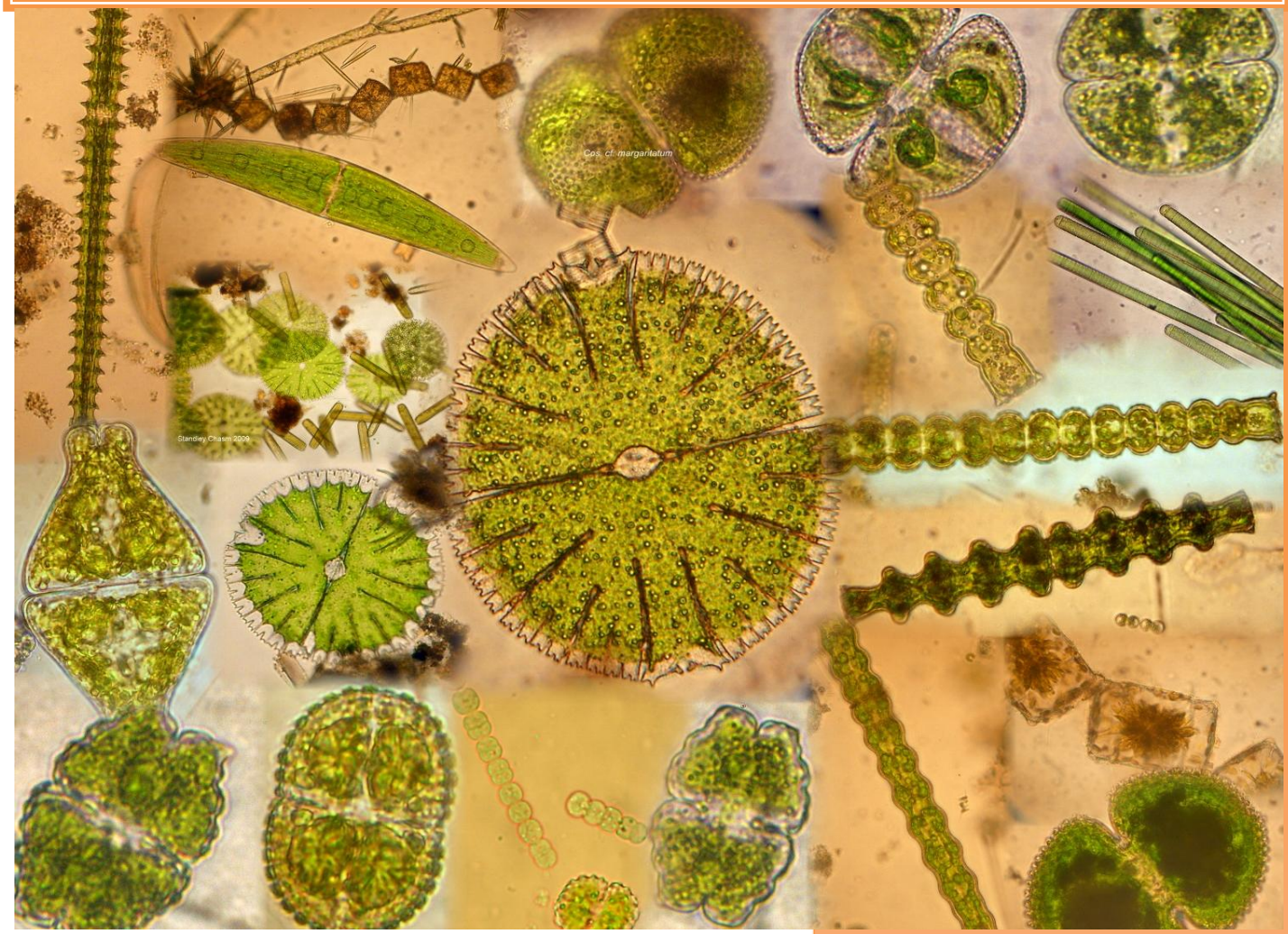
June 2014

Alice Springs Field Naturalists Club Newsletter



Joan Powling sent in this stunning collage of microscope photographs of some desmids and a few other things, including some blue-green algae from the trip to Newhaven a few years back. Amazing!

