



October 2014

## Alice Springs Field Naturalists Club Newsletter



Beetlemania! Don't miss Adam Yates' talk about beetles at the next meeting on 8 October 2014. These two were spotted out near Ewaninga last month. Barb Gilfedder

**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**

### CONTENTS

*Meetings...p2   Trips/Activities...p2   Contacts...p2*  
*September speaker – Michelle Rodrigo - Lake Eyre Basin...p3*  
*Horseshoe Bend trip...p5*  
*Rocky Range on North side of Archery Club ...p9*  
*Wiggly Gorge walk to the Telegraph Station ...p10*

**Web site:**

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

**Email:** [contact@alicefieldnaturalists.org.au](mailto:contact@alicefieldnaturalists.org.au)

## NEWSLETTER

This newsletter edited by Barb Gilfedder.

The deadline for the next newsletter is **Wednesday 22 October 2014**.

Please send your contributions to the club email [contact@alicefieldnaturalists.org.au](mailto:contact@alicefieldnaturalists.org.au)

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

**ALICE SPRINGS FIELD NATURALISTS CLUB**    **Contact:** [contact@alicefieldnaturalists.org.au](mailto:contact@alicefieldnaturalists.org.au)

- Friday 3 Oct**    **Another Eastside track** – 4 km walk. Meet on Undoolya Drive, 1 km beyond second Kurrajong intersection. 6.30 start. If you intend to come, please contact Cecily Sutton mobile 0412 501396 or email [cecsutton@gmail.com](mailto:cecsutton@gmail.com)
- Wed 8 Oct**    **Meeting** 7.00pm at Charles Darwin University Higher Education Building lecture theatre. Speaker: **Adam Yates** of the NT Museum on “**Beetles**”
- Sat 1 Nov**    **Evening bike ride or walk** three and a half kilometres along Simpsons Gap bike track. Meet at Flynns grave and eat picnic tea at the Knoll. Walk/ride back by moonlight. Please ring or email Connie Spencer for confirmation and details
- Wed 12 Nov**    **Meeting** 7.00pm at Charles Darwin University Higher Education Building lecture theatre. Speaker: **Pete Nunn** of Alice Springs Desert Park on “**Research into the nesting habits of Black-breasted buzzards**”.

**AUSTRALIAN PLANTS SOCIETY**    **Contact:** **APS Secretary** [karlee.foster@opbg.com.au](mailto:karlee.foster@opbg.com.au)

- Wed 1 Oct**    **APS Meeting** at Olive Pink Botanic garden at 7pm. Speaker: Professor **Angela Moles** on “The rapid evolution in introduced species. Angela is based at University of NSW in Sydney and will be attending the ESA conference here in Alice Springs.
- Sun 12 Oct**    **Twilight Walk** around OPBG, followed by BBQ on APS. 5pm start
- Wed 5 Nov**    **APS Meeting** at Olive Pink Botanic garden at 7pm. Speaker: **Peter Jobson** on **Fabaceae (Pea) Family flowers** following on from plant families talk earlier this year

**BIRDLIFE CENTRAL AUSTRALIA**    **Contact:** [birdlifeca@gmail.com](mailto:birdlifeca@gmail.com)

- Sat 27 Sept**    **Red Centre Bird Festival** - See the Desert Park website for the full program:  
**to Sun 5 Oct**    <http://www.alicespringsdesertpark.com.au/plan/events.shtml>

### **Alice Springs Field Naturalists Club Committee Members**

President	Barbara Gilfedder	8955 5452;	Public Officer	Rhonda Tomlinson	8953 1280;
Vice-President	Lee Ryall	8953 6394;	Property Officer	Rosalie Breen	8952 3409;
Secretary	<b>POSITION NOT FILLED AT AGM</b>		Minutes Secretary	Connie Spencer	8952 4694;
Treasurer	Neil Woolcock	8955 1021;	Website and Newsletter	Pamela Keil	8955 0496.

