



August 2017

## Alice Springs Field Naturalists Club Newsletter



Pebble bush, *Stylobasium spathulatum* is in the Surianaceae family. We found this specimen flowering well on the Lake Lewis trip. Its distribution spreads from the WA coast to central Qld. Its flowers are interesting, having a calyx cup but no petals. Each has ten drooping stamens. The common name comes from the hard nut-like fruit that can often be found under the bush.

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 August 2017.

The deadline for the next newsletter will be 23 July 2017.

Please send your contributions to Pam Keil [pamelakeil@yahoo.com](mailto:pamelakeil@yahoo.com)

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

### FIELD NATURALIST CLUB ACTIVITIES

August 5/6/7 **Long Weekend - Ruby Gap trip.** High clearance 4WD essential; 300 km round trip, spectacular scenery; limited vehicles but space in others' vehicles available, 8 km walk through Glen Annie Gorge to Fox's grave. Camp for two nights; bring own camping gear, food and water; Leader Jocelyn Davies, contact by email [jocdav26@internode.on.net](mailto:jocdav26@internode.on.net) and head email "Ruby Gap trip", or ring her on 0419 857 561. More information at:- <https://nt.gov.au/leisure/parks-reserves/find-a-park-to-visit/ruby-gap-nature-park>.

Wed 9 August **Alice Springs Field Naturalists Club ANNUAL GENERAL MEETING.** All Committee positions will be declared vacant and a new Committee elected. Please contact an existing Committee Member if you are interested in serving. **The CDU entrance 2 now has a security gate. If you drive right up to it, it should open automatically.** ANNUAL Subscriptions are also due at this meeting. Pay your dues and receive a free club magnet. Also speaker, **Ian Coleman**, Curator of Olive Pink Botanic Garden will talk about the "OPBG new design plan". After refreshments, there will be a short general meeting.

August 19/20 **Serpentine chalet camp and walk into Inarlanga Pass.** For those wanting to camp out in one of the lovely bush camping spots at Serpentine Chalet we will leave Saturday arvo around 2.30pm, but for those that just want to come out for a day walk you can meet us at the Serpentine Chalet trail end gate on Sunday morning at 9am (it's about a 2 h drive from town). We will head west along the Larapinta to Inarlanga Pass passing through some botanically rich and scenic places. It's all on well formed trails but there is a bit of rock hopping in the Gorge itself, and it is around 5-6 km round trip so bring your lunch and plenty of water. Contact Colleen on [shrikestar8@gmail.com](mailto:shrikestar8@gmail.com) to register your interest and to sort out car pooling.

Wed 12 Sept **Alice Springs Field Naturalists Club GENERAL MEETING** at the Lecture Theatre in Higher Education Building at CDU at 7.00pm. Speaker - **Andrew Crouch** "more local birds". **The CDU entrance 2 now has a security gate. If you drive right up to it, it should open automatically.**

### AUSTRALIAN PLANTS SOCIETY ALICE SPRINGS

**Contact:** [apsalicesprings@yahoo.com.au](mailto:apsalicesprings@yahoo.com.au)

There will be no Australian Plants Society Meeting at Olive Pink Botanic Garden in August.

Sun 27 Aug - **APS Todd River Bank Walk**, looking at river frontage Buffel removal sites beside OPBG and Ken Johnson's patch, with Ken Johnson and Peter Latz. Meet in front of the big OPBG sign at the corner of Tuncks Road and Barrett Drive at 3.00pm.

**PARKS AND WILDLIFE - On Sunday 3 Sept Parks and Wildlife Walk in the Park – Trepkina Panorama Walk.** Join Parks and Wildlife for a hike along some of the trails in our Central Australian Parks. Beginners Welcome! This 2.5 km loop is a more remote and challenging walk. After a long steady climb, you're rewarded with panoramic views of the Gorge. Level: Moderate. Meet: Trepkina Gorge Nature Park. Booking is essential as places are limited. Start times available on booking. Please contact Susie on 8951 8247 or email [susie.arnes@nt.gov.au](mailto:susie.arnes@nt.gov.au).