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

Web site: http://www.alicefieldnaturalists.org.au

Email: contact@alicefieldnaturalists.org.au

NEXT NEWSLETTER

The deadline for the next newsletter is **Friday 20 June 2014**.
Please send your contributions to the club email contact@alicefieldnaturalists.org.au
Please send photos and text separately.

ALICE SPRINGS FIELD NATURALISTS CLUB

Contact: contact@alicefieldnaturalists.org.au

Tower Rock trip has had to be postponed until later in the year.

Wed 11 June **Meeting** 7.00pm at Charles Darwin University Higher Education Building lecture theatre.
"A journey through Victoria, Field Naturalist style: recording the sights and sounds of a region" Pamela Keil and Michael LaFlamme.

Sat 21 June **Ooraminna Rock hole**. 100km round trip. Leaders: Jim and Marg Lawrence Ph 89525049 margnjim.asp@gmail.com

Tues 24 June **Extra Meeting** 7.00pm at Charles Darwin University Higher Education Building lecture theatre. Visiting speaker **Brian Timms** will talk about Brachiopods, specifically the fairy, clam and shield shrimps of Australia. He writes *"These primitive shrimps live in temporary waters and usually nobody notices them until some extra big one suddenly is seen and then weirdo wonderment ensues. Actually we have a rich fauna of about 125 species spread across the country, in any water without fish. It is hard to know them all, as many live in remote places, others appear only rarely, and some genera are endemic to Australia. After 20+ years of endeavour I have a handle on them as I study them both as an ecologist and taxonomist. I have many beautiful pictures and even a few absurd adventures to relate, all acquired in my quest for science with fun."* Don't miss this educational and entertaining talk.

Sat 28 June. **Red Range Walk.** Come and explore, mostly following a riverbed as it goes through a gap in the massive Red Range, near Corroboree Rock, a beautiful and interesting area. Bring lunch so we can enjoy the day. Maybe 8-10 km. Ring Rosalie Breen 89523409. Meet in Palm Circuit near Windmill Restaurant at 8.00am.

AUSTRALIAN PLANTS SOCIETY

Contact: APS Secretary karlee.foster@opbg.com.au

Sun 15 June **APS Meeting.** Bec Duncum and Jess Burdon (ASDP) will take us on a walk and talk through the 'Desert Rivers' habitat at the Alice Springs Desert Park. Bring your ASDP Territory Pass with you for entry, or leave enough time to pay the entry fee. Meet in the reception area ready for 10am departure!

Fri 4 - Sat 5 July APS AS at The Alice Springs Show –
Come and see us at the Show! A great selection of tube stock for sale as well as displays and friendly info! If you can volunteer some time either in helping set up or manning the site on these days, please contact Connie Spencer. Ph 8952 4694 constans@bigpond.net.au

BIRDLIFE CENTRAL AUSTRALIA

Contact: birdlifeca@gmail.com

Meetings are held on the 4th Wednesday of each month 7:30pm at the Alice Springs Desert Park meeting room.

Alice Springs Field Naturalists Club Committee Members

President	Barbara Gilfedder	8955 5452:	Public Officer	Rhondda Tomlinson	8953 1280;
Vice-President	Lee Ryall	8953 6394;	Property Officer	Rosalie Breen	8952 3409;
Secretary	Cecily Sutton	0412 501 396;	Committee Member	Connie Spencer	8952 4694;
Treasurer	Jill Brew	8953 0551;	Website and Newsletter	Pamela Keil	8955 0496.

email address: contact@alicefieldnaturalists.org.au

May Speakers: *"A Month in Ethiopia: a biodiversity hotspot and a fascinating country."* **Simon Ward and Robyn Delaney**

Robyn and Simon chose Ethiopia as a holiday destination because it ticked all the boxes – interesting plants, animals and land forms, incredible history, buildings and culture. They showed 300 photos and accompanied them with an animated commentary. Here are just a few of their wonderful photos.

