



June 2019

Alice Springs Field Naturalists Club Newsletter



Visitors to the Alice Springs sewage ponds often comment on the beautiful setting. This photo by Johannes Ammerschlaeger, taken during the Field Naturalists visit in April, illustrates why.

Meetings are held on the second Wednesday of each month (except December & January) at 7:00 PM. The June Meeting will be at the Lecture Theatre in CDU Higher Education building. Visitors are welcome.

CONTENTS

*Meetings, Trips/Activities, Contacts...p2;
May speaker - Simon Mann – Geophysics and the bush...p3;
Sewage ponds birding...p6; Heritage Market...p8;
Vine Hawk Moth...p9; Hakea lorea...p9;*

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NEWSLETTER

The next newsletter will be July 2019.

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

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

ALICE SPRINGS FIELD NATURALISTS CLUB



Long Weekend 8,9,10 June

Trip to **Newhaven Wildlife Sanctuary**.

Camping in Newhaven Campground. Members only.

Contact Barb Gilfedder for more details. bjfedders@gmail.com



Wednesday 12 June

ASFNC Monthly get-together at 7.00pm in the Lecture Theatre in the Higher Education Building at CDU.

Presentation by Megg Kelham, "Wildlife, Palm Oil and Eco-Tourism in Malaysian Borneo: The Good, the Bad and the Ugly - a traveller's impression."

Presentation followed by tea, coffee and a brief general meeting

Saturday 29 June

Behind the scenes with Mammals at Alice Springs Desert Park with Lisa Nunn.

Limited numbers. Please contact Barb Gilfedder to register and for meeting time details. bjfedders@gmail.com



Wednesday 12 June

ASFNC Monthly get-together at 7.00pm in the Lecture Theatre in the Higher Education Building at CDU.

Presentation by Kate Stevens "The genetic consequences of broad scale habitat loss on the Grey-crowned Babbler in their southern-most range"

Presentation followed by tea, coffee and a brief general meeting

AUSTRALIAN PLANT SOCIETY ALICE SPRINGS

apsalicesprings@yahoo.com.au

Wednesday 5 June at 7.30pm at Olive Pink Botanic Garden.

Bec Duncum will take us on a tour of the 2019 Melbourne International Flower and Garden Show. Come along and discover the latest trends in Landscape Design and what plants are 'fashionable' at the moment. Also take a look at some of the spectacular floral art and design.

ALL WELCOME, presentation followed by tea, coffee & supper.



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

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

May Speaker

**Geophysics and the Bush:
A brief story of Australian
exploration - Simon Mann**

Report by Lee Ryall

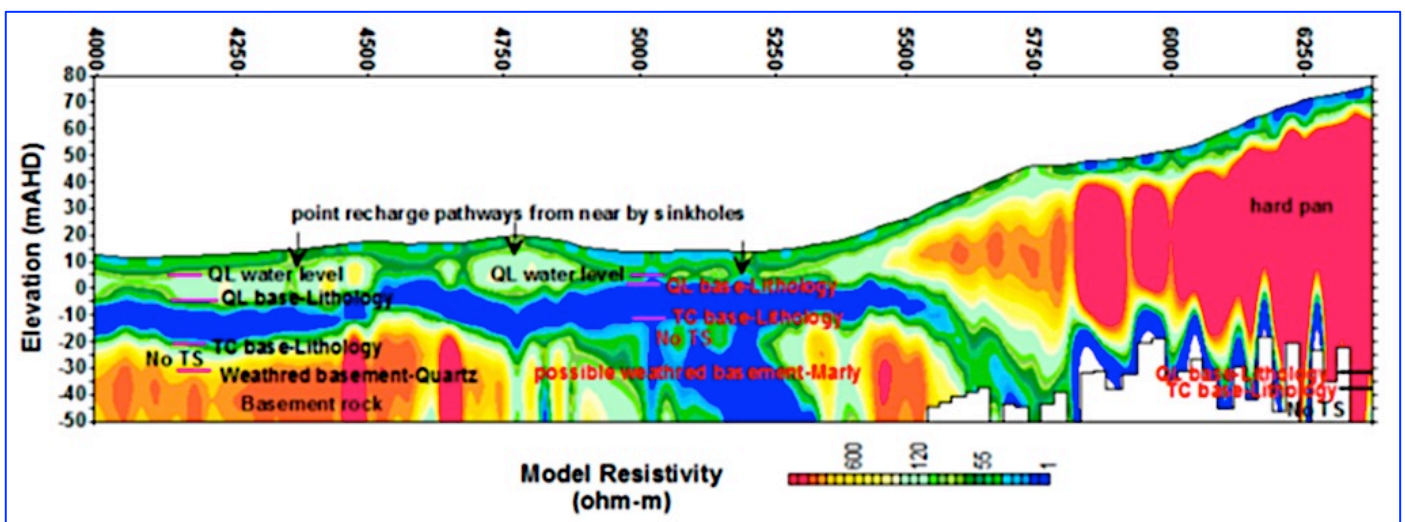
Simon Mann is an explorer- not a sailboat captain setting out to discover new lands, but an explorer of the detail of the landmass. He uses a range of geophysical techniques to discover what is under our feet. What is he looking for? Information of how our earth, which is not at all as static as it might seem to short-lived animals on its surface, works. And he is looking for resources - for ore bodies and the minerals within.



