



October 2015

Alice Springs Field Naturalists Club Newsletter



Adam Yates on the track of a Fossil; CAVEPS; photo by Lee Ryall

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.

**Postal Address: P.O. Box 8663
Alice Springs, Northern
Territory 0871**

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Web site:

<http://www.alicefieldnaturalists.org.au>

Email:

contact@alicefieldnaturalists.org.au

NEWSLETTER

The deadline for the next newsletter is Friday 23 October 2015.

Please send your contributions to Pamela Keil pamelakeil@yahoo.com

Please **send photos and text separately** as combining them causes formatting issues.

- Wed 14 Oct** **Meeting** 7.00pm at Charles Darwin University Higher Education Building lecture theatre. Talk by **Andy Vinter** on "**Tackling the prickly problem of invasive cacti in Alice Springs**". He will have his Landcare and Batchelor Institute hats on for the talk.
- Sat/Sun 17,18 Oct** **Weekend at Arltunga** – Leaving 8 am, North along Gardens Road, camp at Old Ambalindum. Explore Arltunga Historical Reserve and back along Ross Highway. Approximately 300km. Need 4WD and be completely self-sufficient. Leaders Rhondda and Charissa. Contact Rhondda to express your interest by Sat 10 October rhondda.tomlinson@bigpond.com or 8953 1280
- Sat 7 November** **Early morning walk** in hills behind Scout Hall. Leader Connie.
- Wed 11 November** **Meeting** 7.00pm at Charles Darwin University Higher Education Building lecture theatre. Speaker **Bruce Pascoe** "Community Ecology of birds in Acacia shrubland in Central Australia"
- Sat 14 November** **Owen Springs Drive** stopping at interesting places with photographic possibilities. Leaders Rhondda and Charissa
- Thurs 26 Nov** **Sunset/Moonrise from Spencer Hill** on Thursday evening of 26 November. Meet Gosse Street Playground at 6.15pm, with tea or snack to eat while watching the sky from the top of the hill. Torch could be useful for going down again. Ring Rosalie 89523409

AUSTRALIAN PLANTS SOCIETY

Contact: **APS Secretary** jude.pringle@nt.gov.au

- Wed 7 October** APS Meeting 7.30pm at OPBG. Speaker is **Jen Kreusser**, Land for Wildlife on Plant Adaptions to Drought and fire.
- Sat,Sun 24/25 Oct** **Show site working bee**. Start 8am, finish 10am. Please come along and bring tools to assist. If Irrigation system replacement completed on the Saturday, there will be no need to come on the Sunday.
- Wed 4 November** APS Meeting 7.30pm at OPBG. **Jenny Purdie** will show her pictures of the stunning wildflowers she recently encountered along the Canning Stock Route in WA.

BIRDLIFE CENTRAL AUSTRALIA

Contact: birdlifeca@gmail.com

- 19-25 October** **Aussie backyard bird Count** with the aim of spotting one million birds in seven days. You can register your interest as a Counter now through the <http://aussiebirdcount.org.au/> To get involved all you need is 20 minutes, your favourite outdoor space, and some keen eyesight or binoculars. It doesn't matter if you're a novice or an expert. Simply record the birds you know and look up those you don't on our Aussie Bird Count app or the website.
- Wed 28 October** **Birdlife Monthly Branch Meeting**. Alice Springs Desert Park Meeting Room 7pm. Presentation 'Birds of Southern Africa' by Pete & Lisa Nunn. All welcome. Visitors may choose to leave after the presentation or stay for the meeting if they wish.

Alice Springs Field Naturalists Club Committee Members

Congratulations to all who were re-elected and our new Committee Member, Claire Meney

