August 2023

Alice Springs Field Naturalists Club Newsletter

Eremophila acrida bushes were seen flowering profusely on the Birthday Waterhole trip on 22 July. They are rounded, odorous shrubs to one metre high. The leaves are covered with sticky hairs. See more about the trip on page 8.

Meetings are held on the second Wednesday of the month (except December and January) at 7:00pm at the Olive Pink Botanic Garden.

CONTENTS

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The next newsletter will be published on 1 September2023.
We appreciate all contributions, articles and photos both local and elsewhere.
Please have them to Marg Friedel, capparis@iinet.net.au, by 23 August 2023.

ALICE SPRINGS FIELD NATURALISTS CLUB

Wednesday 9 August 7pm – ANNUAL GENERAL MEETING of Alice Springs Field Naturalists Club at Olive Pink Botanic Garden. This will be followed by Members' night. Please bring stories and pictures, a natural history item or a book to share.

Sunday 13 August – Proposed planning meeting

Saturday 19 August – Wallaby Gap and Euro Ridge. Leader: Marg Friedel

Wednesday 13 September 7pm – Speaker night at Olive Pink Botanic Garden. **Dorothy Latimer** re birds.

AUSTRALIAN PLANTS SOCIETY – ALICE SPRINGS

apsalicesprings@yahoo.com.au

Wednesday 2 August – Speaker night at OPBG at 7pm. **Angus Duguid - Some like it wet - plants that prefer wetlands.**

Wednesday 6 September – Speaker night at OPBG, 7pm. **Steve Morton – Plant ecology of Australian Deserts.**

GEOLOGICAL SOCIETY OF AUSTRALIA, NT DIVISION

Saturday 12 August 10.00 am to 2.30 pm. GSA NT are hosting an Earth Science themed event in Alice Springs that will include the launch of Anett Weisheit's new geological guide to the Larapinta Trail, a rock display of local Alice Springs rocks and other STEM activities from local organisations. ASFNC will have a small display. Venue is the Telegraph Station, with the book launch at 10.30 am. Registration is essential for public liability insurance purposes. More information at Geology of the Larapinta Trail - National Science Week Tickets, Sat, Aug 12, 2023 at 10:00 AM | Eventbrite.

Alice Springs Field Naturalists Club Committee Members

President	Marg Friedel	0417 849 743
Vice-President	to be appointed	
Secretary	Suzanne Bitar	0419 897 735
Treasurer	Neil Woolcock	0428 521 598
Property Officer	Claire Norman	0448 341 795
General Members	Jan Black	0400 303 123
	Wendy Mactaggart	0434 495 903
	Lisa McLean	0412 642 987
Public Officer	Anne Pye	0438 388 012

Other Club Responsibilities:

Newsletter – Marg Friedel / Barb Gilfedder

Facebook Organiser – Meg Mooney moon3@iinet.net.au

Website controller – position vacant

Naming a new plant species

Report of a talk by Dave Albrecht 12 July 2023, by Meg Mooney

Investigating a possible new species

Dave Albrecht gave an absorbing example of this process, from when he first saw a ground cover he didn't recognise, at the Ilparpa claypans after big rains in 2000. It looked something like an *Elatine* species he knew (*E. gratioloides*) but was different. Was it a new species, a weed, a hybrid, or simply a variant of *E. gratioloides?*

Dave collected specimens of the claypans plant, including leaves, flowers, fruit, seeds and roots and pressed them. He also put some specimens in alcohol. He used *Thonner's analytical key to the families of flowering plants* to confirm that the plant was in the Elatinaceae family, which has only two genera, and that it belonged to the *Elatine* genus.

Elatine gratioloides, waterwort, is widely distributed in Australia and found around sheltered rockholes in the MacDonnell Ranges. Dave collected specimens from the MacDonnell Ranges for microscopic comparison with the Ilparpa claypans plant.

There were some distinct differences. The claypans plant had larger sepals, almost as large as the petals, the fruit wasn't dehiscent (it didn't split open while on the plant) and the arrangement of cells on the surface of the seeds was different.

Dave examined NT Herbarium *Elatine* specimens and found they fell into two distinct groups, one of plants collected in the MacDonnell Ranges and the other in claypan habitats. He borrowed specimens from larger interstate herbaria to look at differences in *E. gratioloides* across the continent. These plants again fell into two clear categories, but there were far fewer specimens of the claypans group.