Collecting data in beautiful surroundings.

Wikipedia describes exploration geophysics as “an applied branch of **geophysics** and economic geology, which uses physical **methods**, such as seismic, gravitational, magnetic, electrical and electromagnetic at the surface of the Earth to measure the physical properties of the subsurface, along with the anomalies in those properties”. Simon works for a company that concentrates on the use of electrical techniques - looking at the conductivity and resistivity at different depths of the earth.

Although he showed us a gorgeous cutaway representation of the interior of the planet, Simon’s focus is on the crust, the thin, solid layer of rock and regolith we scuff underfoot every day. Continental crust extends on average 35-40km downwards (or occasionally more under mountain ranges such as the Himalayas). Electrical properties are usually measured by galvanic or inductive methods: by sending a current or magnetic pulse into the earth respectively. The resulting electric and magnetic fields are measured and interpreted. The source signal may be artificial or natural and depths of investigation range from the surface to many kilometres. The data obtained suggests information about structures such as faults, different rock types and the nature of the underground mineralization. Companies looking for resources will then confirm detail using drilling, but will have an increased chance of finding what they are after with this much more expensive and disruptive form of investigation.

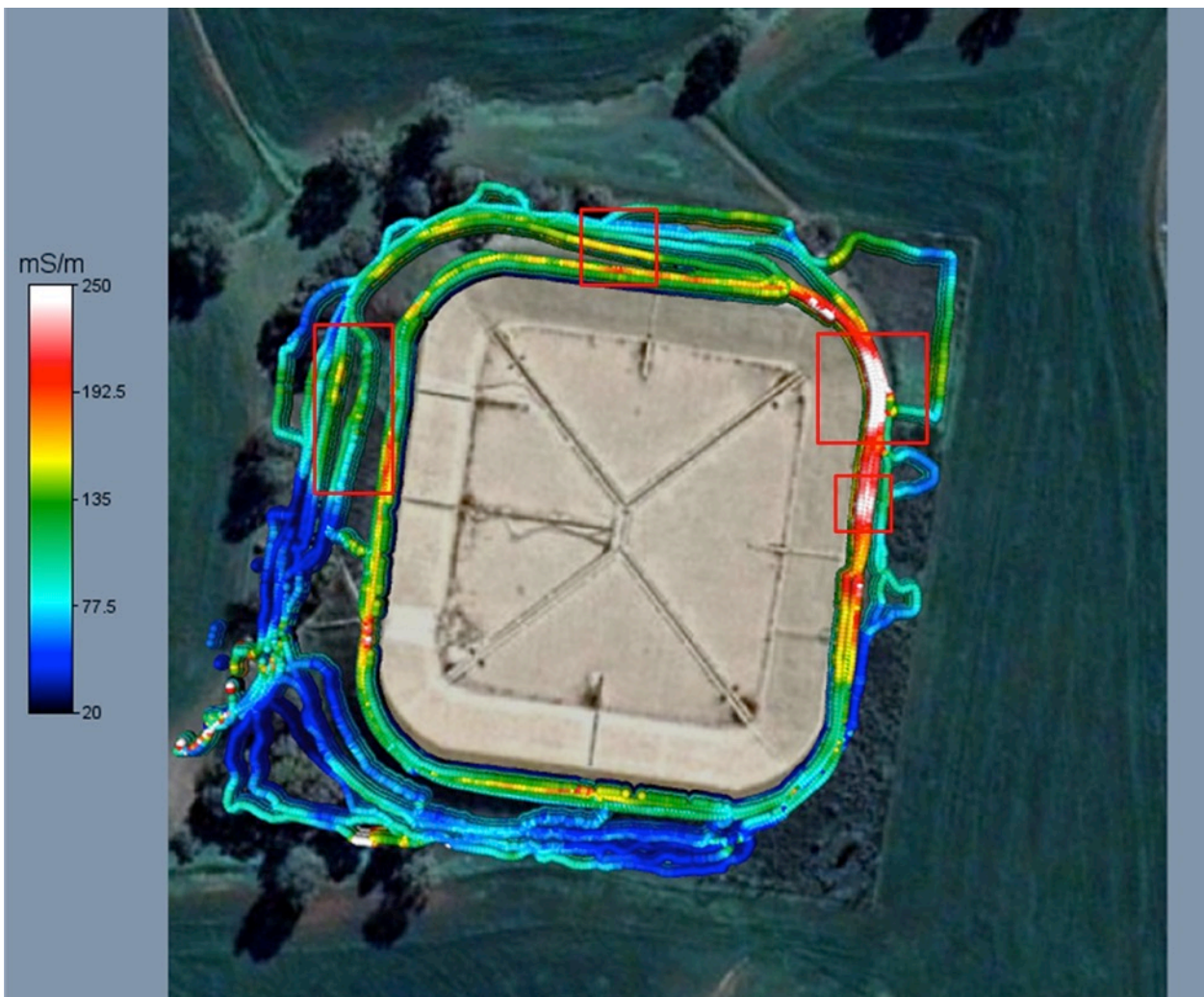


What the data might look like. Geophysical Input to Improve the Conceptual Model of the Hydrogeological Framework of a Coastal Karstic Aquifer: Uley South Basin, South Australia.

Australia, and particularly the desert areas, is wide and flat, and these electrical geophysical techniques offer a cost-effective way of investigating the possible mineralogical jewels hidden beneath the ancient, weathered and levelled surface. It is non-destructive and doesn't require the movement of massive equipment from one spot to another across fragile ecosystems. Besides it gives the workers, including Simon, the chance to camp out in some stunning locations and encounter wild creatures in their home territory.



These techniques are not just used in pursuing mineral resources, but are also used to examine underground structures such as karstic labyrinths which indicate probable underground water reservoirs and for purposes such as establishing where old water systems are leaking. Simon showed some great slides of data highlighting leaks under large old water storage tanks in South Australia. (Below. See obvious leaks around tank with massive excavation work all around it.)



He also touched on magnetotellurics, a system of listening to (actually reading the data from) natural electrical signals such as lightning (shallow, high frequency readings) and solar energy (deeper, lower frequency readings) to examine variations in the composition of the subsurface. His diagram of the “Fingers of God” reading under the Olympic Dam site was a fascinating example of this. Geoscience Australia is using these techniques, in an Australia-wide project appropriately known as Auslamp, to increase our understanding of Australia’s geodynamic framework as well as to ‘point the way’ to explorers such as Simon. (below)