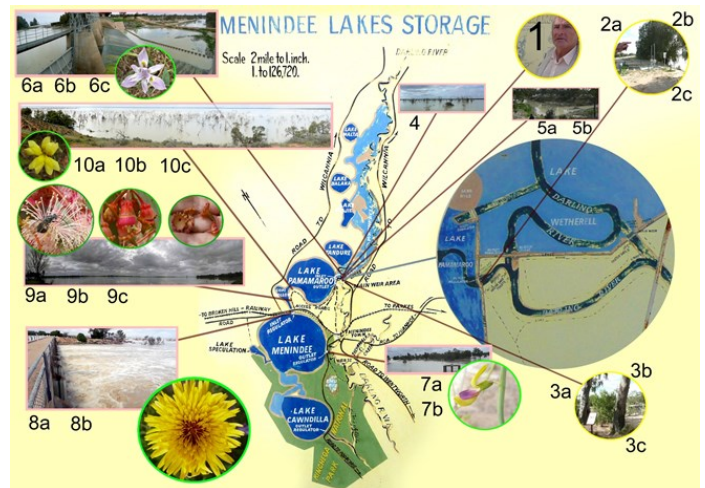
President	Barbara Gilfedder	8955 5452	Public Officer	Rhondda Tomlinson	8953 1280
Vice-President	Lee Ryall	8953 6394	Property Officer	Rosalie Breen	8952 3409
Secretary	Charissa Allan	0400 343241	Committee Member	Connie Spencer	8952 4694
Treasurer	Neil Woolcock	8955 1021	Committee Member	Claire Meney	0448341795
Website and Newsletter	Pamela Keil	8955 0496.			

September Speaker: Visiting Artist Ben Beeton report by Michael LaFlamme

Ben Beeton is an 'artist in residence' at Alice Springs Desert Park for two months. During that time he will be building an interactive website for Park visitors to learn about the stories behind our geology, flora and fauna.

Ben gave a presentation on his previous projects. He has always been interested in both science and art, and integrates them by creating hybrid hand-painted and digital "collages" in many media: drawing, oil painting, large-format giclee, sculpture and video. He uses scientific image as the basis for some of the images in his work, so there is deeper meaning than just the surface appearance.

For example, his Narracorte Caves art included imagery of the soil profile, the dune pattern, and the nearby wetland fauna. His Darling Downs artwork on the Coal Seam Gas wells was a mirrored box that shows wells extending in a network into infinity. He also presented a 3D stacked graph of climate change indicators



For example, his lifelong project is to create a circular panorama of the 10-billion year history of the Earth, from its birth to its eventual death, to express his abiding interest in "deep time."

He has done many previous residencies such as in Broken Hill, Narracorte Caves (artwork pictured below), Menindee Lakes, and Project Kimberley. In his talk he described those projects and his working methods. In contrast to artists who keep their working methods secret, Ben was generous in sharing his methods in response to questions from other artists.

One of his most interesting projects was as the artist for the Burke & Wills Environmental Expedition. The artwork takes the form of a series of 32 postcards (example pictured above) highlighting and documenting the people, the land and changes in Australia's environment since the original expedition, to encourage people to think about the history of Australia through deep time.

Much of Ben's work can be seen online, through his website (www.benbeeton.com.au) or his sponsoring organisations. It was great to have a presentation by an artist who so generously shared his approach, and who will be in town for one more month. He welcomes opportunities to go out with you on field expeditions!



**Speaker: Dr. Kirsti Abbott “Heads down bums up for science: The School of Ants”
report by Charissa Allen**

As Australians, interactions with ants are an all too familiar part of life. Ants are everywhere; occupying every habitat and landscape across Australia (excluding Antarctica). However, have you ever considered the complexity of the lifecycle of ants and how their presence has a greater impact on an ecosystem as a whole?



The ant fauna of Australia is especially large and diverse. World-wide, there are 16 subfamilies, about 300 genera and about 15,000 described species and subspecies of ants. Australia is currently known to have representatives of 10 subfamilies, 101 genera and 1275 described species and subspecies.

Ants contribute significantly to the environment; serving as important predators, pest controllers and soil engineers. Ants' sensitivity to disturbances can be used as bioindicators of landscape health, reforestation and mine site recovery. Nevertheless, their adaptive nature equips them to become pest themselves.

Dr. Kirsti Abbott established the School of Ants is a Citizen Science Project approximately 15 months ago to investigate the diversity of life and ecology in urban environments. A primary objective of the program is to engage people, of all types, to contribute to science.

Citizen Science and the School of Ants are attempting to collect quantitative data across different environments and broad geographic scales, through:

- Utilising easily accessible environments;
- Easily identified organisms;
- Easily followed standard protocols; and,
- Useful observations.



The School of Ants encourages ownership and stewardship of the environment and opens up opportunities to educate a diverse socio-economic population.