Looking at all these specimens helped Dave determine what characters weren't good for separating the two types. *E. gratioloides* is very variable: for example, the leaves vary a lot. The sepals and the behaviour of the fruit were distinctive, as already noted.

For the claypans plant to pass the test for a new taxon, Dave then had to be clear that the distinguishing characters of this plant were reliable, that there was no evidence of 'intermediates' between it and other species, that the variation in the populations was what would be expected for this genus, and that the plant was faithful to a specific suite of habitats.

Top photo is the groundcover Dave found at the claypans. Other two are photos of *E. gratiolodes*, the lower one showing dehiscent fruit.

The claypans plant passed these tests but before he formally described it Dave had to do the following:

1. Check that the plant was not an *Elatine* species from overseas.
2. Check how *E. gratioloides* has been applied in Australia. None of the descriptions included the distinctive features of the claypans specimen.
3. Make sure the name *E. gratioloides* has been correctly applied by examining the type specimen, from New Zealand.
4. Check that there was no existing name for the claypans plant type. Dave looked at high resolution images on the Global Plants website.
5. Decide on a rank for the claypans plant: species, subspecies or variety.
6. See if there were any other specialists better placed to describe the new species. (Unlikely!)

Naming a new species

Dave decided that the claypans plant was a new species and he named it *Elatine macrocalyx* because of its larger sepals. (The sepals, underneath the petals, form the calyx of a plant.) Dave then had to have a description of the species published in one of the Australian state or CSIRO botanical journals. These journals won't accept papers describing new species unless they conform to accepted standards. There is an international code of nomenclature with rules regarding new species. Whether the name is then accepted and used (or not) depends on how botanists agree with the author.

Dave's description of the claypans species was peer-reviewed and then published in *Nuytsia*, the Journal of the Western Australian Herbarium. His paper also included information on the distribution, habitat, ecology and conservation status of the new species and a new key to the *Elatine* genus in Australia.

Dave allocated a collection made by Peter Latz as the type of *Elatine macrocalyx*, with the main pressed specimen (Holotype) being housed at the Darwin Herbarium and a duplicate (Isotype) at the Alice Springs Herbarium. At the time of Dave's paper, specimens of *Elatine macrocalyx* were only known from several locations in central Australia (NT) and two in southwest Western Australia. *Elatine macrocalyx* has now been recorded at 14 locations in central Australia (NT), 7 in Western Australia and one in Queensland. Once a species is described, people notice it more.

Elatine macrocalyx, the new species, named by Dave, because of its larger sepals

Another new species

Dave also told us about another project he's been involved in regarding naming a new species. This is a *Brachyachne* species, an annual grass which is found on bare stony pavements in the Tanami desert and elsewhere. This grass is sparse and Dave wasn't able to collect many specimens of it. So he collected some soil where the grass had recently seeded, working at night by torchlight near Tennant Creek. He grew some of the grass from this soil at the botanic gardens in Canberra. The cultivated plants were studied closely when compiling the description of the new species. They were also valuable as subjects for closeup photos of the grass.

Dave said there was a paper published in 2015 in America that argued that *Brachyachne* should be included in the *Cynodon* (couch) genus. This proposal hasn't been universally accepted in Australia. Dave worked with a molecular biologist on this and they decided that there was sufficient uncertainty in the molecular data to describe the new species in *Brachyachne.*

The new grass species, *Brachyachne anisocarpa*.

Some new species in the pipeline in central Australia

- A *Calandrinia* species from the Chewings Ranges with lots of petals, quite compressed leaves and tuberous roots.
- An *Olearia* species growing out of rock crevices on Mt Edward, just south of Papunya.
- An *Olearia* species with a woolly mat of hairs where the leaves join the stem, found in the Waterhouse Range and Finke Gorge.
- A *Maireana* species found at Rainbow Valley and around Alice Springs.
- A *Sclerolaena* species on saline soils.
- Different *Caesia*, lily, species on Mt Zeil and Foster Cliff.
- Two new *Hibiscus* species, currently included under *Hibiscus sturtii* var*. grandiflorus.*
- Two *Abutilon* species, currently both included under *Abutilon leucopetalum*.
- Dave also noted that *Cymbopogon ambiguous*, lemongrass, currently includes types with narrow, concave, blue leaves and with broad flat, green leaves. He thinks these might be distinct taxa.