I did not expect to see such wonderful castles but the Emperors of Ethiopia built some magnificent ones at Gondor in the 1600s.

Above fisherman perched on papyrus boats on Lake Awassa And right the old man Marabou Stork watches on. Below is a happy group of girls in the Simien Mountains and bottom right a giant Lobelia flowering again in the Simien Mountains. Bottom left are a pair of Ground Hornbills. I wish I had room for more photos. Robyn and Simon, you obviously had a wonderful time. Thank you for sharing it with us in such an entertaining way. Barb.

NEWHAVEN
25-27 April 2014

Rosalie Breen - My little piece of heaven at Newhaven is Susie's Lake. It is beautiful, a circular lake of clear water, soft underfoot, great for paddling, and looking for invertebrates and Charophytes. It was thick with *Chara porteri* , which grows below the surface, except for around the shallower edges. It felt very crisp.

Nardoo was growing too, not as thickly. Surrounding the water are meadows of, variously, sundew plants and small poached-egg daisies not in flower, and low herbs and grasses.

Sundews are carnivo-rous and as we entered the oasis the sun was glinting on the sticky exudate of the plants creating a splendid picture. Further from the water's edges are old and gnarled tea trees in many fascinating shapes. To sit among these trees consumed by the daisy perfumes takes you to another world. Towards the north from where the water flows, and has dried up, we found lots of shells of a small clam shrimp. They obviously like the shallow areas and complete their life cycle quickly leaving shells to intrigue.

Many dragonflies were flying around and on the bark of the tea trees we found discarded exoskeletons. After mating the female lays eggs in the water, these hatch to small larvae and nymphs, growing bigger with each moult. (incomplete metamorphosis). When fully grown these nymphs crawl out of the water, climb up a plant stem or, as here a tree, and shed their skin. It splits at the back and the adult emerges, taking some time for the chemical reactions which impart rigidity to the body and to "pump up" their wings before flying off to delight Field Nats.

On the way home we drove the Siddeley Range tour which takes you through a number of different habitats. Next visit we need to take a whole day to make the most of this area. There are sand dunes, low ranges, quartzite cliffs of the range, a bean tree grove, mulga woodland, honey grevillea, blue mallee, a bore with trough and yards and a mesa to climb. Anywhere you stop more interesting plants can be found.

Newhaven is really just too big and diverse to describe fully. Just make sure come next time. The notes for driving tours are very comprehensive and informative, and free to borrow. There are two good camp grounds with water, toilets and shower. East is best.

Connie Spencer – Newhaven The drive into Potato Creek Gorge was once again stunning with its variety of flowering plants and the Siddeley Range Tour deserves a full day to digest all that there was to see but my pick for the trip is a very common inland species of Teatree and not a plant that you would rave about too often.

Susie's Lake is surrounded by spectacular old growth Inland Teatree (*Melaleuca glomerata*). I was very taken with this single specimen and my photos don't do it justice. I wonder at how old it is and the stories it could tell of dry times, wet times and evading fire. Generally described as a small tree or shrub this has to be a Granddaddy of the species. Other features are its spreading branches (although can be upright) and whitish papery bark. It is a widespread species in inland Australia – found along water courses and often associated with saline habitats. It is a useful screening shrub in a garden and tolerates a variety of soils.

Colecoma centaurea is in the Asteraceae (daisy) family. It is a small perennial shrub from 20–50 cm, woody at the base becoming more herbaceous. Note the toothed leaves and pinkish flower heads. It grows in claypans and in sand in temporarily wet places.

Barb first came across the species on a trip to Newhaven in September 2013. The plant was duly photographed and Peter Jobson was able to identify it although not an easy task and it was not on the Newhaven plant checklist. Fortunately the plant was still growing in the same spot on our recent trip to Newhaven - on the edge of a claypan which was surrounded by Inland Teatree *(Melaleuca glomerata)* and *Calandrinia pleiopetala* (a parakeelya) growing on the sandy edges. This time we collected a specimen and recorded the exact location.