For further information regarding ants, Citizen Science and the School of Ants can be found:



AntWiki, your most up to date and comprehensive site on ants –

http://www.antwiki.org/wiki/Main_Page

AntWeb – <http://www.antweb.org/>

School of Ants Australia - <http://schoolofants.net.au/>

School of Ants in the US – <http://schoolofants.org/>

AntARK TV YouTube channel –

<http://www.youtube.com/user/antARKTV>

Alex Wild photography – <http://www.alexanderwild.com/>

The Global Ant Project – <http://gap.entclub.org/index.html>

Myrmecos – <http://www.myrmecos.net/>

Wild about ants – <http://blog.wildaboutants.com/>

A bug blog – <http://abugblog.blogspot.com.au/>

Friday 25 September 2015: Pedal / Walk to The Knoll

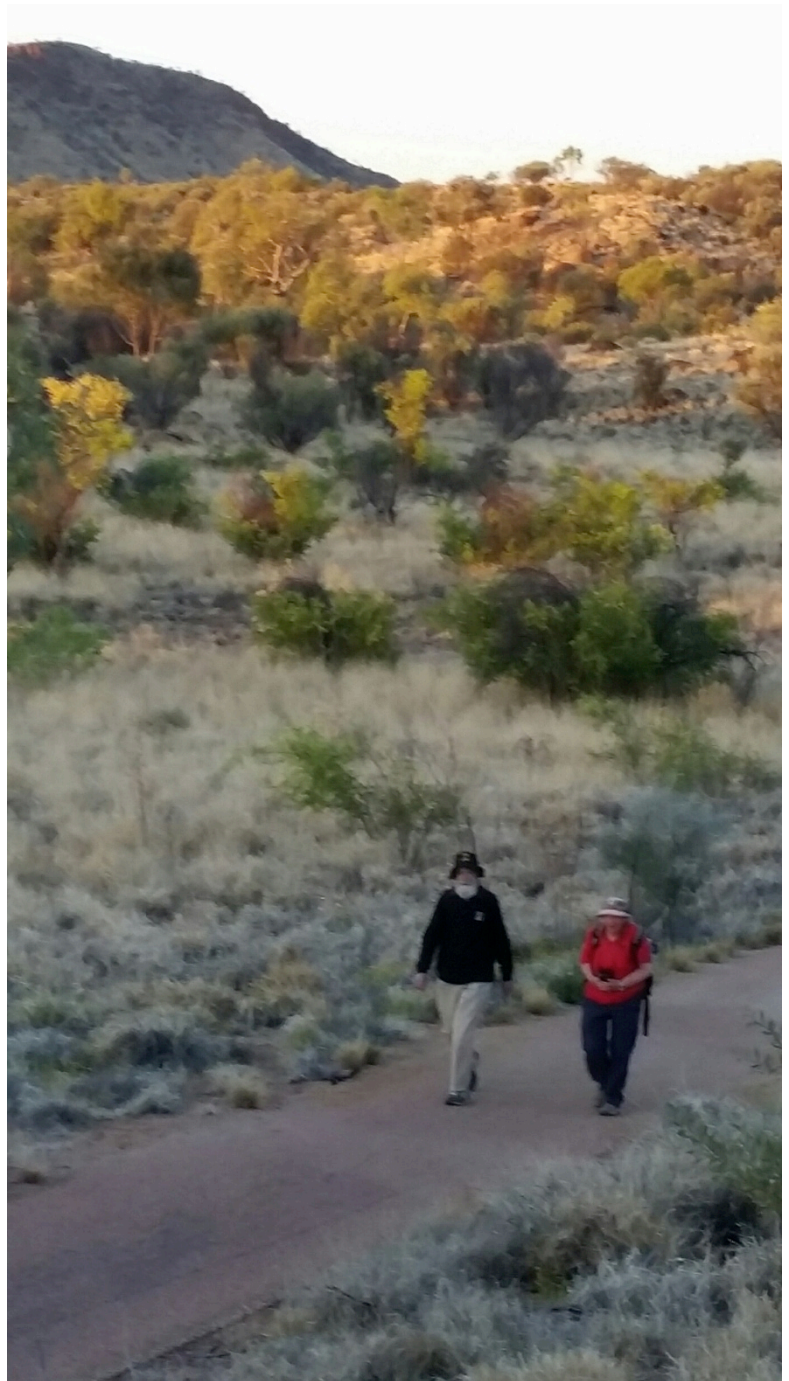
By Connie Spencer

What amazing September weather we have had! Friday dawned a very cool minimum of 0.8° C and a maximum of 23°C with a cool SE breeze. Perfect weather for a bike ride, especially heading in a westerly direction.