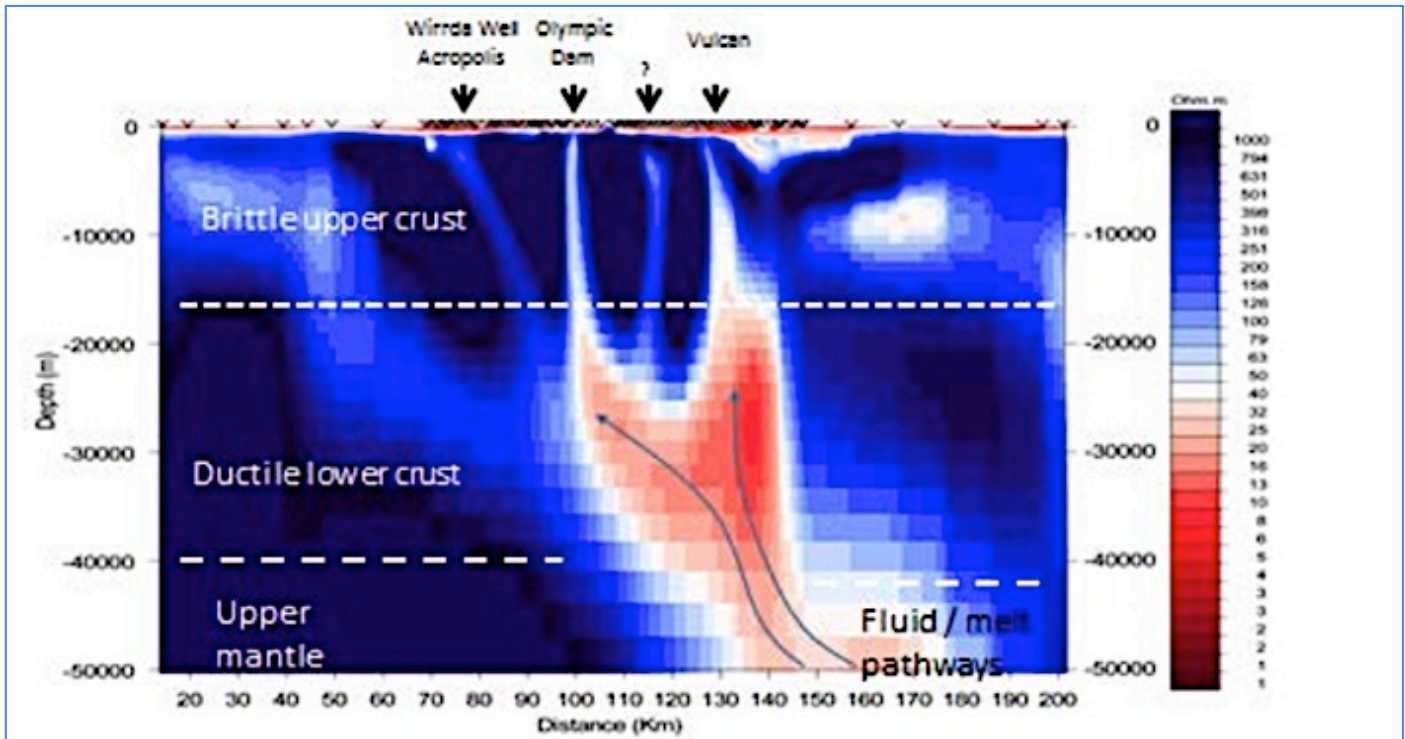


Figure 3. MT conductivity profile from near Woomera at the south (left hand side) to a location approximately 70 km north of Vulcan (right hand side). Areas shown in red and white are zones of higher inferred conductivity and considered likely to highlight former mineralising fluid pathways. Note that there is a single large conductive body at considerable depth (about 30km) beneath the IOCGU systems at Olympic Dam, Wirrda Well/Acropolis and Vulcan, and it bifurcates at shallower depth (MT data supplied by University of Adelaide).

<http://www.tasmanresources.com.au/announcements/a48f734b068340a3d5e88d7c6be7be1f.pdf>



Simon finished by talking about the detailed care, which companies now need to employ to ensure that there is minimal disturbance to the ecology of the beautiful surroundings he visits. This includes ‘weed hygiene’ and detailed vehicle cleaning and restoration of any disturbance that does occur. Great care is also taken to avoid damage to culturally significant areas. These strict requirements increase the benefits of using non-invasive, exploration techniques for extensive preliminary investigations and exploration.

Plenty of interesting birds at Alice Springs Sewage Ponds

Field Naturalists trip on 28 April 2019 – with Lisa and Pete Nunn and Birdlife members.



BIRD LIST by Lisa Nunn

- | | |
|----------------------|-------------------------|
| Black Kite | Whistling Kite |
| Nankeen Kestrel | Black Swan |
| Red-necked Avocet | Black-winged Stilt |
| Masked Lapwing | Eurasian Coot |
| Common Greenshank | Black-tailed Godwit |
| Wood Sandpiper | Sharp-tailed Sandpiper |
| Red-necked Stint | Long-toed Stint |
| Red-kneed Dotterel | Black-fronted Dotterel |
| Red-capped Plover | Orange Chat |
| Little Grassbird | Red-capped Plover |
| Orange Chat | Little Grassbird |
| Tree Martin | Fairy Martin |
| White-backed Swallow | |
| Hoary-headed Grebe | Australasian Grebe |
| Grey Teal | Pink-eared Duck |
| Chestnut Teal | Pacific Black Duck |
| Hardhead | Wood Duck |
| Willy Wagtail | White-winged Fairy-wren |
| Little Crow | Magpie-lark |
| Marsh Sandpiper | |