**email address:** [contact@alicefieldnaturalists.org.au](mailto:contact@alicefieldnaturalists.org.au)

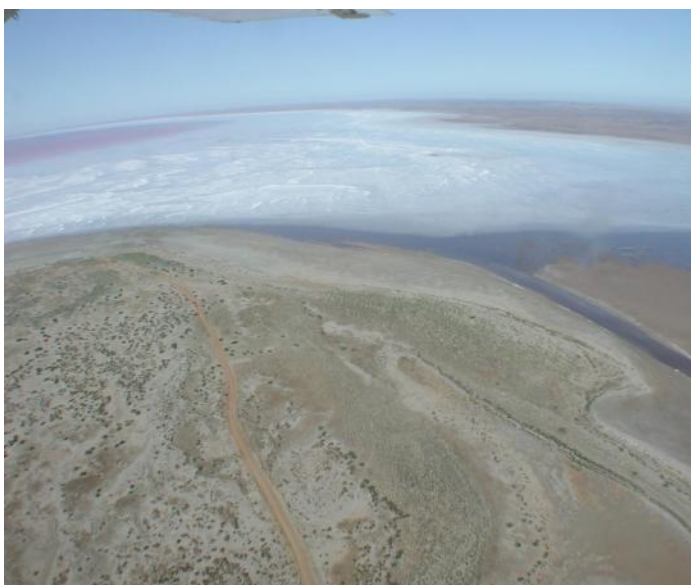
**We do need a Club Secretary. The position is not very arduous. We write few letters.  
Please volunteer if you can help us out. Barb Gilfedder, President.**



# September Speaker – Michelle Rodrigo

## Lake Eyre Basin Report by Rosalie Breen

Lake Eyre is now officially Kati Thanda, the Arabana name, and is one of the larger terminal lakes in the world, and the Lake Eyre Basin is among the last of free flowing river systems. This means it is in need of protection. The map shows the many river systems which all flow inland, no access to the coast. The rainfall of the area is low, around Kati Thanda less than 15mm/year with evaporation 18 to 20 times the rainfall. The only constant is unpredictability with great variability of flow, leading to extremes. Most water comes from the north from the Monsoons, and can take months to flow, wetting and soaking swamps and floodplains as it goes, rarely leaving much water to get to the lake. In 2010 following high rainfall in the Queensland catchments the Cooper ran its full length and Lake Eyre filled to 75% of its capacity. - Boom time. Then with low or no flow everything dries up and the system 'crashes' - Bust time.



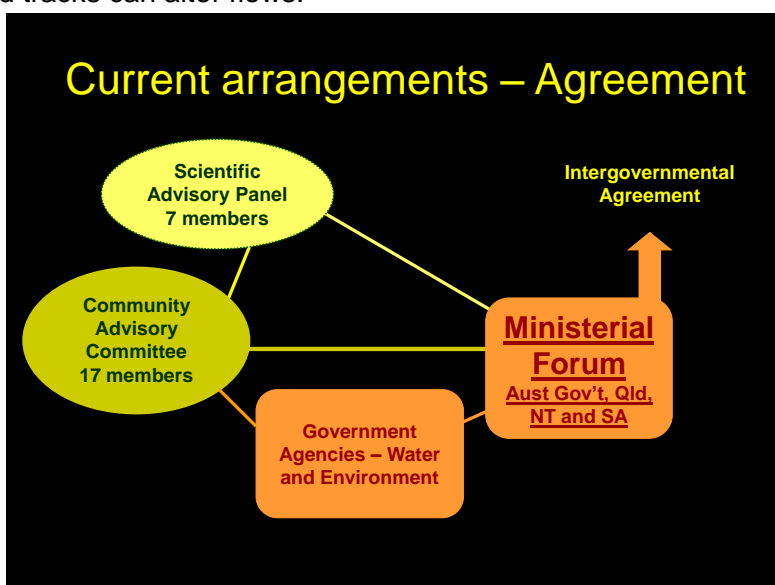
Kati Thanda from the air.



Lake Eyre Basin Map showing rivers flowing into the lake.

