family headed off on the homeward journey. The Lawrences and Leanne decided to take the north road past MacDonald Downs station, and later reported that it was in much better condition than the south track that we had all come in by. Connie, Marg, Bob and I did one last walk along the east side of Tower Rock, looking at what is quite a large diversity of grasses and other plants that were doing well despite the lack of rain. As Connie pointed out, what a difference it makes when cattle are excluded from an area.

We all finally headed off late morning, stopping at another version of Tower Rock on the way. This has been erected on a hill of chert rock – very sharp to walk on but quite beautiful. Then off on the leg back to Gemtree and Alice Springs.

Photos: Page 7 from the top - Boxhole crater; *Capparis lasiantha*; *Calotis kempeji*; MacDonald Downs station store, Mount Swan homestead; granite weathering. Page 8 from the top – the cairn at the top of Tower Rock; epitaph at the grave; puzzling over the track arrows; Anne at a massive split rock; Another version of Tower Rock.



## Tower Rock geology by Anne Pye

According to the Thompson Guide to the Geology of Central Australia, Boxhole Crater, which we visited en route to Tower Rock, is a single crater of about 200m diameter which is considered to be part of the same meteorite shower which created the craters at Henbury - because of its similarity and also because the composition of the iron meteorite fragments found there match those found at Henbury.

Tower Rock would have been formed similarly to the Devils Marbles where the scenic rounded boulders are residual corestones of (Mt Swan?) granite. Moisture enters joints in the granite and the weathering converts and washes away the adjacent minerals over time removing the support for the corestones, which can collapse or become perched in apparently unstable positions. The jointing appeared more horizontal and alternatively more vertical in different areas of the Tower Rock complex.

### ...and this from Jose Petrick

I have written the hard pioneering stories of the Chalmers family and the Coppock family in my book *The History of Alice Springs through Landmarks and Street Names*. The Chalmers story is under Chalmers Street, Chalmers Park and Cora Crescent, in the Gillen suburb.

The street and park were named after C.O Chalmers. Cora Crescent was named after C.O's wife, Cora. Mac was 9 years old, his older sister Jean was 11, and rode with the 400 sheep from Glen Innes on the Queensland/NSW border across the top of the Simpson Desert to the land in Central Australia, CO named MacDonalD Downs after his two young sons. The two younger siblings Jessie, four years and Donald aged two rode in a covered wagon with their mother, Cora.

I came up to MacDonalD Downs in 1951 to be governess to two of Mac and Rose's children, Heather, (later Mrs Goldsworthy of Bushy Park), was Grade 2 and Cameron, (later of Gem Tree Caravan Park) Grade 1. Tower Rock was a favourite picnic spot. Rose would make an egg and bacon tart and a fruit cake to take with us.

re Newhaven.

I wrote the Coppock story under Gilbeanie Court, the pet names for Bert and Jim's parents. Gilbeanie was the name Bert and Jim chose for their station near TiTree. Later when Coppock Court was named I wrote refer Gilbeanie Court, Larapinta.

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## Walking on the Westside - Saturday 8 September 2018

By Connie Spencer

Seven Field Naturalists joined me for a walk in the hills on the westside of town starting from the very end of Smith Street, beyond the old abattoir. We first crossed the railway line onto a dry dusty 4WD/motorbike track then turned off onto the Humpy Mountain Bike Track. There is not much to look at floristically – just too dry but as you leave the Humpy and head up Raby's Ridge Track, the views of the valleys below are worth the climb – so close to town but feels so far .

We then headed down the north side of the ridge, crossed a small watercourse lined with *Eucalyptus camaldulensis* (River Red Gums) and picked up the Bus Track (rather aptly named). Not only is there a rusting body of an old coaster but also, numerous other dead cars in the valley with an assortment of vehicle parts lining the track. The Bus Track winds its way up through a narrow valley and out onto an open area with many quartz outcrops.

At this point there is a rather steep uphill/downhill section. Rosalie and Peter pursued the climb while the rest of us took a breather. We then headed East past some *Evel Knievel* jumps and picked up the West Macs Mountain Bike Track which took us back to our vehicles.

All up distance 5 km, taking 1 hour 20 minutes walking time and 1 hour worth of stops to take in views or do a bit of bird watching.



Photos by Marg Friedel

Quartz outcropping on the ridgetops.

The truth was, "We caught the bus."



## ...and from Jane Bannister

I do remember very vividly the Beefwood, *Grevillea striata*, were the only plants looking healthy and full of life, especially young ones. Otherwise everything looked too dry to even mention. I had never been on these bike tracks before and I was amazed how rough they were, even though Connie said some of them had been upgraded recently, to reach international mountain bike racing standards. I had no idea they cycled on such rough surfaces...rather them than me.