**Land for Wildlife ~ Launch of the Online Register ~ NT Register of Significant Trees.** Come and help us to celebrate National Tree Day on Sunday 30th July 2017 at 2 pm at the historic registered significant tree site, Olive Pink Botanic Garden. Afternoon tea provided. Land for Wildlife is searching for volunteers to join the NT Register of Significant Trees Committee-come along if you think this is up your alley! <http://wildlife.lowecol.com.au/about/projects/significant-trees/>

**FRIENDS OF ILPARPA CLAYPANS** FaceBook.com/IlparpaClaypansLovers **Email:** [ilparpaclaypanslovers@gmail.com](mailto:ilparpaclaypanslovers@gmail.com)

If you are interested in the preservation and conservation of the Ilparpa Claypans, come to one of our regular events ACTION GROUP – 10am on the first Saturday of every month at the Gazebo table, Bean Tree Café, Olive Pink Botanic Gardens WALK AND TALK - 5pm to sunset on the last Tuesday of every month at the Western Claypan.

**Red Centre Bird Festival** will be on again from 20-24 September 2017. Write the dates in your diary.

**Alice Springs Field Naturalists Club Committee Members**

President	Barbara Gilfedder	8955 5452	Public Officer	Anne Pye	0438 388 012
Vice-President	Lee Ryall	8953 6394	Property Officer	Rosalie Breen	8952 3409
Secretary	Pamela Keil	8955 0496.	Committee Member	Pauline Walsh	0416 094 910
Treasurer	Neil Woolcock	8955 1021	Committee Member	Robin Grey-Gardner	8952 2207
Website	Pamela Keil	8955 0496	Newsletter	Pamela Keil / Barbara Gilfedder	

**Arid Zone Research Institute (AZRI) library visit - 13<sup>th</sup> July 2017**

Report by Rosalie Schultz

I heard about the proposed closure of the Arid Zone Research Institute library from Peter Jobson at a Plant Society meeting and again at the visit to Old Man Plains Research Station.

Apparently in a tight financial situation the NT government saw the library that services our pastoral and natural resource industries as unimportant. However our letters and visits convinced the Chief Executive of the Department for Primary Industry and Resources of the importance of the library.

Our visit to the library showed me what a valuable resource we have, including its materials, both historic and current, and the commitment and expertise of the staff.

AZRI Library is open to the public by appointment on 8951 8114, or [azri.library@nt.gov.au](mailto:azri.library@nt.gov.au). There's lots to read and absorb. You can borrow materials from the AZRI library through the Alice Springs Library but not directly.



*Members of the ASFNC enjoyed looking around the AZRI Library. Chief Librarian, Bid Rose (right) gave us a guided tour of the library collection. There were lots of interesting materials to browse.*

**ANNUAL SUBSCRIPTIONS ARE DUE NOW!**

**Please pay at the meeting or by Direct Debit. Subscription costs and bank details are on the membership form, right.**

**Make sure you reference your direct debit payment with your name, so we know who is paying.**

**Please fill out the Membership form if your details have changed.**

Alice Springs Field Naturalists Inc.  
PO Box 8663, Alice Springs. NT 0871

Please accept my subscription for membership of the Alice Springs Field Naturalists Club Inc..

My details are as follows:-

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Subscription year goes from 1 Aug to 31 July.



# Conservation ecology of Slater's skink (*Liopholis slateri*)

July speaker – Dr Claire Treilibs. Report by Colleen O'Malley

Those of us who attended the July meeting were both entertained and intrigued by the talk Dr Claire Treilibs delivered summarising the findings from her recently completed PhD. Claire deftly interwove her passion for cycling with her interest in lizard ecology in her stimulating talk and kept us on our toes with a pop quiz midway through the talk.

Slater's skinks were first collected by members of the Horn Expedition in 1894 and at that time there were two subspecies: the South Australian *Liopholis slateri* subsp *virgata* which was found around Dalhousie and one other location in northern SA, but which has not been seen for over 100 years; and *Liopholis slateri* subsp *slateri* which was originally collected around Illamurta Springs on the Finke River.

During the 1960s Slater's skinks were fairly commonly recorded around floodplain habitat in the Alice Springs region, including on the AZRI block just south of town where more than 50 specimens were collected by one overzealous researcher in 1964-5. Extensive searching during the 1990s failed to find any of these burrow-dwelling lizards in former known habitat around Ellery Creek, or the Palmer and Finke River catchments.

This situation prompted listing of Slater's skink as Endangered under the federal Environment Protection and Biodiversity Conservation Act and the equivalent NT legislation (since downgraded to Vulnerable under NT legislation), and apart from small populations found in Finke Gorge National Park in the early 2000s, this species wasn't located again until a population was found on the newly acquired Owen Springs Reserve in 2004. Since then better targeted surveys have located small populations at most formerly known locations apart from those closest to Alice Springs, as well as finding populations on Aboriginal Land Trusts at Loves Creek and near Ntaria (Hermannsburg).