Hardly what you would call a stunning plant, nevertheless, an important collection for the NT Herbarium and received with much appreciation for this is now the most southerly known occurrence of this monotypic genus (only one species in the genus) which is endemic to the Tanami Desert Bioregion. *Photos by Barb Gilfedder and Jenny Purdie*

Colours at dusk at one of the beautiful stretches of water on Newhaven – Barb Gilfedder

Steve Sinclair and Jenny Purdie – Newhaven.

On our first afternoon we were lucky enough to be invited to tag along with one of the research teams conducting the annual fauna survey while they inspected the traps in the spinifex sand plain habitat. There were three sites each with three low fences made of rubber belting and with pit and funnel traps along the fences. The traps and funnels contained several reptile species which were identified, carefully measured and given a blue dot to identify them if they were caught again. Species included *Amphibolurus longirostris* – Long-nosed Dragon, *Ctenophorus nuchali* – Central Netted Dragon, *Ctenotus hanloni* – Nimble Ctenotus, *C. helenae* - Clay-soil Ctenotus, *C. leonhardii* - Leonhardi's Ctenotus, *C. pantherinus* – Leopard Ctenotus, *C. quattuordecimlineatus* – Fourteen-lined Ctenotus, *C .schomburkii* – Barred Wedge-snout Ctenotus, *Menetia greyii* – Common Dwarf Skink, *Rhynchoedura ornatus* – Beaked Gecko and *Varanus eremius* – Pygmy Desert Monitor. It took about 4 hours as the sites were about 30 km from the campground and we probably held the team up by taking photos of the lizards. Apparently this was the highest number of species the researchers had encountered at any one site.

An interesting fact that we had not heard before is that lizards are unable to run and breathe at the same time as the same muscles are used for both functions. So they run, stop and breathe and run again.
To top off the weekend and reptile scenario when we packed up our tent we discovered we had been sharing it with a Beaked Gecko!

HENBURY - A cattle station in respite
3-5 May 2014

Side view of stromatolites - Barb

Rosalie Breen – some new experiences. A first stop was a morning tea break, which seemed to be nowhere in particular. But we were lured up a small hill to discover, after hints from Meg and Colleen, that the little knobby rocks were stromatolites - fossil cynobacterial colonies , some of the earth's first life forms (Precambrian). They formed in shallow water and these organisms being photosynthetic , were responsible for generating oxygen into the atmosphere enabling other animal life forms to evolve. They were small stacks with growth bands visible and curving slightly upwards in cross section as layers of sand grains are cemented by the microorganisms. In flat section they appeared as rings on the rock surface. Need to observe with a bit of knowledge and deduction.

Lunch was at Snake Hole, which had much more water than last time and it was muddy not clear, so not as inviting as on our last visit. To cross the riverbed, to explore the sand hills on the other side we needed to walk to the east to get past the water. Up on the bank Colleen pointed out an area which would have been an Aboriginal workshop for stone tools, as there were worked stones and also some rocks that did not belong to the area. Again need to observe with a bit of knowledge. In the sand were long lines, smooth, about 10 cm wide. Again observation proved they were ant highways. Supposedly freeways are needed in this part of the world.

Morning at Duck Swamp camp - Rosalie

Duck Swamp depressions were dry still but there had been enough rain to fill some claypans with surface runoff water to make beautiful little lakes with reflections. One creek we crossed on the track to the east had the best ripple mud patterns I have seen for ages.

The camp spot at Duck Swamp is perfect. It is good to be able to have a community camp fire to sit around as a whole group and swap stories. We were entertained by Morgan's quiz with prizes of school supplies for quick and correct answers. The candle was recycled for the next night, but the scissors were most acceptable. Also it's interesting to watch cooking styles. Gary proved an expert with his BBQ, with Chris in attendance holding the plate waiting for the finished products. Morgan had his speciality – jaffles.