Five of us met at the start of the Simpsons Gap Bicycle Path at 5:30 pm. Wendy and Ian left first on their deadly treadlies wanting to ride out to the 8 or 9 km mark and back for our 6:30 pm rendezvous. Gavan and Rosalie left about the same time on foot for the 4 km hike to The Knoll. I waited until 6pm in case any last minute attendees turned up. I caught up with Gavan and Rosalie about the halfway mark. Rosalie was off in the scrub with her binoculars searching for a bird that was behaving like a Quail-thrush but turned out to be a Crested Pigeon.

Somewhere along the way Rosalie took a short cut, Gavan took a long cut, Wendy and Ian returned from their extended bike ride and we all met at The Knoll picnic area for tea. Jumpers were pulled out of packs and donned for although the wind had dropped so had the temperature. We watched the stars appear one by one. A few planes flew overhead and we didn't have to wait for the moon to appear (3 or 4 nights off a full moon).

Our ride and walk back to Flynn's Grave by moonlight for the walkers and bike light for the riders was very pleasant and left me wondering why I didn't do this more often.



CAVEPS at Alice Springs – report and photos by Lee Ryall

A Head Full of Fossils

The NT Museum hosted the 15th Conference on Australasian Vertebrate Evolution, Palaeontology and Systematics (CAVEPS) in Alice Springs from the 1st to 15th September



View from Mt. Watt

Field trip

A few of us were lucky enough to go on a field trip at the start of the week, showcasing the NT roads at their worst (the South Road in need of attention) and their best (Stuart Highway). We also managed to get bogged on the way to one of the sites and had to abandon it.

From Maloney creek, chock full of Ordovician invertebrates entombed in the Horn Valley Siltstone, we moved up in time and geography to the Stairway Sandstone. Here there were beautiful examples of *Cruziana*, preserved trails of the trilobites who were destined to pass into extinction in another 220 million years. Alongside these were the remains of fish scales from *Tantalepis gatehousei* - some of the oldest jawed vertebrates known. Another site of the Stairway Sandstone produced some exquisitely delicate scales and filmy, ethereal-looking scraps of body armour belonging to *Arandaspis prionotolepis*, an ancient jawless fish.

These tiny fossils contrasted with a jumbled mess of (probably late) Oligocene bones (23 plus million years old) which brought Alcoota to mind- and not just because of the tangled mishmash of pieces, but because the bones belonged to crocodiles, giant dromornithid birds and other familiar megafauna. Here we found a couple of recognisable fossils- a bird phalanx (toe bone) and a shiny black tooth from *Baru*, the mega-crocodile.



Mount Maloney Stairway Sandstone Silt bed *Tantalepis*



Baru tooth



Stairway Sandstone
Arandaspis scale

Drawing Class

Peter Murray conducted a scientific drawing class in the Palaeo Lab at Araluen as another CAVEPS activity. Despite the advent of the digital camera, scientific illustration is still an important skill for palaeontologists both for books and in scientific papers. Some well-known illustrators took part as well as people like me who are eternally grateful for my Panasonic Lumix. We pulled out bits of skeletons and set to, and one of the high points of the day was admiring the achievements of other 'students' such as Adam Yates and Ian Archibald.

The Talks

Presentations immersed us in information for four days. The highlights included:

Peter Murray set the Alcoota scene with an illustrated history of the people, events and of course fossils, which have contributed to the site's current eminence. Fascinating old photos showed early pits (some now misplaced!), the growth of the field station, and of some of the long-time workers.

During a break in the drawing class, I was a little shocked to find Anusuya Chinsamy-Turan and some mega-bird loving cronies drilling into dromornithid bones in a back room at the Palaeo Lab. However I was forced to acknowledge the value of her work when she talked about bone histology (microscopic structure), showing in stunning microscopic detail, the growth rings in bones she works with. This creates an intimate window into the lives of extinct animals with information about growth rates, gender, disease and, sometimes, environmental conditions.



Cruziana trilobite trails Stairway Sandstone

One of the aspects of palaeontology that was increasingly obvious as the conference proceeded was the ability of palaeontologists to think creatively- to draw sometimes serial inferences from tiny details, and relate a bone fragment to a whole, live animal. At the same time, of course, they need to remain flexible enough to change their ideas when some other minuscule detail suggests a different direction for their interpretation.

