
June 2003

Volume 19 No. 1

Inside this Issue

- 1 Speeding 4WD's
- 2 Minnowarra Biodiversity Project
- 3 Why Middleback
- 3 CDMA in the Flinders Ranges
- 4 AGM, Guest Speaker And Committee Nominations
- 5 Expedition Witjira
- 6 Munyaroo Report
- 6 GraSP Report

"SEGMENTS" is the authorised journal of the SCIENTIFIC EXPEDITION GROUP INC.
PO Box 501, Unley, SA 5061



Journal of the
Scientific Expedition Group

Speeding 4WD'S
or
The MinnaWarra Autumn Survey

Alun Thomas

The Minnowarra biodiversity survey held during the Anzac Day long weekend was a huge success mainly due to the enthusiasm of the youthful helpers who encouraged the drivers of the 4WD vehicles to be first to survey sites so that they could be first to check the Elliott traps and pitfalls. Once the vehicles had stopped it was a foot race to see who could be first.

The enthusiasm of Adam, Darren, Amelia, Liam and Nick rubbed of on the more sedate adults in the survey team and we all enjoyed the work. We were blessed with fine and dry weather during the survey but at night the winds were strong which put some of the tents in some peril.

For those who do not know the Minnowarra site, there are eight survey sites in recently fenced heritage blocks on Minnowarra, a grazing property near Myponga. The sites represent a range of habitats from perched swamps to dry sclerophyll hillsides, all in fascinating bushland. Each site has six pitfall buckets, fifteen Elliott traps and two cage traps. Sites are checked twice a day for four days. Normally the morning check finds more animals caught and it takes about four hours to complete the round of sites and the afternoon survey takes about two hours.

Mammals trapped were bush rats, swamp rats, yellow footed antichinus, house mice and western pigmy possum. Also trapped were three species of skink, one species of frog, spiders, scorpions and a house centipede. Mostly the mammals were caught in the Elliott traps although the pygmy possums and some of the house mice were caught in the pitfall traps. Full details of the "catch" are given in a report elsewhere in this edition.

The survey really started on the previous Sunday when a hard working band installed a new pitfall site and erected the pitfall drift fences at that site as well as the seven other sites. These workers included John Love, Trent Porter, Raylene Klinger, Rose Fletcher, Liam Fletcher, Anne Crawford, Linda-Marie Hall, Robin Hann, Kathleen Cunningham, Amelia Thomas, Richard Willing and Alun Thomas.

Not all of these were available for the survey proper as a number went on the GRaSP expedition to install the new pluviometer on Arcoona Bluff. Over the Anzac Day weekend we had assistance from Rose Fletcher, Liam

Fletcher, John Lawson, John Morley, Loraine Jansen, Chris Shaw, Rob Faulkner, Nick Faulkner, Robin Hann, Adam Hann, Linda-Marie Hall, Kathleen Cunningham, Amelia Thomas, Darren Cornish, Richard Willing, Elizabeth Yeatman and Alun Thomas.

On Sunday Darrell Kraehenbuehl visited the survey and told us about the vegetation at each of the sites.

We were particularly fortunate that we had Rob Fawkner, Robin Hann and Elizabeth Yeatman who stayed to assist Richard and Gwen Willing on the Monday to do the final round, close off the sites and clean up the equipment.

We are very grateful to our chief biologist Loraine Jansen who took the time during the survey to explain and teach us what she was doing and why while investigating and recording the catch. Loraine also showed us how to

use a key to identify the different species of skink located.

The Minnowarra survey is an excellent opportunity for those of us who are tied to the city and unable to go on projects further afield to provide assistance on an important biological survey. My family and I certainly enjoyed our time there.



MINNAWARRA BIODIVERSITY PROJECT

AUTUMN 2003 REPORT

Richard Willing

The autumn survey at Minnowarra was conducted over the Anzac Day long weekend during a spell of beautiful autumn weather with warm, calm sunny days with temperatures in the low 20's, and cool nights with a few hours of moderate wind.

