



August 2010

Alice Springs Field Naturalist Club Newsletter



Sennas are looking wonderful at the moment, in full flower.
This one is *Senna artemisioides nothosubsp. sturtii*: Barb Gilfedder

Meetings are held on the second Wednesday of each month (except December & January) at 7:00pm at the Higher Education Building at Charles Darwin University. Visitors are welcome

Look - New Meeting Venue and Start Time.

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NEXT NEWSLETTER

The deadline for the next newsletter is **Friday 20 August**. Please send your contributions to Emily Findlay – robbiemily@hotmail.com

MEETINGS

Alice Springs Field Naturalists

Wed 11 August: **Members' Evening.** Please bring your photos of natural history, field trips, plants, birds, animals etc. to share, either on a disc or memory stick. Alternatively bring an interesting item.

Alice Springs Field Naturalists Club Incorporated Annual General Meeting.
If you would like to nominate yourself or another member for a committee position please contact a current committee member.

Annual Membership Fees are now due. Please help the treasurer by renewing promptly.

Sun 22 August: **Planning Meeting** at OPBG at 2.00pm. All members welcome.

Australian Plant Society

Wed 4 August: **APS Meeting at 7.30 pm** at Olive Pink Botanic Garden. Speaker is **Andy Vinter** on "Buffel control and plant regeneration in Northside parks - A review of 7 years of spraying effort."

FIELD TRIPS / ACTIVITIES

Sun 8 August: **Day Walk - Standley Chasm to Bridle Path Lookout.** 10 Km return. This is part of the Larapinta Trail and follows a picturesque watercourse from and then steeply ascends to Bridle Path Lookout. Climbers will be rewarded with rich variety of vegetation and spectacular views. Contact Colleen O'Malley 0420 719778.

Sun 15 August: **Drive and walk to site of old mica mine off The Gardens Road.** Remains of old mine, lush hills, flowering plants and birds. High Clearance 4WD needed. Return distance 200-250km. Subject to landowner permission. Meet at 8.00am at Sargent Street sign on North Stuart Highway. Contact Meg Mooney 8952 8029.

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Dr Ashley Sparrow from CSIRO on Landscape Ecology in Antarctic Dry Valleys

Report by Rosalie Breen

What a chance to see some aspects of Antarctica which do not fit into the usual concept – the dry valleys. These are areas which are free of surface ice, mainly in the McMurdo Sound area. The Trans Antarctic Mountains which rise to 4000 metres hold the Antarctic ice cap back from entering these valleys and moving to the coast of the Ross Sea, and the katabatic winds flowing ferociously downhill from the high, cold ice sheet to the coast are very drying.

Ashley was relating these cold deserts with his previous experiences of hot deserts in central Australia. “It’s all to do with water”, when and where it is available. Hot deserts occur at the interface of the liquid and gaseous phases, where evaporation is the key factor that which determines availability of liquid water for life. In CA the deserts can in turn be dry and barren, flooded, or growing green after water inundation. Actual availability of water is more governed by runoff patterns than where the rain falls, so redistribution is variable and dependent on the landscape. And we know irregularity of rainfall is an important factor. Cold deserts depend on the availability of liquid water at the interface of solid to liquid phase. The majority of the water is ice.

We had a view of the Wright Valley, a wide and beautiful valley shaped by glaciers, with the Onyx River flowing to Lake Vanda, largely ice-free. Between the valley and the coast is a saddle made of debris or moraine from the glacier long-departed, which sends the river inland to the Lake and not the sea. In the background are the TA Mountains and the main ice sheet. The land surface is mostly pebbles with occasional bigger rocks.

The field work for Ashley and his colleagues was conducted mainly in the Garwood Valley. Here the surrounding glaciers provide



meltwater for streams which feed the river and lake. In the photo of the face of the Joyce Glacier there were what looked like sand dunes and river deltas. The dunes were actually moraines, covered with very fine sand blown back by the coastal breezes, and with bigger rocks perched on the tops. Also there were tiny stream lines from small patches of snow on the slopes of sides of the valley.