I also got to see Weener Waterhole, a lovely spot, with its backdrop of Christopher Pinnacle, and Salt Spring which seeps out of a gravelly layer into the Finke riverbed. This too was suffering from too much clayey water in the river, hiding its beauty. I found it interesting to note that some waterholes were clear and some muddy.

Another new thing this time for me was the location of a huge Coolabah. It needed four or five hugs to encircle its trunk. Some eagle eye (human) spotted it on the way in and showed it to the rest of the party on the way out. Thanks to Gary and Chris.

Henbury has so many wonderful places and many habitats, I have mentioned only a few, and the drive in is a special experience for 4W driving. It is sad to wonder that it might be invaded by cattle again and spoilt.

Rosalie seeing what exciting things she can find in Weener water hole - Barb

Henbury from Connie Spencer - Mystery Acacia

I was beckoned by Colleen to help with the identification of an Acacia on a deep red sand dune rising up from Snake Hole (a waterhole on the Finke River). It was a large bushy greyish shrub to 2 m x 2 m with bright yellow globular flower heads. A variety of names were bandied about but nothing seemed to fit. A specimen was collected and GPS reading taken. Back at our vehicles the specimen was passed around and the books and checklist consulted but still no positive id. The closest I could get was *Acacia melleodora* (Waxy Wattle) but Colleen was sceptical.

Our specimen has since been identified as *Acacia dictyophleba* (Sandhill Wattle) and I now can't understand why it was such mystery at the time. *Acacia dictyophleba* is on the checklist, is found to the south of Alice Springs and commonly in sandy soils and I knew all this at the time! I think the greyness of the shrub led me to Waxy Wattle.

Nevertheless, *Acacia melleodora* – from the Latin *mel*, honey and *odor*, smell, scent (ie; sweet smelling) is very closely related *A. dictyophleba* – net-veined (leaves). It is generally recognised by its smaller flower heads and by its generally smaller, less coarsely nerved phyllodes (leaves).

This was Colleen's reason for being sceptical about my identification. *Acacia melleodora* is much more widespread than *Acacia dictyophleba* and around Alice Springs is often found on rocky ground.

Chris and Gary Bastin

Thanks to the Field Nats for a very enjoyable weekend – good weather and good company. For us, there were two outstanding features: seeing what has to be one of the biggest, and perhaps oldest, Coolabahs in central Australia (see photo) and appreciating for the first time the network of claypans / lakes and connecting channels that form Duck Swamp. Thanks Barb for providing the Google Earth image and thanks Connie for the guided walk on Sunday morning (oh, and the delicious lemon cake too).

Above: The big Coolabah - Chris and Gary. Below: Connie's hug - Rosalie

Meg Mooney – Stromatolites.

Some of us climbed a small hill at Stan's morning tea stop on the way into Snake Hole and found stromatolites. From the Henbury 1:250,000 geology map sheet (sorry Rhondda, we were on it after all, in the SE corner), I found out that we'd happened on an area where the Bitter Springs Formation outcrops. The Bitter Springs is the second major layer of the Amadeus Basin, formed from the sediments deposited by the Amadeus Sea, which covered what we now know as central Australia from around 850 to 460 million years ago. The first and bottom layer of the Amadeus Basin is the Heavitree Quartzite, which makes up the ridge on the south side of Alice, the one the Gap goes through.

The Bitter Springs Formation is made up of limestones with some mudstone and gypsum and halite layers. It formed from muds and sands that settled 850 million years ago in shallow tidal lagoons, which sometimes dried up to produce salt layers (as in the Coorong at present). In some places colonies of single-cell blue-green algae grew in the

The little brown knobbles are the tops of stromatolites - Barb

shallow water. These algal mats had sticky surfaces which trapped mud and calcium carbonate form the sea. The colony continued to grow upwards through the trapped mud to make a new layer, gradually forming laminated mounds or columns. As the stromatolite grew, the colony often divided into small units, each growing upward as separate columns up to a metre high.

