



August 2018

Alice Springs Field Naturalists Club Newsletter



A few of the hundreds of Zebra Finches that were constantly flying to and from Roma Gorge rock pool for a quick drink. The males have the pretty orange cheeks while the females are plainer. Thanks to Johannes Ammerschlaeger for the photo. See write-up on page 3.

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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(We hope to include the July speaker write-up next month)

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NEWSLETTER

The next newsletter will be August 2018.
The deadline for the next newsletter will be 23 July 2018
Please send your contributions to Barb Gilfedder - bifedders@gmail.com

TRIPS AND ACTIVITIES

ALICE SPRINGS FIELD NATURALISTS CLUB

Wed 8 August **ANNUAL GENERAL MEETING** of the **Alice Springs Field Naturalists Club** will be held at the lecture theatre in CDU higher education building at 7.00pm. All Committee positions will be declared vacant and new elections conducted. Please think seriously about whether you can help the club in this capacity. If you are happy to stand for any position please let a current Committee Member know, or come along and volunteer on the night. It would be refreshing to have some new enthusiastic people on the Committee. None of the positions are arduous.

Annual subscriptions are due on August 1. Please pay promptly. Use membership form on right, if needed.

The AGM will be followed by our annual **Members' Night**. Please bring along something interesting to share. Maybe some photos on a USB stick or in an album, a natural history item, a relevant book or magazine article – the list is endless.

August 4,5,6 **ASFNC** Members-only trip to **Newhaven Wildlife Sanctuary** - 2 nights camping, unpowered sites, toilets, hot showers, firewood and drinking water available. (\$10 per person per night). **It is vital that you contact new leader: Jocelyn Davies on mobile 0419 857 561 or jocdav26@internode.on.net** (Barb unable to go)

Sun 12 August **Planning Meeting** – 2.00pm at OPBG.
All Members welcome

AUSTRALIAN PLANTS SOCIETY ALICE SPRINGS

Contact: apsalicesprings@yahoo.com.au

Wed 1 August APS meeting at OPBG starting at 7.30pm. Caragh Heenan and Candice Appleby will be showing photos with a botanical perspective from their recent adventures in South America. Presentation followed by light refreshments and chat as usual. Visitors welcome.

Alice Springs Field Naturalists Inc.
PO Box 8663,
Alice Springs. NT 0871

Please accept my subscription for membership of the Alice Springs Field Naturalists Club Inc..

My details are as follows:-

Name:.....

Address:.....

.....

Tel. (home)

(mobile)

Email

Newsletter is usually sent by email.

This subscription is:

A new membership ... A renewal

Payment enclosed: \$

Family \$30, Concession \$25,

Individual \$20, Concession \$15,

Life membership - Ten X normal fee.

Westpac bank details:-

BSB No. 035303 Acct No.100981.

Include your name as reference on the transaction.

Subscription year goes from 1 Aug to 31 July. Half subscription after January for new members.

Alice Springs Field Naturalists Club Committee Members:-

President	Barbara Gilfedder	8955 5452	Committee Member	Pamela Keil	8955 0496
Vice-President	Lee Ryall	0417 401 237	Committee Member	Robyn Grey-Gardner	8952 2207
Secretary	Anne Pye	0438 388 012	Some other Club Responsibilities:-		
Treasurer	Neil Woolcock	8955 1021	Newsletter	Barbara Gilfedder	
Property Officer	Rosalie Breen	8952 3409	Website	Pamela Keil	
Public Officer	Anne Pye	0438 388 012	Minutes Secretary	Connie Spencer	0429 966 592
			Facebook organiser	Colleen O'Malley	

Roma Gorge
Saturday 30th June 2018
Report by Neil Woolcock

Those who went

Neil and Leigh Woolcock and Michelle Wilson, Barb and Jim Gilfedder, Rosalie Breen, Connie Spencer, Johannes Ammerschlaeger, Karlee Foster and her parents Lyn and Peter, up from Tasmania, Bob Read, Peter Jobson with Terry Stewart, also a visitor, and Rosalie Schultz.