Very large in area, 1.2 million square kilometres, LEB consists of many diverse bioregions, Mitchell Grass Downs, Channel Country, Simpson/ Strezlecki Dune Fields, Stony Plains, the MacDonnell Ranges, and Salt Lakes . Special places include Aboriginal heritage sites, and two Ramsar wetlands, Lake Pinaroo, and the Coongie Lakes. The Channel Country is unique, and surprisingly there are many permanent waterholes and mound springs. The main land use in the region is grazing and agriculture, tourism, with oil, gas and mining being the biggest use economically. Coal bearing basins exist underlying the LEB. There are many Aboriginal communities and a few towns. Remoteness means a low population so few people to lend a hand to its protection. Threats facing the area include weeds such as mesquite and cactus, vegetation clearing, feral animals such as camels, pigs, cane toads and redclaw crayfish, and flow interruptions. Changes in flow can come from major dams, flow diversions and levee banks, floodplain harvesting, and farm storages. Also roads and tracks can alter flows.

Comparatively speaking LEB is relatively pristine and stakeholders want to avoid the unsustainable practices that have plagued the Murray/Darling Basin. So beginning from the 1993 proposal for World Heritage Status and an application for cotton growing, community response became strong and this through three main local groups and supported by Government, initiated the Agreement. It involves a Community Advisory Committee, a Scientific Advisory Panel covering many fields and Government Agencies involved in water and the environment. The aim is to get a balance between ecological sustainability and socio-economic values.



The Lake Eyre Basin Intergovernmental Agreement, signed in Oct 2000 (NT joined in 2004) is based on water and natural resources, avoiding adverse cross border impacts. It is a partnership between Commonwealth, State and Local Governments. In all a co-operative approach between community, industry and other stakeholders, and all levels of government. Community inputs come from 17 members from Q, NT and SA. Their continuing involvement is probably the key to success.

The main program under the Agreement is the Lake Eyre Basin Rivers Assessment. It reviews conditions of the watercourses and catchments and is undertaken every 10 years, next in 2018. Working with local landholders, indigenous rangers and arid zone scientists, 53 sites have been monitored for flow rates, fish species and numbers, shape of the waterhole floor and water quality, especially salinity. The information gathered will form the basis for decisions on management.

Michelle had many slides to show us the richness of life in LEB. Most emphasis was on the fish populations, there being 40 species of fish, 34 natives, 21 of these being endemic to the basin. Nine species are restricted to the springs. Our Finke system has nine species. These are real toughies because they can survive high temperature, high salinity and low oxygen levels. They retreat to refuges before flow ceases and can repopulate from these, often travelling 100s of kilometres, sometimes with only centimetres of water. Most impressive of are the birds. Flocks of people also appear, at the biennial LEB Conferences and Aboriginal Forums held regularly.



There are plenty of further information opportunities. [www.lakeeyrebasin.gov.au](http://www.lakeeyrebasin.gov.au) Desert channels website Stories and pictures in videos (including our own Des Nelson), Annual Ministers Reports to the community (FN has some copies available), a great poster of LEB and other booklets.

Michelle is the LEB Communications Officer and with this wonderful presentation, proves a very competent one. Thank you! So many stunning slides of the region were shown and Michelle acknowledged the photographers. We thank them too.



You needed to be present at the meeting to really appreciate the beauty of the area.





*Part of a 100 strong flock of Red-tailed Black Cockatoos seen near Horseshoe Bend - Anne Pye*

## Horseshoe Bend with Jim Lawrence                      2 - 4 August

**Wendy and Ian Mann** - Carpets of wildflowers, the biggest flocks of Black Cockatoos we have ever seen, crowds of Corellas rising from long grass plains, crisp starry nights far from the sounds of civilisation – but what makes this trip so memorable was our wonderful guide who had so much knowledge about the area and so any fascinating yarns to share.

**Rosalie Breen** - The most memorable experience of this trip for me is that I finally got there, having waited many years for the opportunity. But the journeys there and back were just as wonderful too. We had many stops on the way to the first camp to admire the flowers which clothed the sandhills. The camp on Lilla Creek among the majestic river red gums beside a very wide and clear sandy river bed was special.