Because of a strong suspicion of *Phytophthora cinnamomi* ("dieback") infestation Site 6 had been closed after the previous survey, and a new site had to be established. A team of 12 volunteers gathered at the farm on Easter Sunday to do this four days before the traps were opened. Site 9 was prepared using muscle power, crowbars, shovels, chainsaw and brush-cutter. Six 20 litre buckets were sunk into the ground for pitfall traps and their lids replaced lightly. The fence-line was dug in along the buckets, and the site was ready for the final touches.

The fences were erected on the other seven sites and the work completed by mid-afternoon. Many hands certainly made light work, and the day concluded with a barbecue.

The opening of the traps on Thursday was delayed because a steer had damaged a leg and had to be brought up to the cattle yards. Eventually the traps at all 8 survey sites were opened - 6 pitfalls, 15 Elliott traps and 2

cage traps at each. They remained open for 4 days and nights, with rounds made each morning and evening to count, weigh, identify, mark and release each animal.

The survey was a great success. Including the preparation day over Easter 26 people contributed 77 person-days of volunteer help to the survey, including a group of young people who vied for the honour of finding animals in traps. A total of 107 mammals were trapped, mostly in Elliott



Pigmy possum in Loraine's hand

traps - 36 bush rats (*Rattus fuscipes*), 8 swamp rats (*Rattus lutreolus*), 46 marsupial mice (*Antechinus flavipes*), 2 western pigmy possums (*Cercartetus concinnus*) and 13 house mice (*Mus musculus*). The pigmy possums were found in pitfalls in the new site 9, mother and young in adjacent pits. After numerous photos, they were reunited and released into the scrub. Dozens of skinks of 3 species (*Lamprolaima guichenotii*, *Pseudomoia*

entrecaustauxii and *Hemiergis decresiensis*) were also trapped in pitfalls as well as a sleepy lizard ("shingle back" - *Tiliqua rugosa*). Many small frogs were caught, all belonging to the same species (*Crinia signifera*). The bird observers, Claire and Frances, were delayed in getting to the farm before this part of the survey concluded, so their report will be published later.

Monday was clean-up day. Each site was inspected, the animals and reptiles processed, the traps folded up the fence removed and the lids put on the buckets. Considerable help from Rob and Elizabeth in packing up the sites, and Gwen and Robin in cleaning the traps was much appreciated as everybody else had returned home to go to work and school.

All these data will be entered into the SA Biological Survey. The Minnowarra surveys are conducted twice yearly in spring and autumn. The next one will be in October over the holiday weekend. This long-term project is to assess the effect of fencing out grazing farm animals from the native vegetation, hopefully demonstrating an increase in biodiversity as time goes by.



WHY MIDDLEBACK?

John Love

The Middleback Range, well known for its extensive iron ore deposits, was the scene for the adventure phase of Expedition Munyaroo 2002. Its unusual name has an unusual story behind it.

On 8 March 1802, while surveying the west coast of Spencer Gulf, Matthew Flinders saw 'several hummocks', the highest of which he named 'Middle Mount'. On 14 March, on his way south along the eastern coast of the gulf, the more distant perspective enabled him to see 'a middle mount on the west side of the gulph, higher and further back than the one before set'. In his chart this is shown as 'Middle back Mount' (three words with a lower case b) west of 'Middle Mount'. Middleback became

the name of the range and two of its peaks. Either of these, or possibly a third, higher peak, could be Flinders' Middle back Mount. The smaller 'Middle Mount' is a bigger puzzle, still unsolved.

The name 'Middle Mount' does not appear on current published maps but there are at least three possible contenders. One is in an isolated group of hills now called Ash Range, about 10km SSE of Middleback North. Another is about 19km in the same direction, at the north end of the Moonabie Range. This is shown on a Surveyor General's Office map dated 1871 as 'Middle Mount?' (with a question mark). The third is in a group of small hills about 17km east of Middleback North, between Mount Young and Broadbent Hill. Bill Watt,

Secretary of the Geographical Names Advisory Committee, says the third has been tentatively identified as Middle Mount. However, it does not seem to fit the bearings given by Flinders. (All the names mentioned here, except 'Middle Mount', are shown on the 1:50,000 topographical map sheets Charleston, Middleback and Randell.)