Today stromatolites are rare, being found only in very saline water, such as Shark Bay in Western Australia, which is too salty for most grazing animals.

From the University of California's Museum of Palaeontology website, I found out that stromatolites are now thought to have been made by cyanobacteria, no longer considered true algae. Stromatolites were widespread along coasts in the ancient Archean (2,500 to 4,000 million years ago). They began to decline during the Proterozoic (570 to 2,500 million years ago) but were ecologically important as the first reefs. The oxygen atmosphere that we depend on was generated by numerous cyanobacteria photosynthesizing during the Archaen and Proterozoic. The oldest known fossils are cyanobacteria microfossils from 3,500 million year old rocks in Western Australia. (The oldest rocks are only a little older, 3,800 million years old.)

Colleen O'Malley - Henbury trip was my last Field Nats excursion for a while and what magic company to share that experience with! The trip was also tinged with added poignancy as it was likely to be the last time we see this station in a cow-free state as it is back on the market and uncoupled from the lofty carbon farming goals of RM Williams.

A great tiki tour of wetlands and significant trees - including the biggest and gnarliest coolabah I've ever seen - made up the first day's agenda. Having camped that night at Duck Swamp we spent the next morning meandering through the interconnected (mostly dry) swamp and claypan complex, each wetland with subtly different vegetation and wetting/drying patterns related to differences in soils and proximity to the surrounding low dune system.

The last claypan. photo-Barb

Meg and I opted to go on when most of the group headed back to camp for lunch and we wandered on to the last of the claypans in that complex where Barb expected there may still be water. Along the way we saw a small group of Southern Whitefaces and then disturbed a pair of Budgies checking out a hollow in a Coolabah tree on the edge of a jewel-like claypan full of water - we sat in its shade and watched out for jumbucks for a bit. Ambling around the shore (examining the various remnants of former occupation by Aboriginal people - stone knife chips and bits of grinding stones) I was idly watching the stag above the Coolabah tree we'd sat under - drawn to the gentle whistling sounds coming it - when a Bourke's Parrot clambered out of the hollow and flew off. A short time later a wee feathered chick bravely emerged and sat outside (stock still) while Meg and I oohed and aahed.

The flower gatherers - Colleen, Rosalie and Meg
Photo - Connie

Very nice to see this iconic cattle station bustling with birds and with the native vegetation not thoroughly over-run by Buffel or grazed to within an inch of its being. Long may that last!

Trees in lines – Barb Gilfedder

Many trees form lines along either side of our inland waterways or in circles around salt pans and clay pans. When we were out both at Newhaven and at Henbury we saw this in action.

At Susie's lake on Newhaven, as Connie has explained, the Inland Teatree, *Melaleuca glomerata* forms a circle around the lake. This happens around many of the other lakes there as well.

On Henbury Station the big old Red River Gums stand guard along the banks of the Finke River.

At Duck Swamp, a series of interconnected clay pans, some of the pans are circled with Red River gums and some by Coolabah trees.

At Harts Camp Waterhole you can see lines of trees of similar age, obviously several years old, that are the result of mass germination at the edge of a previous high water level.

At Weener waterhole there is a row of seedlings, trees about half a metre high from a more recent flood level. (left)

However the real babies , we found back at Harts Camp. These tiny seedlings were crammed together at this year's water level.

Connie (top) was on her knees in amazement. The grey mass in front of her are all tiny seedlings, they stretched all along this edge of the waterhole. Sue picked up this fragment of drying surface mud that looked like a lump from a seedling punnet at the Desert Park.

The Eucalypt seeds float and the wind carries them to the edge of the water, where they germinate as the water recedes. Time and competition will sort out the survivors and maybe we will have another line of trees.