Although there is not yet any firm population data to determine main threats to Slater's skink populations, it is thought that encroachment by buffel grass, changed fire regimes and over collection in the 1960s may have contributed to population losses for this species.



Figure 1: Mugshots of fifteen individual skinks in the study population showing variations in pigment and ear lobule scale patterns

As its alternate common name, Floodplain Skink, suggests, Slater's skink is found mainly on alluvial soils on riverine and floodplain habitat (there is one quirky population known from rocky habitat in the Krichauff Range) where it occupies burrows dug under corkwoods, turpentine bush (*Eremophila sturtii*) or spotted emu bush (*Eremophila maculata*). Like its more famous relative the great desert skink (or tajkura; *Liopholis kintorei*) Slater's skinks occupy burrows built originally by other animals (skinks, goannas or rabbits etc) and modify these to suit their preference for multiple entrances - one of which they use for a communal latrine (this is a distinctive feature worth keeping an eye out for when wandering through likely habitat areas).

Claire's study was focussed on one population of less than 50 individuals on an alluvial slope occupying an area of around 300 x 60m within the Orange Creek catchment. Over a four year period she visited the site 126 times to glean information aimed at addressing two key research objectives:

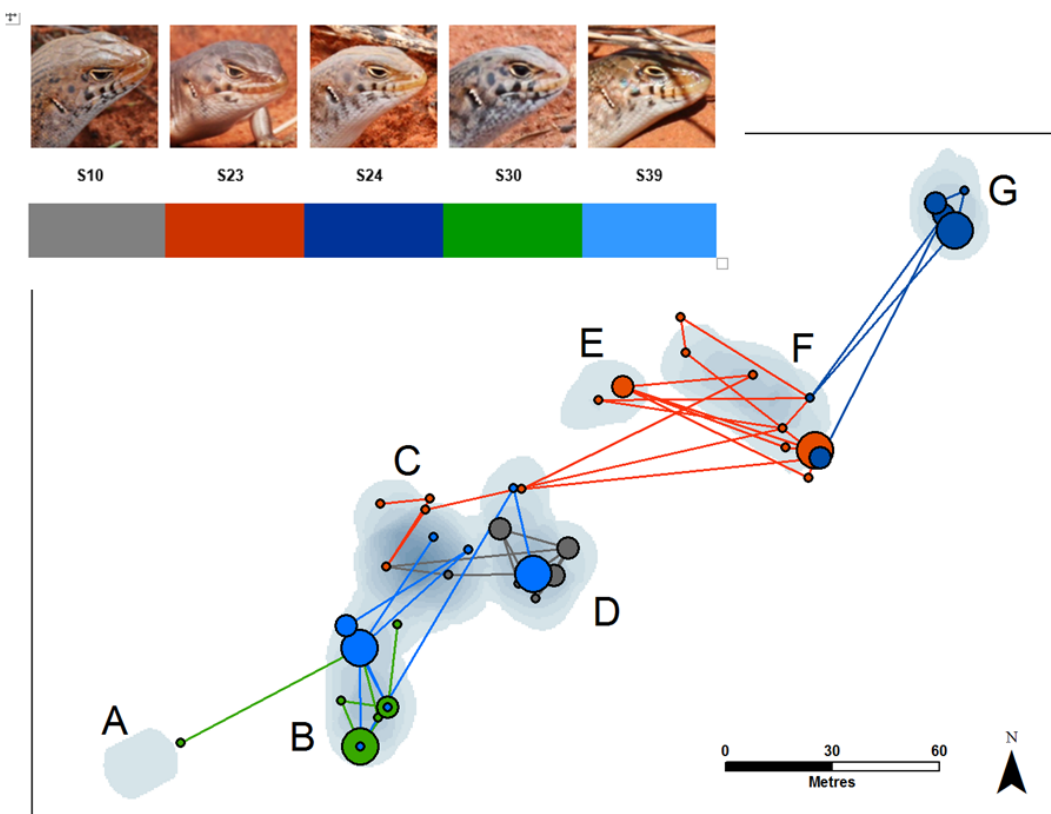
1. Finding optimal survey methods to increase both detectability and to increase potential involvement of Aboriginal Rangers in skink monitoring work
2. Looking at factors associated with population persistence including spatial dynamics, burrow occupancy and population dispersal patterns.