Underlying this uncertainty is a further complication. Flinders was one of the first navigators to devise a system of compensation for compass deviations caused by iron in the ship and he was aware of what he called 'the magnetism of land', but as he rode at anchor on 8 March 1802, did he realise that there were millions of tonnes of iron only 30 kilometres west of his ship?



CDMA in the Flinders Ranges

Andrew Eastick

As the Chief Executive Officer of the Northern Regional Development Board (NRDB) I noted with some interest the mention in the March 2003 edition of SEGMENTS of the establishment of a new pluviometer in the Gammon Ranges that will be reporting daily to the Bureau of Meteorology through Telstra's Northern South Australia CDMA Mobile Phone service.

The NRDB was a successful applicant for the funding from the Federal Government's Networking the Nation Program (receiving \$750,000) that enabled a major expansion of the Telstra CDMA to many parts of the Flinders Ranges, including the Northern Flinders Ranges.

It was the establishment of a Telstra CDMA service from an existing telecommunications tower on Mount Scott, a few kilometers south west of the Leigh Creek township, which now provides the Gammon Ranges coverage.

Often it helps to know the location of mobile phone towers in country areas because that knowledge can

assist to predict when coverage might be available.

When bushwalking that knowledge may influence actions that might be taken to summon help in an emergency situation ie walk to the nearest trafficked road or occupied property, or climb to the nearest high point to obtain a mobile phone service, and summon assistance.

I suspect from occasional advice that I receive that from many of the high parts of the Flinders Ranges it would be possible to access Telstra's CDMA service.

The NRDB's project resulted in Telstra CDMA mobile coverage at:

Orroroo (Telstra tower in the town)
Carrieton (from Stoke Hill near Moochra Tower)
Melrose (from Melrose grain silos)
Booloroo Centre (cell extender from Melrose, on Booloroo Centre grain silos)
Wilmington (cell extender from Stoke Hill, on Wilmington grain silos)
Quorn (cell extender from Stoke Hill, on ridge overlooking the town)
Wilpena Pound (on high ground to the rear of the Resort area)
Leigh Creek (from Mount Scott)

Hawker also has a Telstra CDMA service (and Telstra GSM) from the Telstra tower in the town but this was established by Telstra separate from the NRDB's Networking the Nation initiative.

Obviously the availability of a mobile phone service in these areas has increased the level of safety and security for people visiting the area - whether by car or walking.

I would appreciate advice from walkers on these areas of the Flinders Ranges from which the Telstra CDMA service can be accessed.

You can email me with this information at aeastick@nrdb.com.au.

I will report on the information I receive in a future edition of SEGMENTS.



ANNUAL GENERAL MEETING

FRIDAY 29 August 2003

At 7.30 p.m.

In the Royal Society of South Australia rooms

(Go along the lane from Kintore Avenue, behind the State Library, to Plane Tree Court. The room is west of the plane tree.)

Business

Reports by the Chairman and the Treasurer

Expedition and GRaSP Reports

Membership subscriptions

Election of the 2002-2003 Committee

Any other business

Guest speaker

Mr Mark Pharaoh, who is Curator of the Mawson Collection, has agreed to speak on:

Douglas Mawson, the "Supreme Commander": His Scientific Expeditions in Australia and Overseas, 1903 to the 1950's

Mark has invited us to visit the Mawson Collection, which is housed in the nearby Museum Science Centre, after the talk.

Supper

Note: Parking will be difficult due to Friday night shopping in the city. Car parks are available in the University opposite Pulteney St and off Kintore Ave. Otherwise try down on Victoria Dr..

Nominations are called for the 2002-2003 Committee

The present Committee consists of : President: Mr C.Warren Bonython, Chairman: Dr Richard Willing, Vice President: Mr Alun Thomas, Secretary: Mr John Love, Treasurer: Mr Graeme Oats, Committee members: Mrs Sarah Telfer, Messrs John Hayes, Phil Cole, Chris Wright, Bob Major, Trent Porter, Duncan MacKenzie, Paul Wainwright, Peter Bailey, Ms Linda-Marie Hall.

All members will retire. Warren Bonython and Chris Wright will not be standing for re-election. All the others are eligible for re-election.

Nominations must be signed by a proposer and the nominee and sent to The Secretary, PO Box 501, Unley 5061, by 1 August 2003.