Getting there

Roma Gorge is about 8km south down a stony 4WD track about 5km past the Redbank Gorge turnoff from Namatjira Drive. It takes about 30 minutes to get to the gorge from the turn-off.

Most of us met at Flynn’s Grave at 8:00am and then headed off in a small convoy. The Gilfedders, along with Connie and Rosalie Breen, had left earlier to give them some time to stop along the way if something interesting caught their eye, and to travel at a more leisurely pace. Peter Jobson (with Terry on board) caught up with the convoy somewhere around Standley Chasm.

We all came together at the Redbank Gorge turnoff, then headed on to the Roma Gorge track. This follows the Davenport Creek bed south off Namatjira Drive and is almost entirely loose, smooth stones (below). The track winds past some redgums with short, massive trunks (see the photo right with Rosalie Schultz sitting on a branch). Interestingly, unlike most other creeks flowing through gorges in the MacDonnell Ranges, Roma Creek flows south to north, turning east and eventually flowing into the south-flowing Finke River just north of Glen Helen.



Ruby Gorge – Neil



Rosalie up a tree - Neil



Stony track along Davenport Creek - Neil

A few bushes of a pretty *Eremophila maculata* were growing and flowering in the creek just before the car park. Connie collected a few cuttings from them on the way home

The Gorge

The car park is about 300m from the gorge itself.

Once in the gorge everyone settled down to do whatever interested them most.

It's a pretty spot with lovely red cliffs (see photo top of page 3), some of the best and most extensive petroglyphs in central Australia and a decent amount of water still surviving in a pool at the base of a rock wall which prevents any further walking up through the gorge.



Eremophila maculata - Barb



Painted Finches - Johannes

Hundreds of Zebra Finches were constantly darting up and down to the pond from nearby trees. Several Painted Finches sat and watched from rocks above the pond, as well as Spiny-cheeked and Grey-headed Honeyeaters coming for an occasional drink.

Only two plant specimens from Roma Gorge are currently held in the Alice Springs herbarium so Peter with Terry assisting, as well as Karlee, immediately started gathering more. About 30 were collected in the gorge, including *Pomax rupestris* (below) that Barb had not seen before. I was quite excited about seeing a white *Stemodia viscosa*, but my excitement wasn't shared by other more worldly Field Nats who looked on with bemusement. (below).



Pomax rupestris - Karlee



White *Stemodia viscosa* - Neil

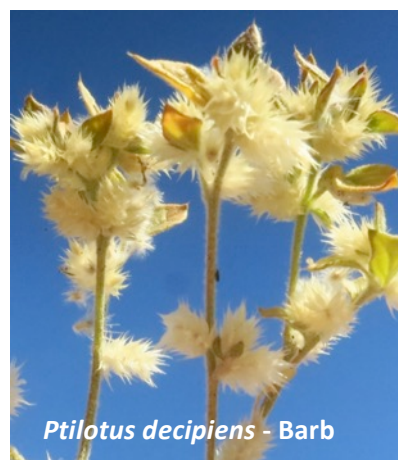
Lunch was spent relaxing in the gorge out of the wind, and included a cake, which Barb had baked for Connie's birthday. Peter Jobson provided entertainment, pressing his collected specimens in newspaper and writing notes on them, while Karlee climbed up the rocks to get a closer photo of flowering Spearbush, *Pandorea doratoxylon*.