As part of testing novel detection methods to study her population, Claire used high resolution photography of skinks posing outside burrow entrances to look at facial pigment and scale patterning to see if individual skinks could be reliably identified this way. She created a key (see Figure 1) using each individual's unique patterns and successfully tested the key with friends before going on to develop a computer algorithm for pigment and scale pattern recognition to enable automation of individual skink identification. This was a significant finding as it meant lizards did not need to be trapped to get information on population dynamics etc.

Detectability of lizards was found to be correlated with humidity and wind patterns, with most detected on mornings after 1mm or more of rain had fallen or on afternoons with slight winds. Observing lizard activity over 30 min intervals using motion camera footage showed that lizards changed their usual daytime activity pattern over the hotter months to become active at night.

Claire's study also showed a fair bit of variability in mobility of different individual skinks in terms of burrow occupancy, with some being relatively sedentary and moving only between one or two close together burrows within one of the seven different "neighbourhoods" identified in the study area, whilst others consistently moved between neighbourhoods over the course of the study and others may even have dispersed away from the neighbourhood cluster into new areas. The observational data showing this (using facial ID technique) was backed up by DNA analysis of scats found in latrines associated with separate burrows.

Her work showed that Slater's skink is highly mobile within its population occupancy area and that in the absence of major disturbances over time populations remain fairly stable with only small population fluctuations and none of the boom or bust response than other desert species exhibit. Within populations there is a high degree of genetic mixing suggesting that if there is a flood event or other catastrophic event that takes out part of a population, skinks from unaffected neighbourhoods might be able to act as source populations to repopulate areas. This is good news indeed for a species hovering on the brink of extinction!



**Figure 2:**  
*Mapping of burrow occupancy pattern of five individuals across the seven "neighbourhoods" within the study area.*

*(The larger the dot the longer the time spent in a particular burrow)*



## Five go adventuring - Hugh Gorge Trip - 10-12 June 2017

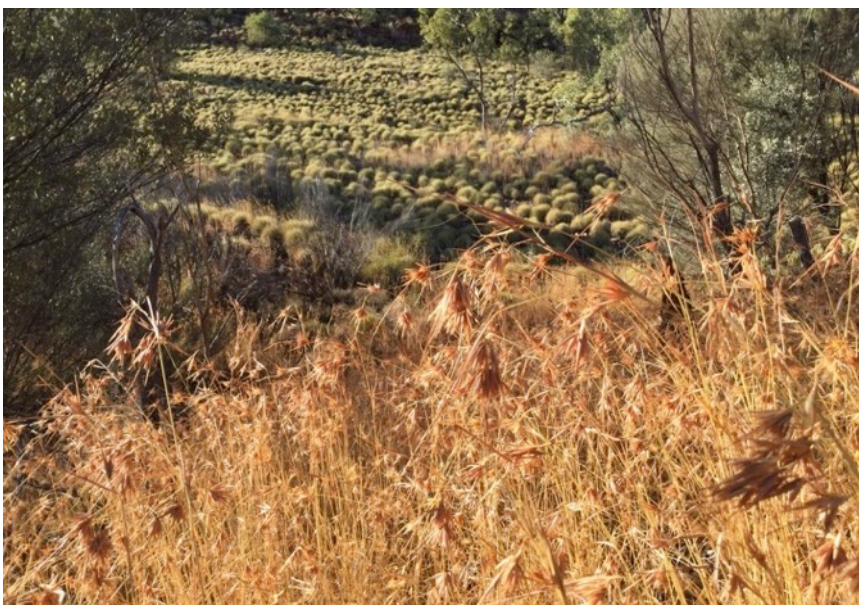
### Report by Colleen O'Malley

With no rain on the horizon and the kind of cool temperatures you expect during winter but aren't always guaranteed, our small (select) group – Connie, Rosalie, Gavan, Meg and me – headed out well after the crack of dawn on Saturday morning of the Finke long weekend. I hadn't been out to the Hugh since body surfing rapids there after the big rains in January. Six months on most of the surface water has disappeared but the evidence of recent flooding was all around - debris high up in trees, flattened tea tree shrubs, and healthy new growth on many large shrubs and trees.

The drive in was fairly uneventful with few plants in flower but we did stop for a red gum with amazing bark contusions and a small patch of satiny bluebush (*Maireana georgei*).