These extreme conditions of cold, drying winds, low water availability (only in Dec and Jan are temperatures above freezing) make for very simple ecosystems – skeletal soils with little organic matter, low biodiversity, and simple food webs, with most species being microbial, both

producers (cyanobacteria, green algae and moss), and decomposers (bacteria and fungi). Those that eat the “herbs” include nematodes, tardigrades, springtails and mites. The top predator is a 1.5 mm red mite!

From the consequences of water flow and soil features the landscape can be ranked on available water, ranging from the sand dunes to the lake edge. Low ranked soil communities (drier) were limited in producing biomass by nitrogen, as they were mostly carbon respirers and a nitrogen sink. The wetter soils were a source of carbon and nitrogen, with both C and N fixers and respirers active.

So you can wonder about the sources of soil organic matter. Ashley suggests four different sources

- 1 Legacy model – deposits from ancient lakebed mats of cyanobacteria and algae from when the area was warmer and wetter, with very large, productive lakes
- 2 Actual on-site cryptic production of algae and mosses. You can’t see all life from the surface. Much of the pebbles and sands of the area are light-coloured sandstones or marble, allowing enough sunlight to pass through to the underneath where the primitive plants can photosynthesize for growth. This was dramatically shown in a picture of the top surface stones scraped away to reveal a green patch of moss growth underneath.
- 3 Long-distance marine deposition. This means the decay over many, many years of stranded seals or penguins, lost and dead far from their sea home.
- 4 Spatial subsidies from aquatic environments. A relationship (complicated) between nutrient distribution from water flow and blowing winds. A diagram explained all this, the factors being much dependent on the actual landscape

patterns, and indicated the various areas receiving the most nutrients in addition to degree of wetness and soil stability to identify the biodiversity hotspots.

From this study an understanding of the drivers of soil organic matter were gained, along with knowledge of simple ecosystems. The landscape patterns are important as an indicator or predictor of potential of biomass and high biodiversity areas, not only in Antarctica, but in other places too.

A really interesting presentation appreciated by a record number of members and friends.

Thank you Ashley.

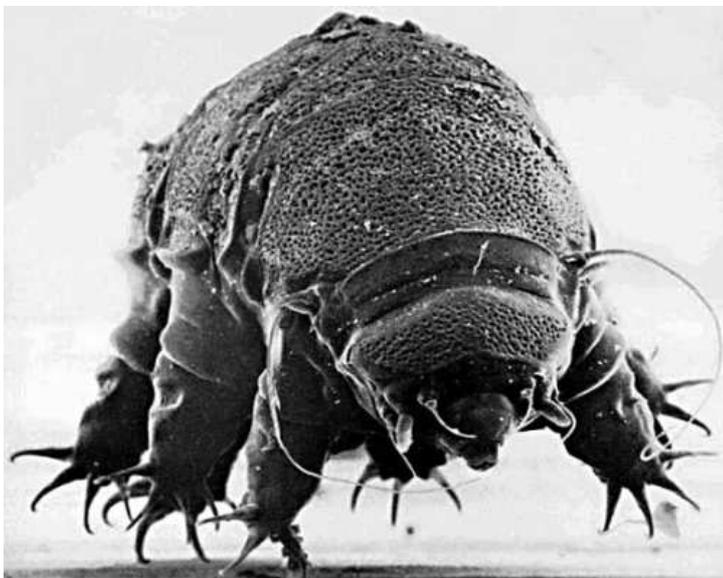
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TARDIGRADES by Jim Gilfedder

In Ashley Sparrow's excellent talk on dry valleys of Antarctica, he mentioned the four animals which lived there.

Nematodes and mites are familiar to gardeners.

Springtails are primitive insects, but what are tardigrades? Slow hills, or drivers' licences for aspiring Dr Whos?

Well, a quick Google will tell you more than you may want to know.



Tardigrades (or Water Bears, or Moss Piglets) are microscopic, water-dwelling, segmented animals with eight legs. First described in 1773, the name means "slow walker". The name comes from the way they walk, reminiscent of a bear's gait. The largest adults may be 1.5 mm in body length, the smallest less than 0.05 mm. Most are 0.3 to 0.5 mm in length.

