



February 2019

Alice Springs Field Naturalists Club Newsletter



At our September meeting last year, Colleen O'Malley presented a very informative talk about lichens and liverworts. She mentioned an introduced liverwort, which frequently occurs in plant nurseries. So I went looking and found this specimen, with its beautiful array of spore-producing gemmae cups, in the top of a plant pot. Liverworts are in the Marchantiophyta division of the bryophyte group (non-vascular, spore producing, non-flowering plants) within the plant kingdom. 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.

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NEWSLETTER

The next newsletter will be March 2019.

The deadline for the next newsletter will be 23 February 2019.

Please send your contributions to Barb Gilfedder: bjfedders@gmail.com

Please contact leaders if you intend going on any field trips.

ALICE SPRINGS FIELD NATURALISTS CLUB

Wednesday 6 February from 6.00pm.

Beginning of the year picnic at Jessie Gap. Bring your own food, drinks, chair, insect repellent, etc.
A joint activity with Australian Plants Society Alice Springs.



(These photos were taken at a picnic in February 2012. Get out your magnifying glass for some old friends in the right photo.)

Wednesday 13 February

ASFNC Monthly get-together at 7.00pm in the lecture theatre in the Higher Education Building at CDU.
Basic Botanical Latin. Ever wondered how plants get their scientific names? Come and listen to a fun presentation by Cyd Holden of Olive Pink Botanic Garden, as he talks us through some interesting names, including some of our local natives. All welcome. Presentation followed by tea, coffee and a light supper and a brief general meeting.

Sunday 24 February at 2.00pm

ASFNC PLANNING MEETING at OPBG Visitors Centre. This is your chance to suggest speakers and trips for 2019. Please bring as many ideas as possible to the meeting, or if unable to attend, please let a Committee Member know your thoughts. All Members welcome! OPBG Café closes at 1pm so bring your own drinks and snacks if desired.

Alice Springs Field Naturalists Club Committee Members

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

Committee Members: Robyn Grey-Gardner 89 52 2207, Margaret Friedel 0417 849 743, Simon Brown 0429 359 593

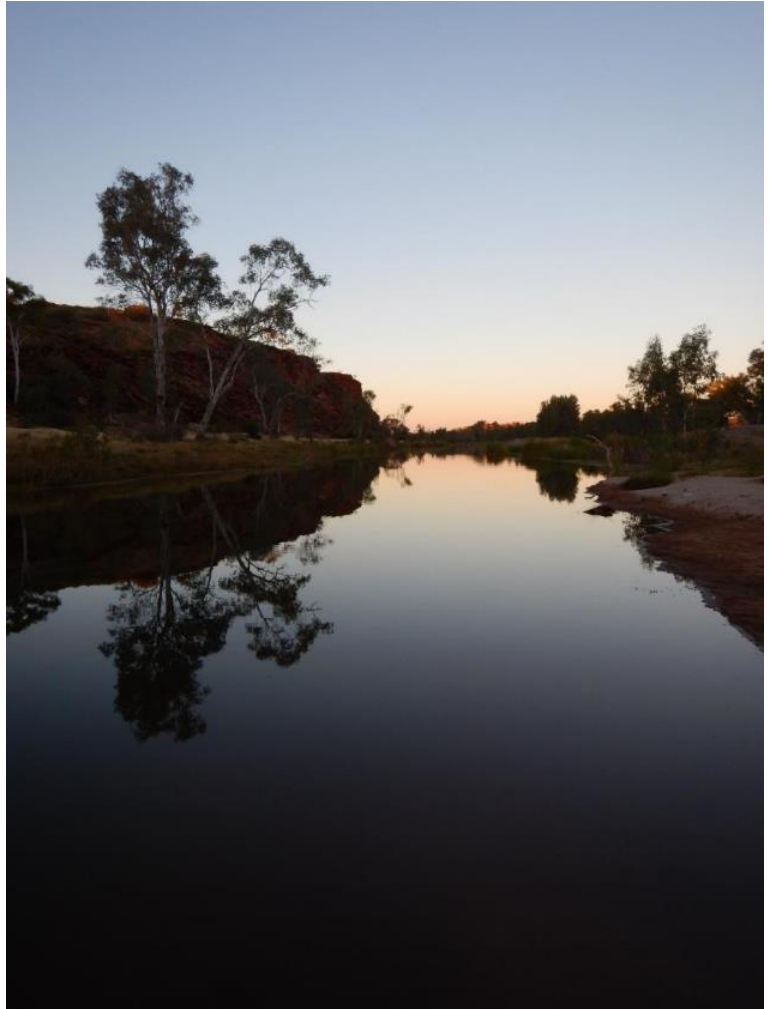
Some other Club Responsibilities: Newsletter – Barb Gilfedder, Minutes Secretary – Connie Spencer, Facebook Organiser – Colleen O'Malley, Website - Pamela Keil 8955 0496 and Robyn Grey-Gardner 8952 2207