As we approached the station itself we stopped before Polly’s Corner hoping to locate Polly Springs, which we did not. It was the right area. We did walk downstream to cliffs of conglomerate and shale, and a waterhole. Then further on were the coloured cliffs which had first captured my interest years ago. Stunning! Meg will tell you all about them. Polly happens to be a ‘hero’ of mine. A horse, she accompanied McDouall Stuart on all his journeys north. At Polly Springs she slipped her foal and was allowed a day’s rest there! I am happy she is remembered by a few names. (including a conglomerate rock formation)

The station area was a surprise having been what looked like bulldozed, to clear or tidy-up the place exposing white and yellow earth. Surrounding were low bare rocky red-brown hills. Rather a razed earth effect. The homestead itself and surrounds though were treed and homely. Carl Strehlow’s grave along with Ted Sargeant, part owner of the hotel, and George Bennet, a drover, were set against one of the rocky hills. It was sobering to think of his journey in 1922 from Hermannsburg when so ill and this lonely burial place and the difficulty of digging his grave in the rocky ground. Incidentally the cross lying on the ground in Strehlow’s grave enclosure was originally erected on the stone monument.





Horseshoe Bend was quite a town at that time with a hotel and acted as a “staging post” for travellers along the Track.

I would have liked to explore more but we needed to drive on East to meet the old road. If the first camp was special the second night’s camp among pink daisies in a valley between dunes was even more special. Next day we continued on sandy tracks to visit Alice Wells, an old police station and water supply provided by the Government for cattle and people along the Track. The stonework on the remaining building’s wall and the tank stand was a real work of art.



Further along was the site of an old sawmill beside the Hugh River which supplied sleepers for the railway line. We returned to the “main road” of the old Ghan train line where we had body massages from the corrugations, and viewed the Finke Desert Race track which snaked beside the road and the stately desert oaks. Rodinga is an old railway station with old buildings and information notices. This was the last official stop of the trip so we said goodbye and a special thank you to Jim Lawrence for leading and to Jim Gilfedder for being the back marker. Both positions vital on a trip like this.

**Barb Gilfedder** - Highlights of this trip for me were two plants I hadn’t seen before.

Even better was that the first was a daisy and you all know how much I like daisies. Actually Rosalie found this one, a tiny plant with 3 small mauve-blue flowers just where we stopped for lunch on the first day. The petals were long and a bit droopy. I identified it from Philip Moore’s book as probably *Brachyscome iberidifolia*. (Pictured two photos on the left) This was confirmed later by Peter Jobson at the Herbarium. We were parked next to a sand hill, so had to explore. The red sand was covered with Poached Egg Daisies, *Polycalymma stuartii*. I crossed that, meeting Rosalie and Meg who said there were lots more of the Blue Daisies over the next sand hill. Sure enough there was a carpet of them, looking absolutely stunning.

The second plant was also on red sand. Small roundish bushes covered with cream-pink pompoms of flowers. We were at the end of the convoy – no one else stopped but I had to get some photos and a sample. At the next stop, we handed the sample around, but were unable even to put a genus on it. Back in Alice, Peter Jobson came to the rescue again with *Pimelea australiensis*. (Pictured right) I understand that it can be locally abundant on red sand hills but grows in quite a restricted area.



Jim Lawrence found us two excellent camping spots. The first was south of Horseshoe Bend at the junction of Lilla Creek and the Finke River. We camped beside the pristine sand of Lilla Creek surrounded by towering River Red Gums.

In the morning we tracked down to check out the Finke River, which sadly was completely choked with invasive Athel Pines. What a comparison!

The second night we turned off the Finke-Rodinga Road at Bundooma, along the old railway line and found a lovely camp site among masses of wild flowers- mainly Pink Everlastings *Schoenia cassinioides* and Saltspoon Daisies *Leucochrysum stipitatum*. It was beautiful.!