They occur over the entire world, from the Himalayas (above 6 000m), to the deep sea (below 4 000 m), and from the equator to the poles.

They are often found on lichens and mosses. In marine or freshwater sediments they can occur up to 25 000 animals per litre.

Tardigrades are able to survive in extreme environments. Some can survive temperatures as low as minus 200 degrees Celsius, as high as 150 degrees C, 1 000 times more radiation than other animals, pressure of 6 000 atmospheres, and almost a decade without water. (Not all at the same time though).

In 2007, some were sent into low Earth orbit for 10 days, exposed to the vacuum of space. Many survived and were able to lay eggs which hatched normally.

The body has four segments, and a head, four pairs of legs without joints, and feet with four to eight claws each.

They have no respiratory organs.

Reproduction is by eggs, and is rather odd at times. Young emerge at 14 days, already possessing their full complement of cells. Growth to adult occurs by enlargement of cells, rather than by cell division.

Tardigrades live for three to thirty months, if left alone. During this time they may moult up to 12 times. In most cases eggs are simply left behind in the discarded cuticle.

Behind the Scenes at the Desert Park 26/6/10 with Jochem van der Reijden

Report by Sue Fraser

Jo and a clear, brisk morning greeted ten of us at the Desert Park meeting place. He first took us to where insects are bred to feed to the reptiles and birds. Here the temperature is maintained at 30C in order to provide optimum breeding conditions for the “roaches”. We saw huge tubs filled with thousands of these insects, all at different stages of development. We were then taken to where the mice are housed. Jo explained that the mice were specially bred white laboratory mice, with no distinguishing features which could enamour them to the people working with them, thus causing distress when it came time to feed them to a mulga snake for example. Even so, a few of us girls thought it was “so cute” seeing some of the tiny “pinkies” feeding from their Mums. On to another room where we saw huge stick insects – up to 30cm long and used for display purposes, hundreds of tiny Praying Mantis hatchlings, fruit flies, house flies and their larvae, and Assassin Bugs. We were then shown the food preparation area for the mammals and birds of prey, which looked like a large commercial kitchen with stainless steel benches, sinks and fridges and various food containers.

We then walked over to the Nocturnal House passing through an area of Buffel-free grassland where only Woolly Oatgrass and Purple Plume grass together with other native grasses were growing bountifully. After watching two delightful young Thorny Devils entertain us with their intriguing rocking gait, Jo led us through to an area behind the displays where he showed us how he had constructed a very lifelike burrow for a bird eating spider, from polystyrene and strategically placed tiny LED lighting. Not only are skills as a scientist needed in Jo’s job, but also those of a carpenter, electrician, designer and general handyman, plus I suspect, many more.

Jo then showed us another area behind the displays where more invertebrates were housed. A display featuring toadhoppers and some other tiny juvenile grasshoppers with distinctive crests on their backs, sheltered amongst the sticks and leaf litter on the bottom of the enclosure.



Our tour had come to an end and we thanked Jo for his time and enthusiasm. After a query from Rob about the interpretive signage around the Desert Park, Jo told us about a delightful book which had been compiled by the Friends of the Desert Park and illustrated by Nickolas Pike, “My Desert Diary”. It is available for purchase from the Gift Shop for \$25.95 and well worth a look. It was officially launched at the Alice Springs Show on 2 July 2010. I bought one and spent an enjoyable hour or so reading it from cover to cover.

A few of us walked back with Jo to where our cars were parked, and had the extra privilege of being shown the dingo enclosure, an echidna and a bustard, all of which were not yet on public display.

Thank you again Jo for a pleasurable morning.

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Bird watching trip to Kunoth Bore

Report by Meg Mooney

Thankfully we didn’t have to meet til the reasonably respectable hour of 7.30, but a new member who got to the bore before dawn saw some interesting birds, including owlet nightjars and a collared sparrowhawk. Kunoth Bore is around 30 kilometres up the Tanami Highway, near the turnoff to the Hamilton Downs Youth Camp.