EXPEDITION WITJIRA 12-26 July 2003

This is to bring you up to date with the latest information on the Witjira expedition.

Camping: Trent Porter, our reliable catering and logistics man flew to Witjira recently week and returned with a very positive report. The camp will be situated at the main Dalhousie Spring in an area separate from the general tourist camping ground. There is a fly proof kitchen on site, and a marquee will be erected as a fly proof dining area. Refrigerator, freezer, toilet, bush shower and a shed for a scientific area are available. Trent made a point about the number of flies and mosquitos. Mozzie proof tents and swags are necessary as well as RID - the preferred repellent.

Health matters: All drinking water needs boiling before use. Ross River fever is present and transmitted by mosquito bite. Diarrhoea is an ever-present phappens. This will be discussed on the information night. 1 important, especially for those in the kitchen. Snake bite is a key topic in this remote area. The important thing is to avoid getting bitten in the first place, and to have adequate bandages available to compress the bitten site if

the worst happens. This will be discussed on the information night.

Applicants: Applications are returning steadily and are now due, as numbers on the expedition ited.are lim Those who are interested and who have not replied yet had better do so immediately if they still wish to go. So far we have more than 20 starters.

Scientific program: The first week of the expedition will be spent working on the mound springs and date palm survey, aquatic biology, invertebrates, birds and vegetation. A set of high quality aerial photos have been blown up so that we can do a ground truth survey to correlate with them. The second week will move on to other projects such as trapping along outflow tails, possible visit to Purni bore, exclosures, rare rodents, kowari search, and possible adventure phase. **Teams:** The party will be split into 5 teams rotating daily between projects and cooking duty. The "meal team" will also act as a backup for areas that require a bit more manpower during the day. Everyone will have the chance to experience most facets of the scientific program.

Scientific staff:

So far we have on board:

Travis Gotch, SEG Scientific Leader, expert on mound spring wolf spiders;
Geoff Axford, NPWS regional Ecologist;
Michaela Birrell, aquatic biology;
Denise Noack, mound spring vegetation (her PhD subject);
Kelli-Jo Kovac, WMC ecologist, rodents and birds;
L Queale, invertebrates;
Rob Brandle and Stuart Pilman, rare rodents;
Jenny Bourne, vegetation and data collection;
Brendan Lay, (possibly) animal exclosures.

SEG staff:

Richard Willing, Chief Leader;
Trent Porter, Catering and Logistics;
John Love and Peter Bailey, general.

Transport: 4x4 vehicles, 3 or 4 in each. Truck for heavy gear. Overnight stay, dinner and breakfast at Coober Pedy each way.



Summary of results from the Munyaroo Expedition, 22 Sept - 4 Oct 2002

Peter Bailey

Below is a brief summary of the scientific results of the Munyaroo Expedition. The full report will be published in the near future.

A list of some 230 plant species was consolidated from plants recorded during the expedition together with some previous SEG records from Munyaroo. Some of the highlights of the flora are discussed and the significance of Munyaroo as containing a representative diversity of vegetation associations is confirmed. A habitat analysis explains the distribution of vegetation associations by the landscape on which they occur and the soils on which they grow.

Of the invertebrates, spiders and ants were intensively sampled. About 190 species of spiders were recorded during eight sampling days indicating a diversity greater than expected from a

low-rainfall area. Extensions of known ranges of some taxa and some previously unrecorded spider species are noted. The insect fauna sampled was mainly ground-dwelling and demonstrated the diversity of the ant fauna of Munyaroo. Six out of the 10 ant subfamilies found in Australia and 30 of the 50 known genera of ants known to exist in South Australia were recorded and of these, eight have not previously been recorded from Eyre Peninsula. At least 3 specimens of *Camponotus* are previously undescribed and are now described as new species by McArthur (2003). Ground-dwelling arthropods are an important food source for lizards at Munyaroo. Stomach content analysis indicated that skinks and geckoes tended to be indiscriminate feeders, dragons were selective ant-eaters.

Of the reptiles, dragons, geckoes,

legless lizards, skinks, and elapid snakes were recorded and evidence of goannas was noted.