ASFNC Presentation - 14th Nov 2018.
Report: Rosalie Schultz

Recent work at Running Waters and lessons learned for the broader Finke River - Dr. Jayne Brim Box

Two dramatic reminders framed Jayne’s presentation: the loss of animal populations and species across the globe, recently publicized by [World Wildlife Fund Living Planet Report 2018.](#), and the unfathomable age of the Finke River, which has flowed in the same course for at least 15 million and possibly up to 340 million years.

Running Waters is the largest of the permanent waterholes on the Finke River, permanency confirmed in both Aboriginal knowledge and isotopic analysis of the water. Its value is immense: economically, socially, culturally and environmentally. For the local Arrernte people, the great value of *Irbmangkara* was recognized through its use as a centre for ceremony and sanctuary for wildlife. This was reported by Ted Strehlow in “Journey to Horseshoe Bend”.



Running Waters' immense and diverse values include its status as a drought and evolutionary refuge, and its multiple different ecosystems including open water, riverine woodland and habitat for the iconic Red Cabbage Palm.



The Finke In Flood Near Hermannsburg (May, 1934)

Photo courtesy Robert Henderson Croll

Jayne described how desert rivers can have confined and unconfined reaches. In confined reaches, the river occupies a single channel, and waterholes are self-scouring during floods and remain largely free from sediment infilling; these segments are at equilibrium. Unconfined reaches are not at equilibrium, and their form may change, forming braids, islands and new waterholes; with sediments eroding then redepositing in floods. Running Waters is in a confined reach.



Jayne discussed three processes that are affecting the quality of the Running Waters ecosystems, because of it being in a confined reach: erosion of the waterway; deposition of sediment into the waterway; and a deterioration in water and habitat quality. Uncontrolled horse and cattle access underlies all of these, despite Running Waters being within a conservation covenant between Henbury Station and the NT Government, which requires that ecologically significant features not be degraded.



Running Waters is important for overall regional aquatic biodiversity and the persistence of species unique to central Australia. It supports 36 macroinvertebrates, 32 of which could not have the species named because they were either new to science or not included in taxonomic keys.

Jayne described the wonderful birds, bats, and snails that Running Waters supports. Special plants she discussed are the Marsh Clubmarsh and the Red Cabbage Palm, an umbrella species because, like tigers and pandas, it has charisma that demands popular support, that can protect less charismatic species. Running Waters is southern-most population of Red Cabbage Palm.



Photo Credit: Ashley Murphy

Jayne lamented the exposure of the Finke Goby to multiple threats. It is hoped that with appropriate management actions, the Running Waters population of Finke gobies can be saved.

Powerful extinction processes are underway and the microcosm of Running Waters is an example.

After a general discussion, some members suggested that if individuals are concerned about the future of Running Waters and its special species and ecosystems, they could write to Territory and Federal governments to urge action. Although Jayne feels despondent over what is happening at Running Waters, she thinks that with greater community effort, together we can turn things around for the Finke River.



Connie Spencer and Peter Jobson studying a reference sheet in the Alice Springs Herbarium.

A guided walk through the Alice Springs Herbarium - 17 Nov 2018

Report by Jill Brew,

Photo by Robyn Grey-Gardner

Peter Jobson was our entertaining guide, stepping us through the handling and storing of plant specimens, and giving a historical and also future slant on the herbarium. It's small, but was the first in the Territory (it is coded as NT, predating Darwin (DNA)). It's the only herbarium specialising in plants of arid Australia. It holds 65,000 reference sheets (the samples of identified plants). 99% of all arid species found between Elliot and the SA border are represented here. Closed in 1988 and joined with Darwin, it was reopened following strenuous local lobbying, is now located at the Alice Springs Desert Park, and is a place that is a library for all sorts of purposes not just botanical. It's also wonderfully cool in summer.