*Site of old saw mill – the River Red Gums have recovered well.*

Also on the way home we stopped at Alice Well where there are ruins of an old police station with one old stone wall still standing, and 3 old water tanks, the oldest of stone. It is interesting that the stones used are eroding faster than the mortar that bound them together. Another place along the Hugh River was where Launce Coppock once ran a saw mill to cut River Red Gums for railway sleepers for the old line. There is not much evidence left and the River Gums are large and healthy.

Thank you Jim for an excellent trip.

### **Meg Mooney - The Amadeus Basin at Horseshoe Bend**

Around 900 Ma, large downwarps or basins formed in the precursor of the current Australian continent (supercontinent Rodinia). Rises in sea level inundated these basins, which are now fragmented in central, South and Western Australia. One of these basins, of a similar scale to the Mediterranean, was the Amadeus Basin. The preserved extent of the Amadeus Basin stretches from Alice Springs to Kulgera and the WA-NT border to 300 km east of Alice Springs. Several kilometres of sediments were deposited in the basin as the sea advanced and retreated and land moved up and down over a period of about 550 million years.

Over this time several events warped the rocks which had formed when sand, silt, mud and salt deposited in the Basin were buried and compressed. The last and most significant event was the Alice Springs Orogeny, around 350 Ma, which created the present day MacDonnell Ranges.

Both during this orogeny (mountain-building event) and one a little earlier, there was movement on a major east-west fault that formed in what is now the Black Hill ranges area, with the block to the north dropping and the one to the south lifted up. The movement on this fault may have been as much as a kilometre. The uplifted ridge was probably the source of the Finke Group rocks which we saw at Horseshoe Bend. The Black Hills are what is left of this ridge today.

Around 300 to 370 million years ago, rivers and deltas eroded the uplifted ridge and deposited pebbles, sand and clays which became the conglomerates, sandstones, siltstones and shales of the Finke Group. The first layer became conglomerate, with rounded pieces of granite, gneiss and other rocks in a fine siltstone cement. This unit is called the Polly Conglomerate after Stuart's horse which 'slipped' a foal near Horseshoe Bend.

Polly Conglomerate may be what those of us who walked across from our Sunday lunch spot saw before we got to the river. However, according to the geology map (which is quite small-scale, so not easy to make out on the scale of where we were walking) these rocks, which had a small cave, were conglomerate from the next layer up, the Langra Formation.

In this conglomerate you could see pieces of granite and gneiss from the 1800 million years old basement rocks like those around Alice Springs.



The map isn't very clear about the tilted rock layers we saw when we walked further on to a small waterhole in the Finke. From what I can make out, the northerly layers were Horseshoe Bend Shale, the unit above the Langra Formation. Horseshoe Bend Shale has micaceous (the little glittery bits) red-brown and green shales interlayered with fine-grained sandstone.

When muds and clays are buried and compressed to form rocks they often develop a fine layering. These rocks are called shales and can break up into very fine layers, as Jim Lawrence demonstrated. (Slates have been subjected to more heat and especially pressure and are much harder rocks than shales.)

Dragging along the Black Hills fault probably caused the tilting of the rock layers. Elsewhere, the Finke Group rock units are usually flat. From the map, there is a possible fault (maybe connected to the Black Hills fault) on the southern side of the Shale and just south of that are Winnall Beds, a much earlier layer of the Amadeus Basin, maybe part of the uplifted block mentioned above.



*Above: Langra formation, below: Horseshoe Bend shale*



The cliffs we all saw further along were, I think, red-brown siltstone and yellow sandstone of the Langra Formation and white kaolinitic sandstone of the Idracowra Sandstone, the uppermost and youngest member of the Finke Group. The layer on top was either silcrete or conglomerate or a combination of the two. (above)

We did see silcrete, used as an Aboriginal quarry, at the old sawmill site on the Hugh.



## Silcrete and mesas

Silcretes form on stable plains during extended periods of weathering in wet, warmer climates, as there was in central Australia from about 60 to 20 million years ago. Rainwater slowly penetrates rocks, dissolving and altering minerals to produce, over time, a deeply leached and bleached zone. At the same time, dissolved silica in the ground-water is drawn to the surface by capillary action and deposited there as silcrete. (Bauxite and laterite are formed in the same way, with aluminum oxide and iron oxide respectively.)