103 species of birds were recorded during this survey, compared with 109 recorded from Munyaroo during a previous long-term study. The record of the Thick-Billed Grasswren *Amytornis textilis myall* represents a southern extension of its range from the north-eastern Eyre Peninsula. No mallee fowl were sighted and no active mounds were encountered.

Recordings of terrestrial mammals included dasyurids, kangaroos, pygmy possums, freetail bats, fox, cat, sheep, rabbit, Mitchell's hopping mouse and house mouse.



GRASP PROJECT Linda-Marie Hall

Some of you may have heard that Chris Wright is moving overseas for the next 12 months. This is great news for Chris, but it means GRASP needs a new Coordinator. Chris has done a fantastic job in this role over the last decade and will be greatly missed.

At the last SEG Committee meeting I was nominated and accepted the position as the new GRASP Coordinator for the coming 12 months. I am delighted to take on the role, but it is going to be a very busy year for me as I am also getting married later in the year.

I agreed to take on the role subject to setting up a core group of people as the GRASP leaders committee to assist me in planning for GRASP trips.

I am, therefore, setting up a GRASP Leaders Committee made up of past GRASP leaders to assist me in the Coordination role. Being on the GRASP Leaders Committee would involve attending pre-trip planning meetings prior to each of the four trips that will be run throughout the year as indicated below.

Trips are planned for the next year as follows:

July 11 to 15, pre-trip meeting in June 2003 (leaders Paul Wainwright, Linda-Marie Hall)

October 17 to 21, pre-trip meeting in September 2003 (Graham Blair, David Kemp)

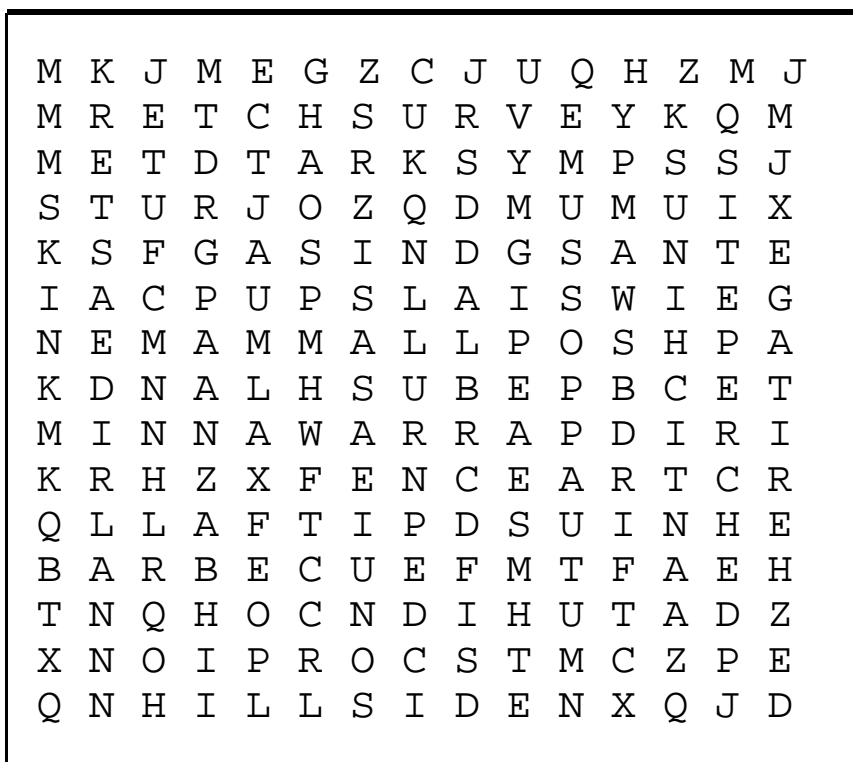
All GRASP Leaders will be invited to the Annual GRASP leaders meeting early next year and trip leaders will be expected to attend the pre-trip meetings for the trips they are leading.

An added bonus for the GRASP Leaders Committee is that they will be given copies of the newly printed updated Leaders Manual thanks to the hard work of Paul Wainwright and Chris Wright (and many others who have contributed to this work over the years).