George Chippendale, the first herbarium

botanist, working at the AZRI site, followed systems he knew at the Sydney Herbarium to set up this arid lands collection. The purpose was originally to identify pasture grasses (detrimental and otherwise to stock) and to identify poisonous plants to stock. Chippendale collected widely – north to the Barkly and the Top End. He was followed in the position by John Maconochie, Bruce Thomson and Greg Leach. In 1993 the herbarium was reopened with Dave Albrecht and finally with Peter Jobson. Peter Latz, long associated with the herbarium, held the position of plant ecologist for many years.

As a result of Empire and Commonwealth connections, Kew holds old specimens from Australia.

Exchanging of specimens between herbaria across the world is usual practice such that the destruction of a herbarium in one locale won't extinguish all samples of a known species. (For example, Berlin Herbarium held a lot of overseas specimens, some from WA gathered by German botanists, but they were destroyed by allied bombing in 1945 during WW II).

Physical processing of collected specimens

The first step is a 'day press'. Each specimen goes between sheets of newspaper (sourced from helpful newsagents) to draw out moisture. At the end of the day, they go in to a 'full press' divided by sheets of corrugated cardboard with a lattice sort of frame – top and bottom – with straps drawn through to hold it all tight. The paper absorbs moisture, the corrugations wick it away.

Newspaper is not re-used for other specimens to avoid contaminating material.

A roof rack is also a good drying rack for a day or 2 in the field as the wind blows through the cardboard corrugations. With the dry climate here, the herbarium often uses the north face of the herbarium building to dry specimens.

Note-taking and identification

Field notes are made in a notebook – they include field identification, the date of collection, co-collectors, notes on habit of the plant, habitat and surrounding vegetation, soil, and a location. A GPS reading is now also included to record precisely the latitude and longitude.

A range of reference books is used to either confirm the field identification, or to identify it to species.

Database entry and transfer of specimen to other herbaria

Information is entered into a database, all of the data recorded in the field plus other items. These include: a unique sequential collection number, collector/s (as well as the co-collector), species name, date of ID,. The GPS recording is displayed onto a map; other collection points (of same species) are evident on the map. This is very useful in determining range extensions.

The NT database is called Holtze and feeds the eFlora NT, and also is linked to the national database in Canberra, feeding into the Australasian Virtual Herbarium (AVH). Holtze is updated every 24 hours. This is very useful as all name changes, corrections, or updates are also updated making these databases as accurate and reliable as possible.

The actual specimen is divided so that a part of it is sent to other herbaria either by courier, or via post for international locations. This is a requirement of Australian quarantine for importing and exporting scientific material.

Specimen mounting

The acid-free archival white card that the specimen is mounted on is around A3 size, a size also used by Kew Herbarium and thus the majority of Commonwealth based herbaria. Adelaide, with its historical connection to German herbaria, uses a larger size. A label with a unique accession number (generated by Holtze) and the recorded details is attached in one corner and archival tape – bleed free – tapes the specimen down on.

The main collection

We stepped through the door (it reminded me of a fridge door) and there it all was. There was a long workbench down the centre and compactus stretching down on either side. It was cold.

All specimens are first frozen at -120C, then they are brought into the 24/7 cooling of the main collection storage. Thus they are safe from insects, and the danger of fire is minimised with an oxygen depletion system that activates if the fire alarm is triggered.

Once mounted on the card, they are put into boxes with other specimens of the same species.

Comparisons of the collections housed under a species name can sometimes show the presence of a previously unknown new species.

An information tab, called a determination slip, is added onto the sheet if determination or species name changes.

If specimens are photographed, a colour bar is placed onto the sheet. This calibrated colour bar ensures that the colour in the photograph is true to the original.