The bleached zone mentioned above is famously seen at Rainbow Valley and there was evidence of it in the Horseshoe Bend cliffs and many of the mesas we saw on Sunday and Monday. Hard caps of silcrete topped these mesas. If you joined up all the mesas you would recreate the land level 20 million years ago, before the down warping of the Lake Eyre area caused the erosion of this old plain.

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## Rocky Range on North side of Archery Club

16 August 2014

By Connie Spencer

Photos by Neil Woolcock & Connie Spencer

The start of the walk was a gentle stroll through an assortment of yellow daisies, mostly Sand Sunray – *Rodanthe tietkensis*, along a fence line from the Archery Club gate to the base of the range where it is truncated by Roe Creek. From here it was straight up – mostly on all fours! For once, I was actually thankful for Buffel grass, as the sturdy clumps provided good hand holds. Cec was a good leader and stayed behind to ensure all of us eventually made it to the top and what a view! Well worth the effort! Roe Creek and Temple Bar Station was a tranquil scene.

I don't know why I envisaged the top of the range to be a gentle stroll. It was anything but. We scrambled up and down and around sheer cliff faces – some of us a bit more agile than others. The views all the way making it all worthwhile. We noted Mountain Primrose - *Goodenia grandiflora* flowering on the cliff faces. Larger trees and shrubs on the range top were Holly Grevillea - *Grevillea wickhamii*, Blue Mallee - *Eucalyptus gammophylla* and Native Pine - *Callitris glaucophylla*. The Orange Spade Flower – *Hybanthus aurianticus* was well pruned by grazing roos that inhabit the range and there must have been a sh\_t-load of them judging the amount of roo poo!

We stopped for refreshments (Neil and Leigh provided a bar of chocolate) in a flatish sheltered area and an obvious meeting point for the local inhabitants, before moving on to our descent into the Archery Club. At



first glance, I thought not possible but with careful zig-zagging down the slope all was well. Once down off the range we followed Archery Club tracks out into an open plain – a sea of Buffel grass but also the home of some wonderful old gnarled Corkwoods – *Hakea divaricata* and majestic Ghost Gums.

A two hour walk turned out to be a three to four hours, but that is par for the course. Back at the gate, most of us opted to climb over, but not so Leigh who decided to go under the fence. So, while Leigh de-prickled herself, the rest of us enjoy mandarins supplied by yours truly. Thanks Cec! It was not a “doddle in the park” but well worth the effort.

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## WIGLEYS GORGE TO THE TELEGRAPH STATION

23 August, 2014 by Rhondda Tomlinson

Rosalie, Connie, Beth, Collette and Rhondda met up at the Telegraph Station to leave our cars and we were picked up by Gavan and taken out to the parking area at Wigleys Waterhole. Thank you very much, Gavan.



We headed down into the gorge and the plant people were taken with the struggling surviving plants that grew in rock crevices and even managed to produce flowers to highlight their presence. I was taken by the pool reflections as well as Rosalie and Collette reflecting on the red towering cliffs.



We paused to examine the flood indicator which Beth was quite intrigued with. The varied terrain was amazing to see with the rock formations and dry river bed all having examples of their own individual plants. We sat on a bench under a very large and impressive gum tree and contemplated our surroundings and were passed by one lone biker.

Our next stop was to sit atop a very large rock with a 270° view near a communications tower. This was such a peaceful place that we were very reluctant to move on but on we must. We saw at least 3 varieties of Ptilotus and Sennas were very common. Any further plant reports please ask Rosalie or Connie. We saw and heard Finches and a couple of Willy Wagtails which always supply entertainment for both themselves and us. We then followed mountain bike trails back to the Telegraph Station.

Thank you Rosalie for a great morning!