### **BIRDLIST 08.09.18 2 hour survey 0830 – 1030**

Wedge-tailed Eagle, Whistling Kite. Black kite, Rainbow Bee-eater, Nankeen Kestrel, Galah, Australian Ringneck, Striated Pardalote, Western Gerygone, Weebill, Inland Thornbill, Black-faced Cuckoo-shrike and Torresian Crow.

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## Desert Park produces stunning display of wild flowers

The desert park staff always put a lot of knowledge and effort into their wildflower display. This year they seemed brighter and more beautiful than ever, maybe because the dry winter has left most of our surrounding bushland fairly devoid of interesting flowers. A large group of Field Nats wandered through enjoying the sights and discussing flower names. They enjoyed it so much, that a suggestion was made that it become an annual visit.

Below is a selection of stunners.



*Calotis kempei*



*Dodonaea microzya*



*Eremophila goodwinii* subsp. *goodwinii*



*Androcalva loxophylla*



*Grevillea eriostachya*



*Polycalymma stuartii*



*Eremophila prostrata*



*Ptilotus polystachyus*



*Brunonia australis*





**ALICE SPRINGS FIELD NATURALISTS CLUB INCORPORATED**  
**Minutes of the general meeting held at the Higher Education Building**  
**Charles Darwin University – Wednesday 12 September 2018**

**Open:** The Vice President, Lee Ryall, opened the monthly meeting at 8:30pm following a presentation on *Lichens and Liverworts* by Colleen O'Malley. Thank you to Colleen and thank you to Margaret Friedel for supper.

**Present:** 16 members, 1 visitor and 8 apologies as per attendance book.

**Minutes:** The Minutes of the August 2018 general meeting as printed in the newsletter were accepted by the meeting.

**Business Arising:**

- Website: Barb Gilfedder queried Robyn Grey-Gardner on the possibility of an index for past newsletters and would this be of use to anyone other than herself. After much discussion amongst members, Robyn suggested she do a "mock up" to present to the next meeting.

**Treasurer's Report:**

Balance of all funds (including petty cash) end of July 2018	\$1629.34
<b>Income for August 2018</b>	
Membership	545.00
Lisa Nunn bird brochure loan repayment	878.00
Interest	.22

**Expenses for July 2018**

Nil	
(Petty Cash	\$1.85)

**Total of all funds (including petty cash) end August 2018** **\$3,052.56**

The meeting accepted the Treasurer's report.

**Correspondence:**

- Phone call from Andrew Skeoch from Listening Earth. He produces recordings of natural soundscapes / acoustic ecology [www.listeningearth.com](http://www.listeningearth.com). He was keen to give us a talk. However, he had to return home to Victoria. He had very little success in recordings but, will return and follow up with us another year.
- Barb contacted insurance supplier re dates for two longer than one day trips – Tower Rock trip and Christmas trip to Standley Chasm.
- Beth Hansen sent information about Batton Hill camp.
- Email from Shirley Goodman re Echidna sightings reports. Forwarded to members.
- All other relevant information forwarded to members

**General Business:**

- Members in favour of the Club purchasing ten *Birds of Central Australia* brochures to give to guest speakers as a thank you.
- Handheld UHF radios – Simon Brown provided information on make, wattage & price of radios from TJM. After discussion the general feeling of the meeting was that the Club not purchase the radio(s). Members to purchase their own should they feel the need for some form of contact. Barb to put details of radios in the next newsletter.
- Lee Ryall mentioned the extra cost involved in sending newsletters via post. There is the cost of printing and \$2 postage. As there are only 3 newsletters the feeling of the meeting was that the Club could easily absorb the postage costs but Lee should be reimbursed for any printing costs.

**Past Events:**

- Sunday 12 August - Planning meeting.
- Saturday 1 September - ASDP wildflower walk. Suggestion that we make this, an annual feature on the ASFNC calendar.
- Saturday 9 September – walk in hills with Connie. 7 members attended.

**Future Events:**

- 14 - 16 September – Tower Rock with Neil Woolcock.
- 19-23 September 2018 – Bird Festival
- Robyn advised that she is still in touch with CLC re a trip down Ellery Creek on the southern side of Namatjira Drive.

**Next Meeting:** Wednesday 10 October 2018. Presentation by Kate Crossing on *Bilbies*.

Scribe: need volunteer

Supper: Connie Spencer

Meeting Chair: Rosalie Schultz

**Sightings:**

Bev Gray – White-faced Heron and Grey Falcon

Marg Friedel – Whistling Kites nesting and White-faced Heron

Shrike O'Malley – Collared Sparrowhawk in Gosse Street drain

Rosalie Schultz - 8 Red-tailed Black Cockatoos in Spencer Valley

ASDP car park lively with various birds including Grey and Brown Honeyeaters

**Meeting closed** at 9:00pm.

Minutes compiled by Connie Spencer