Under the direction of our leader Bob Read, we stopped a short distance down the track to the youth camp to look around in the mulga. The bird of the day was definitely the Diamond Dove. They were everywhere in significant numbers, still snuggled up on branches as we drove out, maybe because of the exceptionally dewy morning. Being

near water, we also saw lots of Zebra Finches and the occasional Ringneck Parrot and Budgie.

In this first wander in relatively open mulga there were some treats: brilliant Red-capped Robins flitting around; the unusual – to see it flying in the open like this – small blue streak of a Splendid Fairy-wren; a Crested Bellbird that finally got sick of being shadowed by a huddle of Field Naturalists and sang from the top of a bush so they could see it; a Hooded Robin sitting on a branch watching the air; Crimson Chats – my favourites – skimming around from ground to bush.

We drove a couple of kilometres further down the track, passing a Common Bronzewing pigeon sitting behind a log near the road with its breast puffed up so it looked to me almost as big as a pheasant. The distant ‘oom...oom’ of these pigeons was a common background to the trip.

The next venture into denser mulga proved a little lacking in birds, so we turned to plant-watching. There were large stands of the honey-scented large green *Ptilotus macrocephalus* and clumps of the beautiful little pink *Ptilotus helipteroides*. We also saw *Ptilotus fusiformis* and a couple of other less showy ptilotus species.

There were Woolly Cloak and other ferns under the mulga. The ground was studded with liverwort and Rosalie found a moss with fruiting bodies. We investigated a solanum bush with pale green, furry and wavy leaves.



From the plant book, it looked like it might be a commonly eaten bush tomato, *Solanum ellipticum*, but investigation of its fruits – four compartments rather than two – showed it was the poisonous and aptly-named *Solanum quadrilocatum* (see above). It's not a good idea to eat solanum fruits unless you're absolutely certain of the species.

After morning tea, it was decided that most of us would walk the several kilometres across country back to the bore, and others would meet us there with the cars. Not far east of the Youth Camp track, we crossed a wide creek, still trickling in parts and with lovely pools, to a plain with low scrub, including the ‘peaches and cream’ variety of *Eremophila maculata*.

Most of the group walked on the scrubby side of the river and didn't see a lot of birds, although there were some White-winged Fairy-wrens, always a treat. I ended up mostly on the western side of the creek, because it was so beautiful between the mulga and the creek and there were so many birds there, although far more Diamond Doves and Zebra Finches than anything else. We did see, or rather glimpse rocketing off, a lot of Little Button-quails.

We eventually got to the windmill, and found one Grey Teal and two Pink-eared Ducks on the dam and bogged troopie (not one of ours) next to the dam. The Field Naturalists came to the rescue, linked snatch straps and pulled out the troopie. After lunch, another lovely, companionable morning wander came to an end.



Kunoth Bore Bird list from Bob Read

- | | | |
|---------------------|---------------------------|--------------------------|
| Little Button-quail | Red-backed Kingfisher | Splendid Fairy-wren |
| Diamond Dove | Willie Wagtail | Black-faced Woodswallow |
| Common Bronzewing | Red-capped Robin | Singing Honeyeater |
| Grey Teal | Hooded Robin | Yellow-throated Miner |
| Pink-eared Duck | Rufous Whistler | Spiny-cheeked Honeyeater |
| Brown Goshawk | Crested Bellbird | Australasian Pipit |
| Black Kite | Black-faced Cuckoo-shrike | Zebra Finch |
| Brown Falcon | Crimson Chat | Pied Butcherbird |
| Cockatiel | Western Gerygone | Grey Butcherbird |
| Australian Ringneck | Brown Songlark | |
| Budgerigar | Rufous Songlark | |

Watermark Muster

from Beth Hansen

I'm passing on information for the Alice Springs Field Naturalists newsletter about a wonderful event held in the Camden Haven area (near Port Macquarie) every second year. It's called the Watermark Muster and brings together writers and readers with an interest in the literature of nature and place. The next Muster is June 17-20, 2011.