A *Calandrinia* species from the Chewings Ranges. The flowers have lots of petals, quite compressed leaves and tuberous roots. This one growing beautifully in the Desert Park nursery.

Thank you Dave, for a terrific talk!

Tyape-Apwelantye walk

Marg Friedel and Tanya Hattingh

We set off from the Telegraph Station on the Larapinta Trail on a chilly 2°C morning in July, wearing jumpers and jackets. After the first 2 km we began peeling off layers before cutting across to the Tyape-Apwelantye mountain bike trail and heading for Wigley Gorge. Soon after, we heard the familiar calls of small groups of Zebra Finch sheltering from the chill and the less familiar song of the Grey Butcherbird – far less frequent than its cousin the Pied Butcherbird. And then stumbled across two Spinifex Pigeons foraging on the path. As people familiar with this walk will know, the trail follows the original north road for some distance before climbing up nor-nor-westwards towards one of the old seismic stations. High on the ranges, the views from here are spectacular (above), so always worth the short detour.

Returning to the trail, we walked northeast, crossing the old north road and stopping to photograph an old Ghost Gum at the junction with the 'Road Train' bike trail. Passing through rises and falls of stony woodlands, we admired silvery Long-leaf Corkwoods plus one lone Fork-leaved Corkwood (*Hakea divaricata*) high on a rise. Approaching Wigley Gorge the trail provides a pleasantly broad view along the valley that's used for vehicle access to the southern carpark.

While resting at the carpark, we enjoyed watching a pair of Australian Ringnecks/Port Lincoln Parrots feeding in the magnificent Red Gum overhead and listening to a family of Grey-crowned Babblers frolicking nearby. Despite soaking up the sun we found the chill beginning to catch up with us, so we set off with creaking knees on the return journey. Marg noticed the increased amount of Buffel Grass in comparison to her previous walk, around two years ago. This time, there was little room for flowering perennials, although there were still a few gems (see *Swainsona* below), and the underlying soils and rocks were scarcely visible in places where they had been previously.

All up, the return journey was about 10.5 km but walking one way is also possible given there's vehicle access at both ends. The advantage of starting at Wigley Gorge is the coffee at the OTS café at the other end – just a thought for a club field trip?

Photos by Marg from top: view from prominent seismic aerial towards the Heavitree Range;

Old Ghost Gum *Corymbia appararinja*;

Long-leafed Corkwood *Hakea lorea*;

Swainsona sp. flowering well.

Tanya's bird list

2 Spinifex Pigeon
4 Galah
2 Australian Ringneck (Port Lincoln)
30 Budgerigar
6 Splendid Fairywren
2 White-plumed Honeyeater
1 Brown Honeyeater
1 Red-browed Pardalote
1 Thornbill sp.
4 Grey-crowned Babbler
1 Black-faced Cuckoo-shrike
5 Crested Bellbird
2 Grey Shrike-thrush
1 Grey Butcherbird
2 Pied Butcherbird
1 Australian Magpie
1 Magpie-lark
3 Little Crow
16 Zebra Finch (Australian)

Photos by Tanya: *Ptilotus sessilifolius, Senna artemisioides* subsp. *artemisioides*, a Golden Orb spider egg case in a *Hakea divaricarta, Chrysocephalum pterochaetum.* Bottom photo by Marg: near Wigley Gorge.

Birthday Waterhole – a special day out

Barb Gilfedder

It has been so long since I had been out bush any further than Ilparpa, I was really looking forward to this trip. It exceeded my expectations. We met out at Flynns Grave and 25 of us piled into Charlie Carter's 10-seater bus and 4 smaller vehicles.

Charlie and Deb Clarke gave Field Nats a talk about a trip they had made out there last year after heavy rains had caused havoc with the track along the Hugh River and knocked over many old gum trees https://alicefieldnaturalists.org.au/22_06.pdf. Since then, a grader had put the track to rights, in some places having to realign it. Charlie was in tour guide mode and pointed out things of geological interest along the way. We all stopped at a small outcrop of dolerite beside the track (left). It had been recently burnt but grasses (not all buffel we hope) and some shrubs were reshooting with the more recent rain. The photo illustrates the demise of what was once a large *Acacia kempeana.* There were little holes among the rocks but we were unsure what animal may have made them.