Thickened forelimb bones in crocodile fossils led Adam Yates to suggest that the 'Alcoota ripper', a 'hyper-robust' species of the crocodile *Baru*, with claws up to 80mm long, held onto its prey rather than death-rolling it as do modern, 90 lb weakling, crocodiles. A terrifying possibility which might mean being hunted on land as well as in the water.



From his study of marsupial lion teeth, Mike Archer raised the fascinating question- did *Thylacoleo carnifex* moderate its hyper-carnivorous diet as it aged, leaving the bones to the youngsters and chewing on the prime cuts of flesh, possibly even adding a vegetable option? The changing shape and orientation of its teeth suggest this was so.

Analysis of dromornithid birds now gives evidence of sexual dimorphism- the female was smaller than the male. And there was a whisper that the mega-goose may in fact now be the mega-chook!

In contrast to the familiar issues of fossil extraction at Alcoota, the process of studying an impressive collection of dinosaur trackways in the rocks in the Dampier Peninsula would seem straightforward.

However this remote set of sites presented their own issues- the trackways occur over several square kilometres of intertidal rocks where the tides chased researchers off twice a day. The solution involved an ingenious combination of helicopter-borne and hand-operated droid style cameras.

After the Conference, I still wonder at lizards and snakes discarding and sometimes re-growing their limbs on an evolutionary whim. I am haunted by the soft-eyed tree kangaroos whose ancestors occupied not only coastal Australia, but also the arid lands and by a vision of Riversleigh populated with crocodiles, some of whose snouts were astonishingly long and narrow (longirostral), charming ancient dwarf turtles and a wealth of songbirds. CAVEPS 2015 was a week of beguilement which left me with an enormous reading list and the joyful knowledge that I live in a country where a kronosaurus skull may lie in wait under a bush in the desert.



Latzy's Place

26 July 2015

Report by Connie Spencer

Twenty Australian Plants Society and Field Naturalists Club members gathered and made their way to a 20 acre property on Ilparpa Road. There was a degree of uncertainty as to the exact location of the property but it was decided to drive along Ilparpa Road and stop at the first Buffel Grass free property we came to! As it turned out, Peter Latz, renowned ecologist, was there to meet us at the gate.

Peter started our tour pointing out that there was now 80 acres of Buffel free county in the immediate vicinity but not all on the same side of the road and he was in the process of keeping the road verges between the properties Buffel free. He also pointed out a watercourse opposite his property with many dead Ironwoods (*Acacia estrophiolata*). This watercourse was heavily infested with Buffel Grass and a fire was put through in order to reduce the fuel load. Peter was sure it would never recover but was surprised and encouraged to count 12 native grass species emerge after good rains over the summer. This watercourse which flows into his property is where he gets most input of Buffel.

We then wandered across the front of the property through now dry Summer Grass (*Urochloa piligera*) to what had been a totally bare scalded area when Peter first came to the property some 15 years ago. It is now covered in Native Oat Grass (*Enneapogon avenaceus*). Again, he never thought it would regenerate! We made our way back across the property through a host of other native grasses – 40 different species on Peter's last count! Tall Oat Grass (*Themeda avenacea*) (pictured above) stood out because of its height. As with the Leonard property we visited earlier in the year – no grasses were planted. All have come back from the seedbank in the soil once the Buffel Grass was removed. This took 10 years to accomplish.



As we continued on our way to the rear of the property, Peter pointed out the second favourite plant camels like to browse – Curly-pod Wattle (*Acacia sessiliceps*) although I fail to see why, as the stiff leaves have a sharp point! Although wide-spread throughout central Australia, particularly in the south, it is not a common plant. The Quandong (*Santalum acuminatum*) (pictured left) understandably is the camel's favourite plant to browse.

We now stood in front of a thick copse of Weeping Emu Bush (*Eremophila longifolia*) a shrub spread by root suckers and nearby Colony Wattle (*Acacia murrayana*) which is also clonal. These gave rise to Peter spruiking that we have bigger trees here in central Australia than Tasmania! It's just that they are mostly underground!