### ***Olive Pink Botanic Garden Summer Caretaker – Volunteer Position: Own Caravan Required***

*The Olive Pink Botanic Garden is inviting applications for the position of Volunteer Caretaker over the Christmas/New Year period. Park your caravan on site and enjoy the Garden in a unique way. Electricity and toilet facilities are available. The only duties are to lock the gates at 6pm and liaise with security should there be any disturbances. There are regular security patrols of the Garden.*

*Email: [curator@opbg.com.au](mailto:curator@opbg.com.au) if you are interested.*



**ALICE SPRINGS FIELD NATURALISTS CLUB INCORPORATED**  
**Minutes of the general meeting held at the Higher Education Building**  
**Charles Darwin University – Wednesday 10 September 2014**

Following a presentation by Michelle Rodrigo on *Kati Thanda – Lake Eyre*  
Thanks to Rosalie Breen for note taking and Rhondda Tomlinson for supper

**Meeting opened** at 8:40pm

**Present/Apologies:** as per attendance book (13 members, 1 visitor & 1 apology)

**Previous minutes** accepted by the meeting.

**Business arising** from the minutes – nil.

**Correspondence In/Out**

- Jill Brew (via email and telephone from Canada) sent July 2014 treasurer's report.
- Victor Cherikov via email requesting photos of Wild Orange (*Capparis mitchellii*) & Native Currant (*Psyrdrax latifolia*) fruit for a bush foods book he is writing. Photos sent with a request for acknowledgement and a copy of the book for ASFNC when published.

**Treasurer's Report**

Balance as at 31 July 2014	\$3,029.31
Plus subscriptions	385.00
Less expenditure	<u>96.99</u>
Balance 29 August 2014	<u><b>\$3,317.32</b></u>

Report accepted by the meeting.

**General Business**

- Cec Sutton reports receiving a lot of spam which she thinks is generated from the ASFNC email address. As Cec is no longer on the committee and others not experiencing the problem, it was decided to keep email address as is.
- Signatories to ASFNC Westpac bank account. Moved by Barb Gilfedder that the following members be signatories: Barbara Gilfedder, Lee Ryall, Neil Woolcock & Connie Spencer. Seconded by Margaret Lawrence.

**Past Outings/Activities**

- Sat 16 Aug 14 – walk along the Ilparpa/Archery Club Range led by Cec Sutton. Connie to write report and Neil and Leigh to provide photos.
- Sun 17 Aug 14 – planning meeting held 33 Battarbee St. 6 committee members present. Program put together until the end of the year and early 2015. Many empty spaces during Oct/Nov. If anyone has ideas, let a committee member know.
- Sat 6 Sep 14 – work shop on plant census at Olive Pink Botanic Garden. Several ASFNC members involved in the project.
- Sun 7 Sep 14 – ALEC Biodiversity Matters trip to sewage ponds led by Barb. Many participants had never been before.
- Barb advised that wildflowers at Rainbow Valley are stunning and well worth a trip.

**Future Outings/Activities**

- Sat 27 Sep 14 Eastside walk including Mount Bond. Leader Cec Sutton.
- Fri 3 Oct 14 – Eastside walk. Leader Cec Sutton
- Wed 8 Oct 14 – ASFNC meeting. Speaker: Adam Yates from NT Museum on *Beetles*.
- Sat 1 Nov 14 – Bike ride/walk to The Knoll on Simpsons Gap Bike Track. Leader Connie Spencer.
- Wed 12 Nov 14 – ASFNC meeting. Speaker: Peter Nunn on *Black-breasted Buzzards*  
APS and Birdlife events were also mentioned.

**Sightings**

- Whilst gliding at Bond Springs Gliding Club, Wendy & Ian Mann saw a Wedge-tail Eagle flying along beside them using the same thermals. They also spotted a Bearded Dragon on the corner of Undoolya Rd and Kurrajong Dr.
- Marg Lawrence spotted a Crimson Chat at Rainbow Valley.
- Barb Gilfedder reported seeing a Black-flanked rock-wallaby in Palm Valley
- Juvenile White-faced Heron seen by Bev Gray
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**Next Meeting** – Wed 8 Oct 2014. Speaker: Adam Yates from NT Museum on *Beetles*.

Scribe – Lee Ryall,

Supper – Wendy & Ian Mann

**Meeting closed** – 9pm