In fact, it was quite sad to see so much evidence of burning alongside the track, particularly, I thought, some large corkwoods near the windmill and tank. I hope they reshoot.

The road was bumpy and there was evidence of the rain with large puddles stretching across it in places. The waterhole looked clear and clean enough to swim in, but the wind was much too cold to even consider a dip.

Deb quickly organised people onto 3 possible walks, along the path to the Larapinta Trail shelter with her, a rougher but flattish walk with Charlie or a climb up the hill with Wendy Mactaggart. Everyone gathered their backpacks and some picked up walking poles and I was by myself, the only non-walker. After a leisurely morning tea, I explored the adjacent river bank. There was *Cenchrus ciliaris* but so much more. The *Stemodia viscosa* was covered in flowers (below), as was the *Cullen australasicum.* There were several straggly *Indigofera helmsii* bushes, some very lush *Marsilea* sp. I couldn't find any sporocarps on it but the leaves looked enormous. There was a beautiful *Indigofera basedowii* (below), a metre across, and a single *Acacia strongylophylla* (below), both in full flower. I was also taken with a couple of tall grasses swaying in the wind, *Leptochloa digitata* (below) and *Themeda avenacea* as well as the much smaller *Eragrostis elongata*. I enjoyed the time on my own and the freedom to concentrate on taking photos.

As the various parties returned, the wind became stronger and we huddled sheltered behind the bus, for a very sociable, chatty time as we ate our lunches (right).

On the way back I swapped vehicles to travelling with Deb. The highlight was stopping to take photos of the *Eremophila acrida* (see front cover). I had discussed with Connie whether it was *E. acrida* or *E. elderi.* They are fairly similar. The main difference seems to be that *E. elderi* has ribs or wings extending down the stem from the leaves, where *E. acrida* does not. Also *E. elderi* generally occurs on higher ranges.

I found it such an enjoyable day. Many thanks to Deb Clarke and Charlie Carter and all the other participants for making it so.

Rosalie Breen

Having walked in this area in the past and being interested in freshwater macroinvertebrates and algae, I really wanted to revisit Birthday Waterhole, so a big thankyou to Charlie and Deb for the opportunity.

The orange scum on the surface of the water shown in Deb's photos of artistic swirls of "paint" was a drawcard. Fascinating, beautiful! Samples from Charlie's visit about a month ago were investigated under my microscope and identified by Joan Powling, an algae expert in Melbourne, as *Botryococcus*. More about that coming in the September newsletter.

This time using my bigger net I took sweeps through the water and rather disappointingly found few macroinvertebrates. My ID skills are a bit rusty but I found the long legged water strider bug, tiny scuttling mites with their eight legs, some Cladoceran or water fleas which zip around erratically using their branching antennae, including one with a great clump of eggs seen through the carapace which encloses the body and part of the head. These eggs can survive drought. There was a red Chironomid or non-biting midge with two black eyespots on its capsule head. I am sure there were plenty of other little critters to be found, as part of the food chain in the waterholes. I did not sample the mud.

Above: "artistic swirls" – *Deb Clarke*.
Left: Rosalie with bigger net and, below, examining the catch – *Marg Friedel.*

Wendy Mactaggart

Climbing the range at Birthday Waterhole

It was very pleasing to see so much regrowth of native vegetation on the range slope following a fire in the area earlier in the year. It will be even more spectacular in coming weeks when many more plant species will be flowering. Connie Spencer could identify the ones that were already flowering (and the many that weren't).

Top: View from the top of the hill of Brinkley Bluff. Below: The view of Birthday Waterhole from the top. Below right: Kangaroo Grass, *Themeda triandra* recovering well after the fires earlier in the year. All photos – *Wendy Mactaggart.*

Sally Bryan

Wonderful day at Birthday Waterhole! I walked with the group led by Deb who showed us these stunning stripy rocks (left).

Suzanne Bitar

Captured this great photo of a White-necked Heron (below).