If anyone is likely to be in Canberra on Oct 20th this year, the Watermark Society and the National Library of Australia will be presenting a lecture on "Fire in 1788: the closest ally" by Bill Gammage.

A look at the website: <http://www.watermarkliterarysociety.asn.au/> will give a good background to the Watermark Society and its activities. Eric Rolls (of "a Million Wild Acres" fame) is the Perpetual patron.

I hope to see you & other FN'ists in early August for the walk on Sunday 8th & meeting on the 11th.

Spitting Spider from Barb Gilfedder

Recently Jim rearranged our woodpile, making room for another load of wood. We found several interesting looking spiders amongst the logs, pinkish and almost transparent. I sent a photo to Robbie Henderson, our local spider expert and received this reply:-



"Fortunately this one is easy to identify - it is a 'Spitting Spider,' sometimes also known as a Lyre Spider "Scytodes thoracica"

They are sometimes found in houses (I used to find them quite often when we lived in Darwin)... and are usually associated with human activity - flower pots, wood piles etc etc. They are an introduced species from Europe, but have a fascinating method of capturing prey. They spit a type of 'glue' from special glands in the head area onto their prey - and this sticks to the prey and surrounds so it is immobilized, the spider then can deal with it without need of a web."

Thanks Robbie! Not a native but fascinating.

INTERESTING SIGHTINGS



Please let Barb Gilfedder know of any interesting birds or animals seen locally for inclusion in this list.

Crows stripping bark (Is it for nesting material or raincoats)	July		Sue Fraser
Red-capped Robin	June	Hills behind Battarbee Steet	Marg Lawrence
Pacific Heron	July	Near Desert Knowledge buildings	James Armstrong
Brolgas (pictured)	July 20	North of Plenty Highway	Barb Gilfedder
Pair of nesting Hobbys feeding young on a Zebra Finch	July 21	On the horizontal revolving top of broken windmill, Argadargada Station	Barb Gilfedder
Banded Whiteface	July 19	Near Argadargada Homestead	Barb Gilfedder

Photos by James Armstrong - Clockwise from top left – Grey-headed Honeyeater enjoying *Grevillea wickhamii* blossoms; Don't you point that camera at me – Red-tailed Black Cockatoo; Drosera flowers; Interesting geology at Ruby Gorge.



NB: Please read these minutes of the last General Meeting and last year's Annual General Meeting so that you can vote on their acceptance at the August meetings. Thank you, Barb Gilfedder.

ALICE SPRINGS FIELD NATURALISTS CLUB INCORPORATED
Minutes of General Meeting held at Higher Education Building, Charles Darwin University
on Wednesday 14 July 2010

Open: President, Barb Gilfedder declared the meeting open at 8.30pm.

Present: 22 people attended with 3 apologies as per attendance book.

Minutes of previous Meeting: The minutes of the June meeting had been circulated as part of the newsletter. The Minutes were accepted as circulated.

Correspondence In:

Western Australian Naturalists Club	The Naturalist News – July 2010
NT Field Naturalist Club	Nature Territory – July 2010
Olive Pink Botanic Garden	asking if ASFNC will be having a stand at the 2010 Eco Fair

Correspondence Out:

Thank you to Chris Palmer, last month's speaker

Treasurer's Report:

There is a current balance of \$1657.

There is one reimbursement claim still outstanding and one cheque out that has not been presented.

Accepted.

General Business:

- 2010 Eco Fair. It was decided that the club would have a stand as usual. Barb will respond to Ben. Details will be decided at the next planning meeting.
- Annual General Meeting. This will be held at the next, (August) meeting. Members are invited to consider nominating to be on the committee. The theme of this meeting 'Sharing' and members are invited to bring items, collections or photos based on Central Australia to share.
- Planning meeting. This will be held on at 2pm on Sunday 22 August at Olive Pink Botanic Garden. All members are invited to attend.