After a leisurely lunch stop we carried on to Section 6 trailhead where we were a bit distressed to see a newly installed locked gate 500m short of the old car park and camping area. But after a bit of disgruntled searching for buffel free and less rocky spots to put our swags and tents we all found pleasant enough places to set up camp before heading off in two separate groups for an afternoon ramble. Meg and I headed up a spur of the Chewings range to get wonderful views of the surrounding landscape. One of the distinctive features of this walk and of much of the lower slopes of surrounding hills and ranges was the orangey hue of big patches of kangaroo grass (*Themeda triandra*). Many of you would have noticed what a bumper year it's been for kangaroo grass despite the ongoing encroachment of buffel grass into rocky hill habitats. . I'd love to believe that kangaroo grass might be fighting a rearguard battle and that these native grasses may in fact be able to hold their own against buffel invasion ... but that might just be fanciful thinking.







On the way down the hill I heard what I thought was frogmouths softly calling and I was searching nearby trees for them to no avail and finally realised the calls were coming from the ground just a metre in front of us. After getting my eye in I spied a cosy huddle of four or more spinifex pigeons fluffed up for the cool night perfectly camouflaged amongst the rocks and kangaroo grass.

We reconvened with the others who had headed up river to explore the pools of water at the start of section 6 and to check out the newly constructed shelter for trail walkers – a very over-engineered rusty steel girder design with wide sleeping platforms and food lockers.

We watched the full moon rise over the ranges to the east of us, and later that evening our pleasant fireside conversation was interrupted by strange animal noises coming from the wee sandy creek beside our campsite. Our guesses of feral pigs or odd-sounding dingoes were proved misguided when a lone white horse ambled out of the darkness along the creek paying no attention to us.

We watched the sun rise high enough to halo the mulga on the ridge lines of the Chewings Range before heading off on our day's adventure – a rambling walk to Pocket Gorge en route to Hugh Gorge proper. It was interesting to see how the route in through narrow parts of the river had changed since the summer floods, with many small trees bent flat and larger trees having toppled in the force of the flow. From the height of some of the flood debris and the scarring on some of the trunks of standing trees it clearly would have been an impressive sight to see at its peak.



It was good to see young seedlings of *Commersonia magniflora* (previously *Rulingia magniflora*) a shrub endemic to the southern NT that grows 2 m high and has really gorgeous clusters of mauve-pink flowers and soft grey green leaves. (pictured right) Along the way we also saw plenty of mistletoe in flower including my favourite species *Amyema giberulla* that only grows on shrubs of the Proteaceae family, in this case on holly grevilleas. (pictured at top of page eight)







With the odd bloodwood and red gum also in flower we were unsurprised to hear plenty of white-plumed honeyeaters and grey-headed honeyeaters squabbling about in the canopy, but it was more of a surprise to see the small group of black-chinned honeyeaters that Meg spotted. The golden-backed form that we get in central Australia is nomadic, moving into areas when favoured plants are in flower. A small group of aptly named painted finches was also seen amongst the larger rocks fringing the river closer to Pocket Gorge.

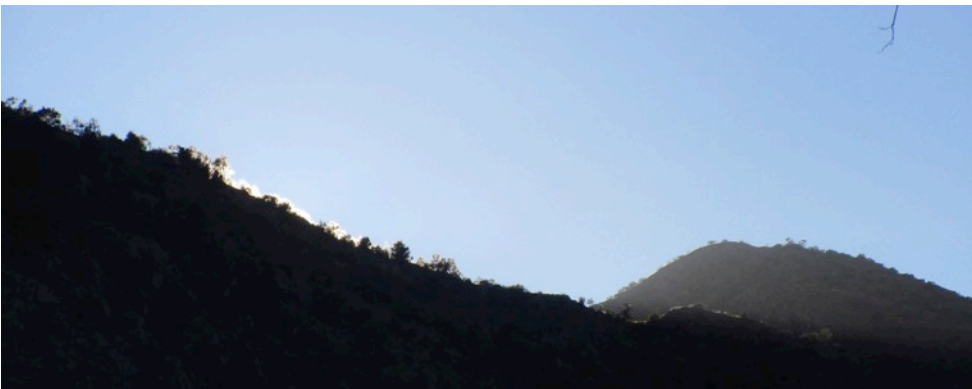
For me, besides the wonderful company and gorgeous environs generally, the highlights of the trip were in some of the finer details of the textures and designs we saw in the trees and rocks that we passed by - stunning patterns that looked like they had been carefully crafted rather than being the result of some weathering or ageing process or the work of insects.