Bulky carpological [seed] items that resist flattening are kept in plastic bags in a separate section. There is also a lichen and moss collection. Specimens may still be attached to rock or soil. All is in a paper envelope or bag, with the label firmly attached either inside the clear bag, or onto the enclosing flap of the envelope. There is also a 'spirit collection' – orchids, water lilies, etc – those species with a delicate form that would be lost if pressed, are kept in small glass containers. The fluid used currently is 70% ethanol with double distilled water.

Volunteers

Volunteers have been assisting at the herbarium for a long time, helping to mount, sort and put away specimens. The community involvement in the herbarium is a special part of the Alice Springs Herbarium’s history and greatly valued.

The availability of the herbarium

The herbarium is like a library that botanists from other herbaria, can borrow from, if they are studying a particular genus or family of plants. Seeds can be taken to test longevity and other seed trials. Researchers can study trends in the plant world such as: tell the history of the changing landscape from say pre-European settlement to changes due to local agricultural practice and introductions; the bias, preferences and places of observers who collected; and fix historical weather events from specimens collected at different times of the year. Shifts in flowering times can show weather and climate trends. The shrinking size of successive specimens of quandong fruits, for example, can tell a story. Artists have used the collection, taking photos for design purposes, drawings, paintings even patchwork. Peter welcomes visitors to the herbarium but requests a phone call to fix a mutually suitable time so he can be there to show you around and attend to your particular interest.

ASFNC Christmas Breakfast at Standley Chasm Kiosk





Moon rise/Sun set walk up Spencer Hill



Rosalie Breen carefully picked the best date and led a lovely relaxing walk up Spencer Hill.

Clouds added to the beauty of the sunset and the moon appeared super-sized and glowing orange as it rose above the horizon. Thanks Rosalie for organising and Jim Lawrence for the stunning photos!





ALICE SPRINGS FIELD NATURALISTS CLUB INCORPORATED
Minutes of the general meeting held at the Higher Education Building
Charles Darwin University – Wednesday 14 November 2018

Open: Lee Ryall declared the meeting open at 8:30 pm following a presentation *Running Waters on the Finke River* by Jayne Brim Box. Thank you to Jill Brew for supper and to Rosalie Schultz for taking notes.

Present: 20 members, 6 visitors and 6 apologies as per attendance book.

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

Business Arising:

- Website newsletter index – held over until next year due to absence of Robyn Grey-Gardner.

Treasurer's Report:

Balance of all funds (including petty cash) end of September 2018	\$3,142.79
Income for October 2018	
Membership	250.00
Interest	.29
Expenses for October 2018	0.00
<i>(Petty Cash</i>	<i>\$1.85)</i>
Total of all funds (including petty cash) end October 2018	<u>\$3,393.08</u>

The meeting accepted the Treasurer's report.

Correspondence:

- Many positive responses to the November newsletter. Barb – always encouraging to receive positive feedback.
- Email from Mitzi Ferguson who would like to interview a few members about our club and how it fits into and benefits the community, for a PhD study. Forwarded to members. No response as far as Barb knows.
- Invoice from AUhost4U our website host. \$99.98 for 3 years. Committee members, including Robyn and Pam Keil, happy to continue with this company. Barb paid using Paypal. Neil has reimbursed Barb.
- All other relevant information forwarded to members.

General Business:

Past Events:

- Sunday 3 November – *Variety Bash by foot*. Leader, Rosalie Breen. Although very warm, an enjoyable walk. Five participants.

Future Events:

- Saturday 17 November, 10.00am – Tour Alice Springs Herbarium with Peter Jobson.
- Sunday 18 November, 9.00 am – Breakfast at Standley Chasm kiosk (Ray's last day). Camp night before if desired. Come 7.30am to walk into Chasm before breakfast.
- Friday 23 November – *Moonwalk* with Rosalie Breen. Meet 6:20 pm Gosse Street Playground. Walk up Spencer Hill. See sunset and moonrise.

Next Meeting: Wednesday 13 February 2019 - Cyd Holden on Latin botanical names.

Scribe: Lee Ryall?

Supper:

Meeting Chair:

Sightings:

Sacred Kingfisher - Gillen area

Channel-billed Cuckoo – Eastside

Swinhoe's Snipe and Terek Sandpiper – Sewage Ponds

Black Kite dive bombing medium sized dog.

Baby Goannas near Steiner School

Meeting closed at 9:00pm.

Minutes compiled by Connie Spencer