KID'S CORNER

This edition's puzzle has words hidden in all directions. They are taken from the article on the Minnowarra Project



FENCE
DRIFT
MINNOWARRA
AUTUMN
SURVEY
HERITAGE
ANTICHINUS
PIGMY
POSSUM
SWAMP
PERCHED
HILLSIDE
BUSHLAND
MAMMAL
ELLIOTT
TRAP
PITFALL
SKINK
SCORPION
SITE
BARBECUE
EASTER
ANZAC

EDITORIAL

This edition sees the final preparations for the Expedition Witjira to Dalhousie Springs. This expedition will carry out important scientific research into the feral date palms around the mound springs as well as a wide range of other interesting projects.

The Annual General Meeting in late August will also see a major watershed in SEG as Warren Bonython, who has been our President since the inception of the group in 1985, steps down. In recognition of his long service the committee has decided to create the position of Emeritus President and to appoint him to that position. This will be ratified at the AGM.

The Minnowarra Survey over the Anzac Day Weekend was a great success and Richard Willing's hard work in the region has seen a number of local people become interested in the project.

Chris Wright leaving to work overseas has left a hole in the committee which will be ably filled by Linda-Marie Hall as Coordinator of the Gammon Ranges Scientific Project. An immediate problem will be transport to and from the Gammons. Anyone who can help is asked to contact her on .

I am pleased to report that SEG is proceeding as strong as ever with a wide range of projects to hand.

Alun Thomas

Useless Facts

The average person flexes the joints in their fingers 24 million times in their lifetime!

Odds of being struck by a meteorite: 1 in 10 trillion!

The human heart creates enough pressure to squirt blood 30ft!

SCIENTIFIC EXPEDITION GROUP

The Scientific Expedition Group came into being at a public meeting on 21st August 1984. Membership is open to any persons, family or organisation interested in the following aims:

The promotion and running of expeditions of a scientific, cultural and adventurous nature.

The furthering of knowledge, understanding and appreciation of the natural environment.

Promotion of the values and philosophy of wilderness.

Enabling people to learn the skills required for planning and running expeditions, and to develop sound field techniques.

Members will receive regular information on S. E. G. activities and expeditions

SUBSCRIPTIONS (Including GST)

Working adult member	-----	\$16.50
Pensioner student or unemployed	-----	\$11.00
Family membership	-----	\$22.00
Organisation membership	-----	\$22.00

APPLICATION FOR MEMBERSHIP AND MEMBERSHIP RENEWAL

Name.....

Address.....

.....

Telephone (H)..... (W).....

Email

Details of scientific, cultural, adventuring or other relevant skill or interests you may be prepared to share with the group:

.....
.....
.....

Applications should be addressed to : The Hon. Secretary
Scientific Expedition Group Inc.
P.O. Box 501
Unley S.A. 5061



Patron: Her Excellency, the Honourable Marjorie Jackson-Nelson, AC, CVO, MBE,
Governor of South Australia



COMMITTEE

		Phone	Fax	Email
President	C. Warren Bonython AO	8431 1363	8431 1363	
Chairman	Dr Richard Willing	8558 6381	8558 6212	willingr@comstech.com
		Mob 0408 807 517		
Vice-Chairman	Alun Thomas	8296 9453	8223 2588	alun@madderns.com.au
Hon. Secretary	John Love	8379 1172		jsp@senet.com.au
Hon. Treasurer	Graeme Oats	8278 3179	8278 5577	oatsgd@senet.com.au
Committee:	Phil Cole	8339 3201	83039555	pjcole@senet.com.au
	Duncan MacKenzie	8332 1204	8364 5527	dmackenzie@iname.com
	Robert Major	8352 8949		
	Trent Porter	8278 9078		trentasaurus@bigpond.com
	John Hayes	8204 2870		hayes.john@sa.gov.sa.gov.au
	Paul Wainwright	8359 2270		terranoa@senet.com.au
Editor	Alun Thomas	8296 9453	8223 2588	athomas6@bigpond.net.au
				Address: 23 Rutland Ave Brighton S.A. 5048

SEG WEBSITE www.communitywebs.org/scientificexpeditiongroup

SEG EMAIL ADDRESS segcomms@telstra.com