## Bird Highlights by Meg Mooney

There were some bird highlights on the Hugh Gorge trip. Shrike and I climbed up the slope on the eastern side of the gorge just before sunset on the first day. We were walking through some mulga at the bottom of the slope at dusk. I had to make a little stop so Shrike, just ahead of me, stopped and waited. We'd heard a low 'oom' noise and weren't sure what it is. Shrike looked down and saw a little group of spinifex pigeons snuggled in the grass among some low rocks, maybe going to bed for the night. We hadn't seen these pigeons for a while, so were excited to see them. When I was out at Ormiston recently, they were everywhere, eating scraps at the café.

The next morning as we were all walking up the gorge, we heard a group of birds chattering just ahead of us. The chattering, not unlike some parrots, didn't seem familiar so while the others looked at some plant I investigated the birds, hanging out in young river gums, foraging in the foliage. They turned out to be black-chinned honeyeaters, badly named because their black chins are not very clear but they do have striking



black caps with a white stripe from the eye. These were the golden-backed variety, race *laetior*. Their backs were bright yellow but it was hard to see the yellow-green eye ring. We saw a lot of these birds because they moved up the gorge ahead of us, a kind of forward party. I've seen black-chinned honeyeaters a few times along the creek at the beginning of the section of the Larapinta trail that goes west from Standley Chasm, but not for a few years. We also saw some painted finches, at a waterhole in the gorge, always beautiful.

Photo left : Sunrise by Rosalie Breen



## Lake Lewis at the micro level – by Colleen O’Malley

It was a treat to be part of this thrice thwarted trip to Lake Lewis in the company of such greats as Dick Kimber and Marg Friedel and under the very knowledgeable guidance of Bill Low. I was intrigued to learn about the use of part of the lake bed for disposal of tonnes of hypersaline waste water from one of the Palm Valley gas field bores when it was operating at full throttle some years back. Bill’s business had been involved in helping select a site matched to the mineral composition of the waste water to have minimal environmental impact and he showed us the main area where the water was dumped out of tankers and pointed out the various monitoring points that his team collected environmental data at over the years to check on any impacts on vegetation, fauna and land systems.

All of this and the information shared about the main dreaming story for the area and the various uses Aboriginal people made of some of the plants growing in abundance in this dry landscape, the historical visits to the Sleepy Hollow Yacht Club on a lunette above the lake shore, as well as the various plants we saw en route was all very interesting, but I was most entranced by things at the micro level.... the salt crystal structures, the wind swept patterns made by residual dried out algae tangled in tiny samphire plants on the lake floor, and the pitted patterns on the seeds of the various samphires fringing the lake shores (which are sometimes diagnostic for species but I’d foolishly forgotten to bring the genus key with me so relied on Bill’s memory and our collective guesswork to have any sense of which species were which).

These captivating small details failed to be eclipsed by ‘possibly’ seeing three grey falcons chasing each other around the lake edge and then alighting on the lake floor for some minutes. I say “possibly” because although I was the closest to them and watched them for several minutes I’d walked across the lake bed without my binocs so only had a somewhat myopic view of them. Luckily Lisa got a good look at one of them and was pretty certain that’s what they were.

Another fabulous Field Nats adventure in fine company!



...and from Rosalie Breen

Quite a few things made this trip special. Not only did we have our usual knowledgeable members, and Bill Low as our guide and “mine” of information of its mining affiliation but we had experts Margaret Friedel, Dick Kimber and Colleen O’Malley to give insights into the vegetation, land form and history. Thanks so much. I was running ragged wanting to listen to many talking, take a photo, look through binoculars, look at animal tracks, write a note, take a grass sample and examine other plants. Then at the Causeway where we were up close and personal with the salt lake bed itself, I marveled at the never ending expanse of sparkling white, and examined the formation of salt crusts around rock nodules, beautiful pure white crystals of salt, dirty and solid looking lumps of ancient ‘rock salt’, the millions and millions of Ostracod or Seed Shrimp shells set in tide lines from the evaporating water levels, and imagined the birds feasting among the *Rupia* weed which covered the lake when full of water, and now remaining as greeny roughage lining the edge. To walk on the salt crust was an experience, to feel and hear the scrunching of salt, and feel the slight softness of damp soil underneath, orange sandy on top and then a little deeper, dark black almost gooey stuff. It was a perfect sunny day. Finale - lunch at the yacht club, a sand hill vantage point, looking over the white and green world.

*Many thanks to Roy and Janet Chisholm of Napperby Station for allowing us entry to this interesting site! Also to Bill Low for guiding us through, along with many stories. We have more photos of the Lake Lewis vegetation, which we will share in the next newsletter. Ed.*