Hill climb

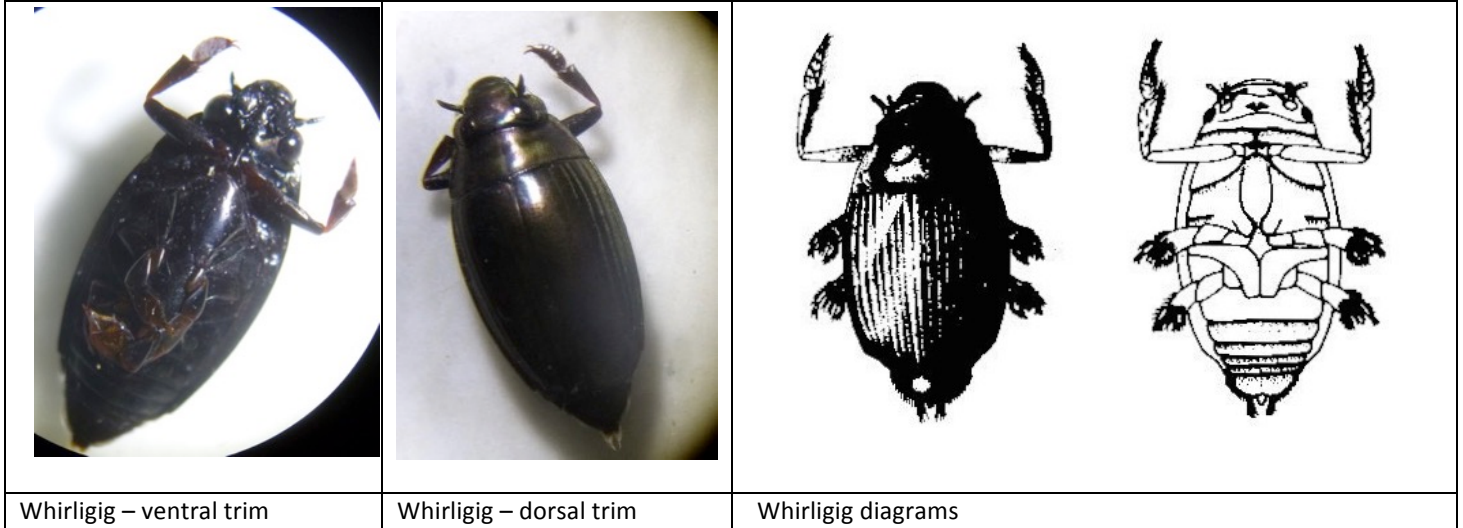
After lunch Neil, Karlee and Rosalie Schultz went back to the start of the gorge and climbed up the rocky hill to see what was further up the gorge past the rock wall barrier. Karlee collected several more plant specimens that she hadn't seen down in the gorge itself, *Eremophila arida* in flower and *Ptilotus decipiens* that could be so easily mistaken for an *Alternanthera nana*, if Peter Jobson hadn't been there to identify it. They discovered that there were no more ponds further into the gorge. From the top the upper reaches of the creek could be seen heading into the ranges further south.

On the way out, more stops revealed some mature *Alectryon oleifolius* Bullock Bush trees and some bushy *Pimelea microcephala* shrubs. There were a few small flowers on the *Pimelea* but sadly no seeds on either species.