Nearby was a large heavily frost-affected Native Passionfruit (*Capparis spinosa* var. *nummularia*). Fifteen years ago there were only three shrubs of this species on the property. Last count – 140! Although heavily frosted, they will come back to life when the weather warms up. The Bush Banana (*Marsdenia australis*) a twining shrub was non-existent 15 years ago and now we were noticing several throughout the property.

Peter pointed out a very large depression, once inhabited by possibly 20 or 30 of the extinct (on the mainland) Burrowing Bettong (*Bettongia lesueur*). "It was once the most widespread of all Australian mammals and is now only found naturally on four islands off the coast of Western Australia." Rabbits played a part in their disappearance by competing for food and shelter. Eventually possibly up to 200 rabbits took over this warren. There is still evidence of rabbits on the property but the Calicivirus has taken care of most of them plus warrens were and are destroyed if found.

The next point of interest was a Wild Orange (*Capparis mitchellii*) and a discussion was held on the difference between the juvenile and mature tree. In the young shrub the leaves are small and sparse and the branches seriously thorny! A nearby graceful Ironwood (*Acacia estrophiolata*) behaves similarly in that its juvenile leaves are thicker, shorter and spiny. Both are defence mechanisms against browsing animals as Australia was once dominated by browsers not grazers.

Whilst standing under a most magnificent Ghost Gum (*Corymbia aparrerinja*) with its long white limbs reaching skyward Peter talked about the importance of our best friends and largest biomass - ants and termites and of some of the birds he had seen. How in late afternoon up to 100 Galahs would be feeding on Tar Vine (*Boerhavia coccinia*) when in season and fifty Red-tailed Black Cockatoos on Caltrop (*Tribulus* sp.) side by side.

We were standing in front of a very large, old Corkwood (*Hakea divaricata*) with trunk and limbs prostrate on the ground. The tree had died of old age four or five years ago and was now a virtual city of reptiles plus providing shelter for young new Corkwoods and other plants, as well as adding nutrients to soil as it slowly breaks down.



Our stimulating morning was finished off with a scrumptious morning tea whilst questioning Peter further, chatting amongst ourselves and just generally relaxing in the warmth of the sunshine.

A sincere thank you to Peter and to Bec Duncum for organising the outing. We would love to revisit after rain.



ALICE SPRINGS FIELD NATURALISTS CLUB INCORPORATED
Minutes of the general meeting held at the Higher Education Building
Charles Darwin University – Wednesday 9 Sept 2015 at 8.15pm

After presentation by Ben Beeton.

Thank you to scribes Pam Keil and Michael LaFlamme and to Ian and Wendy Mann for supper.

Also to Rhondda for transporting Ben Beeton

Present: 17 members and 6 visitors

Apologies: Barb and Jim Gilfedder, Sue and Max O'Callaghan

Minutes of July meeting accepted by meeting.

Business arising

- Inquiry about possibility of ASFNC helping with a field trip for Year 6 Ross Park students. Evidently Susie Pendle was able to help, and took them on an excursion to Old Telegraph Station and talked about plant and animal adaptations.

Treasurer's Report.

Balance of all funds end of July	\$873.17
<u>Income received</u>	
Memberships	\$545.00
<u>Withdrawals</u>	
Australian Plant Society (plant brochures to give as gifts)	\$40.00
<u>Petty cash</u>	
Petty cash	\$8.10
Total of all funds end August	\$1378.17

Correspondence in/out

- Thank you card will be sent to Kirsti Abbott, last month's speaker
- Kath Walker, CDU Conservation and Land Management, Industry Consultation Meeting 2 October
- to be sent out to members for information
- Request for donation from Birdlife Australia
- Bird trails brochure for tropical Queensland

General Business

- Thank you people who attended Planning meeting. And very special thanks to people who offered to lead trips.

Past Trips

- Intertexta Forest with ALEC 15 August – Connie
- Tim Low talk at OPBG

Future Trips

- Walk to cycle to the knoll – 25 Sept – Connie
- Weekend Arltunga 17, 18 Oct – Rhondda/Charissa

Next meeting – October 14 – Andy Vinter – Tackling the prickly problem of invasive Cacti in Alice Springs

Scribe: Rosalie Breen; Supper: tba, possibly Pam

Sightings:

- Pam Keil: Grey honeyeaters heard at the desert Park,
- Lee Ryall: Bee-eaters at the sewage ponds,
- Connie Spencer and Pam Keil: Dusky Grass Wrens, Major Mitchells around the Desert Park