Outings/Trips/Activities

17 July	Bird spotting trip to Kunoth Well will now be led by Bob Read. Meet at Sargent St at 7.30am.
8 August	Walk from Standley Chasm to Bridle path and back. Leader Colleen O'Malley
15 August	Day trip to Old Mica Mine site off Gardens Road. Leader Meg Mooney
22 August	ASFNC planning meeting at 2pm at Olive Pink Botanic Garden. All welcome.
11 Sept	Eco Fair at Olive Pink Botanic Garden (Sorry! Wrong date! It is actually on 18 September. Ed.)

Next Meeting: Wednesday 11 August 2010. AGM and Members' Evening.

Note taker: not required

Supper: Barb Gilfedder.

Meeting closed at 8.50 pm.

ALICE SPRINGS FIELD NATURALISTS CLUB INCORPORATED
Minutes of the Annual General Meeting held at Olive Pink Botanic Garden
on Wednesday 12 August 2009

The President Bob Read declared the AGM open at 7.40pm.

Present: As per attendance book. 20 members.

Apologies: Kaye Percy, Robbie Henderson. Emily Findlay, Sarah Wilson, John Bermingham, Ian and Jenny Richter, Leonie Read

Minutes of Previous AGM:

Minutes of the 2008 AGM were circulated.

Jenny Purdie moved that the minutes be accepted. Rhondda Tomlinson seconded the motion. Motion carried.

Treasurer's Report:

Presented and read by Rosalie Breen (copy on file). An audited copy is available to members.

Moved by Rosalie Breen and seconded Sue Fraser that the report be accepted. Motion carried.

President's Report:

Bob Read presented the President's Report (copy on file).

Election of Officers:

As Bob Read (the out-going President) was not standing for election in any capacity he acted as the Returning Officer and declared all positions vacant.

President: Barb Gilfedder was nominated by Shirley Goodman
Nomination was seconded by Connie Spencer. Accepted unanimously.

In-coming President Barb Gilfedder took the chair.

Vice-President: Sue Fraser was nominated by Rhondda Tomlinson
Nomination was seconded by Rosalie Breen. All in favour.

Secretary: Shirley Goodman was nominated by Connie Spencer.
Nomination seconded by Jenny Purdie. All in favour.

Treasurer: Rosalie Breen was nominated by Rhondda Tomlinson
Nomination seconded by Marilyn Hall. All in favour.

Property Officer: Sarah Wilson was nominated by Shirley Goodman
Nomination seconded by Jenny Purdie. All in favour.

Public Officer: Rhondda Tomlinson was nominated by Barb Gilfedder
Nomination seconded by Rosalie Breen.
Rhondda Tomlinson was appointed to the position.

Bob Read moved 'That two extra committee members be appointed.' The motion was seconded by Jude Mapleson. Motion carried

Connie Spencer and **Vicki Gordon** were nominated and elected to the positions of Committee member by a show of hands.

Life membership:

Out-going President Bob Read joined the ASFNC in 1996 and has held the position of President for the 13 years of his membership. Rosalia Breen put the motion

'That Bob Read be granted Life Membership of the Alice Springs Field Naturalist Club in recognition of all that he has done for the club'.

The motion was supported with a brief account of Bob's achievements for the club.

Marilyn Hall spoke to the motion and read out a recommendation giving back-ground to Bob's contribution over the past 13 years. Sue Fraser also seconded the motion and provided more back-ground starting with Bob's original 'appointment' as President and acknowledging his valued contribution in finding speakers for the monthly meetings and organizing club field trips.

The motion was passed unanimously and club President Barb Gilfedder presented Bob with a Certificate of Life Membership.

Membership fees:

As foreshadowed in the previous Newsletter, the committee suggested that the fee structure be modified a little.

Treasurer Rosalie Breen moved that membership fees for the year 2009/2010 be:

Single membership	\$20	Single concession	\$15
Family membership	\$30	Family concession	\$25
Newsletter only – available to people not residing in Alice Springs - \$10			

Motion seconded by Shirley Goodman. All in favour.

Close: There being no further business, the President declared the AGM closed at 8.01pm.