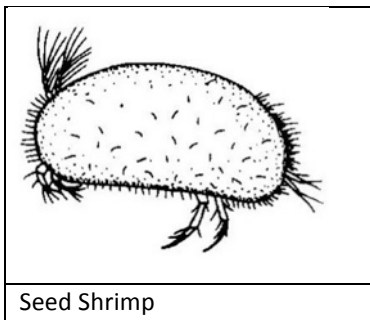
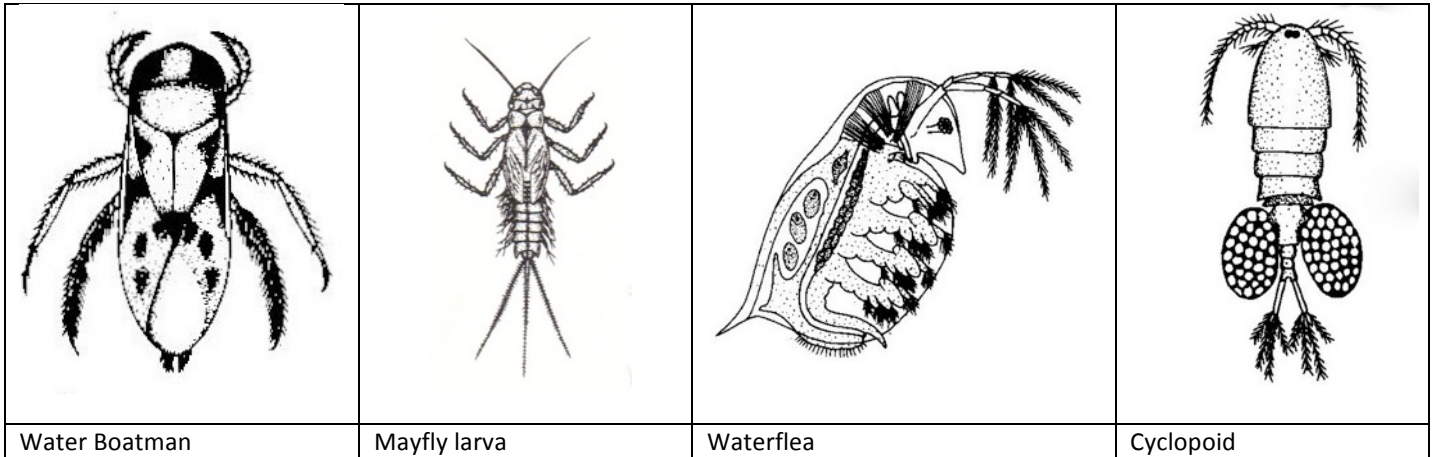


Whirligig Beetles and other Roma Gorge Macroinvertebrate finds – Rosalie Breen

The biggest find in a trawl at the waterhole at Roma Gorge was a Whirligig Beetle. Family *Gyrinidae*. These are fascinating animals with a streamlined oval body, glossy black, only 6-12mm long. They congregate together and swirl around in circles in the water surface film, twisting and gyrating, twinkling with glimpses of sunlight as they rush around. This behaviour is very distinctive.



If disturbed, they dive down, carrying a bubble of air in the tip of their abdomen. Their two pairs of hind legs are short and paddle shaped, well adapted for fast swimming. The front legs are long and used for grabbing their prey, being carnivores and scavengers. They have compound eyes, completely divided, two upper and two lower sections. This enables them to see both above the water (in the air) and below the water at the same time, as they swim along the surface (great for snorkeling?).



Also I found a diving beetle, fly larvae, many of the little bug, Water Boatman, and various sizes of Mayfly nymphs. These have three tails and gills along their abdomen, which flutter continuously as they gather oxygen. Mosquitoes were around as I found the larvae and pupa of an Anopheline Mosquito.

Micro Crustaceans were plentiful. These included a Cladoceran, the Water Flea, *Daphnia*, which has a jerky movement, a Cyclopoid, *Copepod*, which has one central eye, and carries two egg bundles, and *Ostracods* or Seed Shrimps. These last ones look like black dots moving around in the water. A microscope is needed to get a good view of these tiny animals.

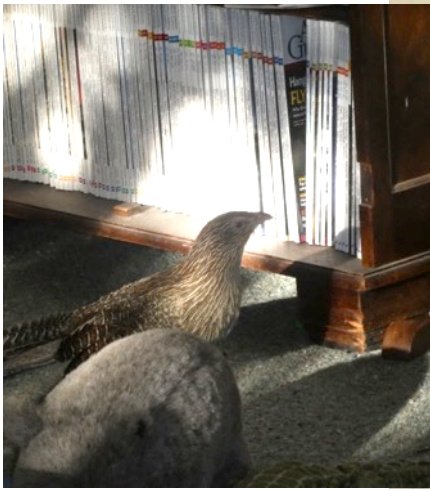
Diagrams from "Freshwater Invertebrates" by Ralph Miller.

The diagrams are not to scale. Whirligigs and Water Boatmen being much larger than the others.



Pheasant Coucal visits

Most of us like to see a rare bird but not everyone has them in the house. This long-tailed intruder came in through an open door and perched on the lounge room fan at Rosalie Breen's house. This species is usually restricted to more northern areas but has been seen several times recently in gardens on the east side. After a quick photo shoot, Rosalie managed to persuade it to leave through a window.