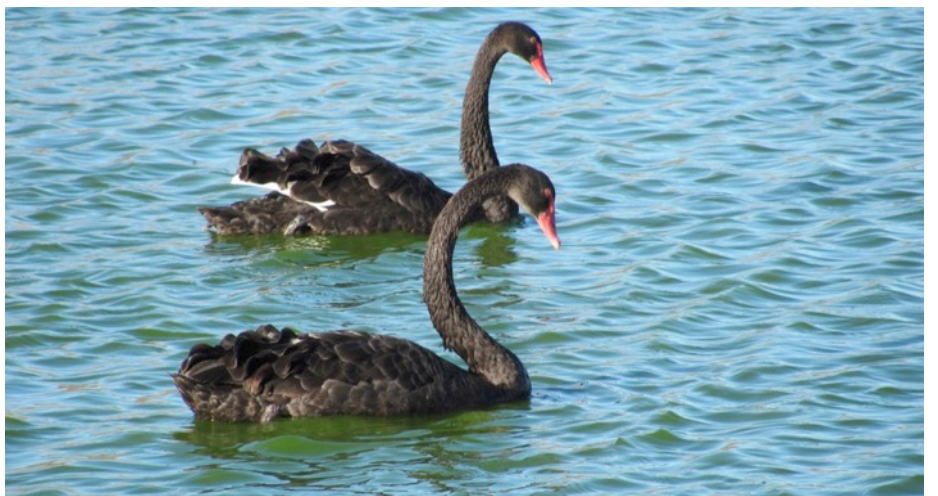


PHOTOS

Page 6
Female and male Orange Chats by
Lisa Nunn
Common Greenshank by *Pete*
Nunn
The crowd in their Hi-Vis by *Barb*
Gilfedder

Page 7
Tree Martin and Fairy Martin by
Pete Nunn
Masked Lapwing by *Barb Gilfedder*
Black Swans by *Barb Gilfedder*
Sharp-tailed Sandpiper by
Johannes Ammerschlaeger

If you're interested in learning more
about our local birds, consider joining
Birdlife Central Australia. Search
'Birdlife Central Australia' on Facebook
or get in touch with Lisa Nunn.
lisanunn986@hotmail.com
mobile 0402 557 558



Heritage Market 25 May 2019

The Heritage Market seemed quieter this year, but that is not surprising with so many other events happening in Alice Springs. However our stall was busy.

Australian Plant Society Alice Springs and Alice Springs Field Naturalists Club shared a stall site. There is a big overlap of Membership between the two clubs, which meant many helping were serving both groups. We had the usual merchandise for sale – mugs, flora and bird brochures, seed packets, cards and some tube stock plants from OPBG. The plants were popular as were the packets of native plant seeds. Two excellent interactive displays really attracted visitors and locals to the stall. First a fantastic display of found natural objects put together by Rosalie along with a range of magnifiers to view them. There were fossils, insects, liverworts and various animal skulls and scats to study. And second, Barb had set up a photographic bird identification exercise where people had to match bird names to images. Customers put a lot of effort and time into studying this and all came away with a magnet to treasure.

Many thanks to Bec Duncum who did most of the stall organising although she was unable to attend, and to all the volunteers who helped – Neil and Leigh Woolcock, Connie Spencer, Rosalie Breen, Margaret Friedel, Jane and Peter Bannister, Sue and Max O’Callaghan, Kimberley Morgan, Megg Kelham, Peter Jobson and Barb Gilfedder



A few snaps from the Heritage market. From the top: There was a varied assortment of merchandise. Rosalie engaged both experience and youth with her found treasures, and Left - this family cooperated matching bird pictures to bird names.



Hippotion celerio Vine Hawk Moth

This big brown caterpillar (right) was found among debris on the ground under grape vines in Rosalie Breen's garden. It has a backward facing horn and large eyespots on the first abdominal segment.

When disturbed, the caterpillar tucks its head under its thorax, and expands the segment with the eyespots. No doubt these distract and deter possible predators. We were able to identify it as the Vine Hawk Moth caterpillar, which feasts on cultivated grape vines and sweet potato vine, as well as quite a large selection of other green leafy plants. Its main colour can vary from bright green, brown, red and dark grey.