Woodland Trail – Jill Brew

The walk on the morning of Anzac Day along the first section of the Woodland Trail took about an hour and a half to get to Rocky Gap, with walkers choosing customised pace and observational activities. A wet walk up part of the creek bed to the gap was a (not unpleasant) surprise. The recent rain had given the water hole at Rocky Gap a refreshing recharge. We had a picnic break on the sandy foreshore facing the rock-face. It was a sunny and perfect morning for walking, exploring and just sitting (or swimming even). Then back along the same route with views across to Simpsons Gap and the range, and a return to town by 11.30 am.

The Knoll Walk and Ride – Barb Gilfedder

Three riders and three walkers set out from Flynn's Grave. The views along the ranges are beautiful in the evening light, though the amount of Buffel grass lining the path is disappointing. We all met up at the Knoll, the first picnic ground along the Simpsons Gap bike track. It was a pleasant temperature but the dusk fell soon after we arrived and the jackets were pulled from backpacks. Gavan just had time to climb the small rocky outcrop and we settled down with our varied picnics at one of the tables around a camp light turned to red (the white light was too bright). Several of us were grateful that Connie brought her can of Rid.

I had hoped that the moon would have risen to light our way home, but it too late and when we glimpsed it on the way home, it was peeping between clouds and although pretty, not of much value lightwise. Connie and Anne had good front lights, so I stayed close to them but still found it hard to anticipate the curves and gradients of the track. The walkers were braver switching off their torches and allowing their eyes to adjust to available light.

A pleasant experience for all participants!

ALICE SPRINGS FIELD NATURALISTS CLUB INCORPORATED
Minutes of the general meeting at Higher Education Building
Charles Darwin University – Wednesday 14 May 2014

Following a presentation by **Simon Ward and Robyn Delaney**
"A month in Ethiopia: a biodiversity hot-spot and a fascinating country."
Thanks to Sue O'Callaghan for supper.

Meeting opened at 8.40pm

Chair : Barb Gilfedder; Minutes : Jill Brew

Present: - 10 at meeting (14 members attended talk)
Apologies : 8

Previous minutes accepted by the meeting.
Business arising from the minutes - nil

Correspondence:

- Last month we received 3 copies of the Lake Eyre Basin Minister's Report to the Community . It contains an article by Anne Pye in which she mentions the Field Naturalists – thank you Anne! – Reports are available for circulation, please return at next meeting and pass on. Michelle Rodrigo, Communications Officer for the organisation has agreed to talk about it at our September meeting.
- Jane McCutcheon wrote seeking information on Jane Danne. Rosalie Breen and Rhondda Tomlinson both found relevant things that were passed on to her.
- Letter from Marie Ryan, thanking contributors and editors for quality of newsletter.
- Email re volunteer caretaker needed at Old Andado – has been forwarded to members.
- Email sent to Joe and Danae at Newhaven in appreciation of Newhaven trip.
- Email sent to Paul and Lesley at Henbury in appreciation of Henbury trip.

Treasurer's Report:
Balance as at 14th May: $3209 (no movement since last report) .

General Business:
- We have received a request for a donation to Australian Natural History Medallion Trust. The medallion recognises scientific professionals. Previous donations have been for $50, but not every year. It was agreed that $100 be donated this year. Jill to write cheque and send.

Past Outings/Activities:
- Newhaven and Henbury trips very popular and successful.
- Barbara noted stromatolites at Henbury.

Future Outings/ Activities:
- Friday 16th May bike ride. Meet at Flynn's Grave 5.30 pm (5 pm for walkers) for 4k ride/walk to picnic area and picnic tea.
- Sat 24th -25th May. John Hayes Rock Hole. Ian and Wendy Mann leading. Limit 5 vehicles.
- Same weekend - Neil offering trip to Rainbow valley. 89551201 or 0428521593.
- Tower Rock trip planned for June long weekend may be postponed. Pam Keil is unavailable to lead that weekend and has had no show of interest so far.

Sightings, etc:
- Rifle range area and clay pans have water – Connie.

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Next Meeting: 11th June 2014.

Speakers: Pam Keil and Michael Laflamme : "*A journey through Victoria in Fields Nats Style"*

Scribe: volunteer needed. **Supper** : Rhondda Tomlinson