Horse Mulga and Emu Apple

Two trees recently photographed by Neil Woolcock on his more exciting route via Birdsville to the East Coast. The Horse Mulga, *Acacia ramulosa*, was at the base of the sandhill, Big Red. There were no flowers or fruits to help with identification, but Peter Jobson at the herbarium sorted it mainly with the help of distribution maps. Around Alice Springs we usually see it as a bushy shrub rather than a tree. Its yellow flowers are on cylindrical spikes as it has long straight hanging pods.

The Emu Apple, *Owenia acidula*, was at the Birdsville *Acacia peuce* site. It produces edible, golfball-sized fruit and has lush pinnate leaves.



Asteroid Impact Grounded Bird Ancestors By Pat Leonard

(An interesting read, reprinted from an article in the Cornell Chronicle May 24, 2018)

A bird watcher straining to see a tiny tuft of feathers hopping in the treetops may find it hard to believe its ancient ancestors lived on the ground. An international team of scientists has concluded the asteroid that smashed into Earth 66 million years ago not only wiped out the dinosaurs, but erased the world's forests and the species that lived in trees. The researchers say only small ground-dwelling birds survived the mass extinction, profoundly changing the course of bird evolution.

"What this means is that all modern tree-dwelling bird lineages can trace their ancestry to non-tree-dwelling species in the wake of the asteroid impact," says lead author Daniel Field of the Milner Centre for Evolution at the University of Bath in the United Kingdom. "It took about 1,000 years for the forests to regenerate. It took a lot longer for some bird species to evolve the shorter legs and grasping feet needed to perch and nest in trees."

It's estimated that the initial meteor impact at the end of the Cretaceous period (also known as the K-Pg event), blew down trees in a 1,500 km (932 miles) radius, leaving the 110-mile wide Chicxulub Crater on the lip of Mexico's Yucatan peninsula. The effects were felt long after. Intense heat set off wildfires

that turned forests into ash fields. Acid rain killed off even more vegetation. Soot in the atmosphere blocked the sun and prevented photosynthesis. A treeless world would not have been a pleasant place.

But the cataclysm left useful clues for scientists delving into ancient history. One line of inquiry for this study focused on a comparison of plant fossils, pollen, and spores from geological layers before, during, and after the asteroid hit. Some of the evidence comes from a place called John's Nose in North Dakota.

"The John's Nose site is one of several where you can clearly see differences in plant life before and after the mass extinction," explains co-author and Smithsonian paleobotanist Antoine Bercovici. "We examined the geological layers at John's Nose as well as at sites in New Zealand, Japan, and Europe. At all these locations we found a huge spike in fern growth immediately after the asteroid impact, which indicates the deforestation was global."

Ferns are sometimes called "disaster plants" because they typically spread rapidly in areas that have been denuded of vegetation—a pattern that continues today in places devastated by human activities or natural disaster.

Study co-author and Cornell Lab of Ornithology doctoral candidate Jacob Berv used avian family trees (phylogenies) to infer the characteristics of birds in the distant past. This line of inquiry also led to the conclusion that, after the K-Pg event, the ancestors of modern birds had their feet on the ground.

"The avian family tree tells you about the hierarchical relationships among bird species," Berv explains. "The group that's the sister group to every other bird lineage today is known as the palaeognaths—including ostriches, cassowaries, kiwis, and so on—all ground-dwelling. From that and other related evidence we can infer that the bird ancestors that survived the asteroid impact were also likely to be ground birds."

The fact that the paleobotanical (fossil plant) data agree with the bird data is one of the reasons the study authors are confident in their conclusions. Their research shows that every tree-dwelling bird today is the result of an eons-long tale of survival, and the product of uncounted evolutionary tweaks that allowed them to—at last—return to the trees.



A ground-dwelling species, similar to this Tinamou of South America was probably around at the time of the Asteroid impact.