This one on the ground, was preparing to pupate.



A few days later Rosalie was able to photograph the pupa or chrysalis. (left) It can waggle its pointed end when held.

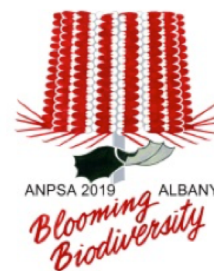
At the Heritage Market she had an adult Hawk Moth as part of her petrie dish display. (below)

It was a different individual (too soon for this one to emerge) but interesting to see the adult stage.

It occurs worldwide except for the Americas.



This lovely Corkwood, *Hakea lorea*, was photographed near Jay Creek by Peter Bannister.



**National Wildflower Conference in
Albany, Western Australia, Sept-Oct 2019**

www.bloomingbiodiversity.com.au



ALICE SPRINGS FIELD NATURALISTS CLUB INCORPORATED
Minutes of the general meeting held at the Olive Pink Botanic Garden Visitors Centre on
Wednesday 8 May 2019

After Simon Mann's interesting talk on Geophysics and the bush.

Thank you to Margaret Friedel for supper, Lee Ryall for scribing and Anne Pye for taking meeting minutes.

Present: 27 members and 5 visitors as per attendance book and 4 apologies.

Minutes of the March General Meeting attached to the last newsletter. Accepted.

Business arising from the General meeting Minutes.

- Website - Robyn Grey-Gardner talked on index for newsletters on web. It was agreed to make the index as simple as possible. People were happy with what she presented. The three columns for article, report etc. may not be necessary. May be possible to update once a year and send to Membership as well as being on the web site.
- Insurance account paid. Barb requested and received the Certificate of Currency.
- Lisa and Pete Nunn given donation of \$500 towards Letter-wing Kite Research and were very happy with that
- Neil Woolcock and Marg Friedel are going to sort out the signatories for the club account at Westpac as this has not been set up properly by the bank.

March/April Treasurer's Report: Neil Woolcock

Balance of all funds (including petty cash) end of February 2019 **\$3,314.14**

Income for February 2019

- Interest 0.51

Expenses

- Insurance **\$440.00**
- Donation P & L Nunn Letter-wing Kite Project **\$500.00**

(Petty Cash opening balance - \$41.85

Expenses Lodgement of annual return – Anne Pye \$17.00

Balance end April \$24.85)

Total of all funds (including petty cash) end April 2019 **\$2, 357.65**

The meeting accepted the Treasurer's report.

Correspondence:

Various emails addressed to ASFNC have been forwarded to membership.

General Business

- Last week Barb spoke to APS AS about the changing environment at Standley Chasm before and after the fires, and also about the Johnston River Grass *Paspalum conjugatum*, written about in our May newsletter by Peter Jobson. Several people at that meeting were interested in having a working bee out there, if Nova Pomare, the manager would like, to help to remove some of it. She may have made other arrangements. Barb took a list of volunteers from ASFNC Members: 6 members volunteered.
- No other general business.

Past Events:

- Sunday 28 April – Visit to sewage ponds with Lisa Nunn and other Birdlife Members. This was not a shorebird count, just a look and learn experience. 19 people attended, 11 of those ASFNC Members.

Future Events:

NEED SPEAKERS FOR JULY, OCTOBER AND NOVEMBER – Simon Brown is going to talk to a PhD student doing a thesis on *Acacia undoolyana*, as there is an upcoming field trip to see if anything has recovered from the fire 5 years ago at N'dhala Gorge.

- Heritage Market, Saturday 25 May. Thank you to people who have volunteered to help at joint APS AS and ASFNC stall. Please come out and support the market and our club and have a chat. Doug will see if there are any saleable plants
- June long weekend – 8-10 June – Newhaven camp.
- Saturday 29 June – Behind the scenes at ASDP with Lisa Nunn.

WE ARE A BIT SHORT OF EVENTS. Many things suggested at Planning Meeting but leaders keen to have rain beforehand. Any ideas?

Next ASFNC Meeting - Wednesday 12 June - Megg Kelham , "Wildlife, Palm Oil and Eco-Tourism in Malaysian Borneo: The Good the Bad and the Ugly - a traveller's impressions" which will be held at CDU Lecture Theatre.

Scribe: Margaret Friedel; Supper: Simon Brown.

Sightings: Pheasant Coucal in Rosalie Breen's garden again.