Tanya Hattingh and Jane Bannister

Bird List at Birthday Waterhole

3 Grey Teal
3 Australasian Grebe
1 Crested Pigeon
1 Horsfield's Bronze-Cuckoo
1 White-necked Heron
1 White-faced Heron
1 Black-shouldered Kite
1 Nankeen Kestrel
1 Brown Falcon
30 Budgerigar -- several small flocks
5 Singing Honeyeater
8 White-plumed Honeyeater
5 Brown Honeyeater
1 Red-browed Pardalote
8 Weebill
1 Willie Wagtail
1 Magpie-lark
2 Little Crow
1 Red-capped Robin – male
1 Mistletoebird
60 Zebra Finch (Australian)

Jane Bannister

Falcon at Birthday Waterhole

I went north of the waterhole and around to the east with Charlie Carter and others. Almost immediately we heard the screeching of a bird of prey, which I instantly recognised as a Brown Falcon. The bird flew across the face of a pale, sheer quartzite rock face, and on to the west. Many opinions were that it was too pale for a Brown Falcon. However, Tanya was so quick with her wonderful camera and caught it beautifully in flight on her screen, that there was no doubt at all that this magnificent bird was indeed a Brown Falcon. Thanks Tanya, what a wonderful photographer.

[Ed. Unfortunately Tanya did not keep her photo.]

Barb Gilfedder also saw a Black-breasted Buzzard from the car on the return journey.

Peter Bannister compiled this list and others have added to it

A few plant species on the flattish walk north of the waterhole, led by Charlie Carter

Acacia aneura (Mulga)
Acacia strongylophylla (Round-leaf Wattle)
Calotis latiuscula (Leafy Burr-daisy)
Calotis hispidula (Bindyeye)
**Cenchrus ciliaris* (Buffel Grass)
Corymbia aparrerinja (Ghost Gum)
Cullen australasicum (Tall Verbine)
Digitaria brownii (Cotton Panic Grass)
Enneapogon polyphyllus (Woolly Oat-grass)
Eremophila acrida
Eremophila freelingii (Rock Fushcia-bush)
Eriachne pulchella (Pretty Wanderrie Grass)
Euphorbia tannensis (Caustic Bush)
Fimbristylis sp. (A sedge)
**Melinis repens* (Red Natal Grass)
Rostellularia adscendens (Pink Tongues)
Senna artemisioides subsp. *Oligophylla* (Oval-leaf Senna)
Solanum lithophilum
Themeda triandra (Kangaroo Grass)
Tripogon lolliformis (Five-minute Grass)

*Introduced species

Corymbia aparrerinja (right – photo Tanya Hattingh). Peter noted that these Ghost Gums had been scorched by fire and consequently looked quite different. As a result of scorching, they had epicormic shoots. The large oval leaves on the shoots fit with Anne Urban's description of young leaves being 50-155 mm long and 20-65 mm wide.

[Ed. Many thanks for all the wonderful photos that have been sent in. Sorry we couldn't squeeze any more in.]

Clockwise from top left:
Swainsona flavicarinata - Tanya Hattingh
Calotis latiuscula – Suzanne Lollback
Cullen australasicum – Barb Gilfedder
Stemodia viscosa – Suzanne Bitar

Annual subscriptions are now due

After more than 14 years of unchanged fees, the Club has increased the cost of annual membership. While Treasurer Neil Woolcock was confident that we would have adequate funds to maintain our standard expenses, the potential to support worthy projects or simply to buy something for the club was limited. The Alice Springs membership was initially canvassed for opinions, and all responses were supportive. The fee proposal was subsequently put to a brief general meeting at our recent speaker night and agreed. All categories of full membership have increased by $5; interstate newsletter subscriptions are unchanged. Here are the details:

Family $35 Family concession* $30 Individual $25 Individual concession* $20

Life membership – ten times normal fee.

Members living interstate – Newsletter only – $10

*Concessions are for students and unemployed/retired members

Subscription year is from 1 Aug to 31 July. Westpac bank details: BSB No. 035303, Account No.100981. Please include your name as a reference on the transaction.

For intending new members, a link to the application for membership is on the Club website https://alicefieldnaturalists.org.au, under Contacts & Fees. Email your form to contact@alicefieldnaturalists.org.au. Don't know members who can nominate and second you? Send the form and we will arrange signatories. Bank details for payment are as above. Half subscription after January for new members.