REFERENCE

Field D.J., Bercovici, A., Berv, J.S., Dunn, R., Fastovsky, D.E., Lyson, T.R., Vajda, V., Gauthier, J.A. (2018). [Early Evolution of Modern Birds Structured by Global Forest Collapse at the End-Cretaceous Mass Extinction](#). *Current Biology* 28: 1-7.



ALICE SPRINGS FIELD NATURALISTS CLUB INCORPORATED
Minutes of the general meeting held at the Higher Education Building
Olive Pink Botanic Garden – Wednesday 11 July 2018

Open: The Secretary, Anne Pye, opened the meeting at 8:40pm following a presentation by Sheridan Martin, Senior Ranger at Owen Springs Reserve. Thank you to Kimberley Morgan for supper, to Pam Keil for note taking, to Ian Coleman for the use of OPBG at short notice and to Alisha Mercer for setting up.

Present: 22 members, 1 visitor and 13 apologies as per attendance book.

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

Business Arising:

- Robyn Grey-Gardner and Pamela Keil continue to work on website. Remainder of 2017 newsletters now archived. Request to keep working on 2018 issues. Current newsletter is still showing June 2018. Also a query of whereabouts of the July 2018 newsletter.
- Barb reimbursed \$156.20 for additional insurance cover for 4 longer-than-one-day trips.
- Barb and Rosalie checked out display panels at The Alice Springs Show. The panels in the Parks and Wildlife stand were light weight, fold into a case, free standing, suitable size and appear fairly stable. Will try to procure similar.
- Barb had second thoughts about writing a letter to the Minister, etc. regarding animals at Running Waters on Henbury Station. She was previously unaware that Jayne Brim Box was doing an in-depth study. Also, it seems from Joan Powling's write-up that the water quality is not as bad as it looked. Some members also concerned about getting offside with pastoralists.

Treasurer's Report:

Balance of all funds including petty cash end of May 2018 \$848.58

Income for June 2018

Membership \$40.00

Bird brochure loan repayment from Lisa Nunn \$878.00

Bank interest (May and June) \$0.17

Expenses for June 2018

Anne Pye refund for government fees \$34.00

Insurance overnight extra premium refund to B. Gilfedder \$158.54

Bank fee for deposit \$5.00

(Petty cash

Petty cash opening balance \$1.85

Expenditure in June Nil

Petty cash balance end June \$1.85)

Total of all funds including petty cash end June 2018 \$1,569.21

Correspondence:

- Bill Low - seminar this Friday 13 July 2018 3:30pm – Bob Gosford on *Birds spreading fires*.
- Sheridan Martin - Barb asked if trip to Owen Springs Reserve possible as follow-up to tonight's talk. Sheridan very busy prefers to leave till next year.
- Various emails and phone calls between Barb and Jackson Ankers at CDU re tonight's meeting. As CDU on semester break, security are not employed after 6.00pm and CDU would therefore charge us \$100 per hour to employ security after that, (3 or 4 hundred dollars)
- Phone calls with Ian Coleman, Curator OPBG. Decision made to change the venue for this meeting.
- Other relevant correspondence forwarded to membership.

General Business:

- Great to see repayment of \$878 of Bird Brochure loan from Lisa Nunn

Past Events:

- Sat 30 June 2018 - Roma Gorge with Neil Woolcock. 10 members, 5 Visitors. Excellent trip! A query about the origin of the name Roma Gorge, but local historian, Jose Petrick unable to find out.

Future Events:

- Overnight Serpentine Chalet Site with Wendy and Ian Mann pending their return from Darwin.
- August Long Weekend 4-6 August 2018 – Newhaven Sanctuary. Leader Barb Gilfedder. Request for volunteer to lead the trip should Barb be unable due to illness. None forthcoming.

Next Meeting - Wed 8 August 2018 CDU Lecture Theatre - AGM and Members' night. Please bring hard copy photos, articles, photos on USB, natural history items, etc. to share. Scribe – Anne Pye. Supper – Ian and Wendy Mann

Meeting closed at 8:50 pm.

Minutes compiled by Connie Spence