



Twenty Years for SEG

2004 is a very busy year for the Scientific Expedition Group (SEG), as indicated in the 2004 calendar below. SEG will be celebrating its twentieth birthday in August 2004 at the SEG AGM and another separate event for SEG members to recognise the amazing achievements of SEG participants over the last twenty years.

Further information on the 20 Year Celebrations will be provided in the June issue of SEGments, which will feature articles celebrating twenty years of SEG.

SEG 2004 Calendar

April

April 22 to 26 ANZAC GRASP trip

April 22 to 26 Minawarra Survey

May

May 28 Deadline for articles for June issue of SEGments

June

Mid June SEGments Vol.20 No.1

July

July Holidays GRASP trip (date TBA)

August

August 20 SEG AGM (venue TBA)

(date TBA) 20 Year Celebration

August 27 Deadline for September issue of SEGments

September

Mid September SEGments Vol.20 No.2

September/ October School Holidays
GRASP trip (date TBA)
Minawarra Trip (TBA)

November

November 26 Deadline for December issue of SEGments

December

Mid December SEGments Vol. 20 No. 3

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

News from the SEG Committee

Chris Wright is back from his trip to Ireland and has been co-opted back onto the SEG Committee.

Linda-Marie McDowell is still continuing to play an overall coordinating role for GRASP expeditions, but Chris will again oversee the scientific activities for GRASP.

New Editors for SEGments

After eight years as Editor of SEGments Alun Thomas has moved on to take on the role of Chairman for SEG.

Linda-Marie and Matthew McDowell have offered to take over the role of editing SEGments. They look forward to receiving many interesting nature based articles and stories about SEG adventures to include in each issue of SEGments.

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Wetland Monitoring at Dalhousie Springs, Witjira National Park, South Australia

This article on the Witjira SEG expedition follows on from the article written by Richard Willing in the September 2003 issue of SEGments.

Monitoring 'Wetlands with Tails'

Michaela Birrell, Department for Environment and Heritage, SA

In July 2003, 40 scientists and volunteers set up camp at Dalhousie Springs in the Witjira National Park to undertake an ambitious survey and monitoring program.

The monitoring and survey work, was a huge collaborative project with participants from SEG, students from the University of South Australia, Flinders University and the University of South Australia, and staff from Western Mining Corporation, the SA Departments for Environment and Heritage and Water, Land & Biodiversity Conservation and Primary Industries and Resources.

The purpose of the monitoring and survey program was to gather information on:

- the impacts of date palms on springs,
- visitor impacts at the Dalhousie Main Pool,
- grazing pressure (from both native and feral species) around water sources in the Park,
- rare rodent populations,
- evidence of marsupial moles (*Notoryctes typhlops*),
- the abundance of feral animals (aerial survey),
- the effects of weed control programs,
- and to rediscover kowari, *Dasyercus byrnei*, populations in habitats identified in historic records.

While the evening swims in the Dalhousie Main Pool were quite luxurious (around 37°C), the days were full of hard work including mapping the very spiky date palms, checking hundreds of mammal traps early each morning, diligently collecting water chemistry data three times a day and traipsing through dense vegetation and mud to collect aquatic invertebrates. Participants also sorted invertebrates in a 'shed-based lab', re-

fenced some experimental exclosures, measured the profiles of the spring pools from a boat, counted feral animals along transects from a small aeroplane and measured vegetation cover at the edges of pools and down the spring 'tails'.



Setting a malaise trap at Dalhousie Springs; Photographer: Michaela Birrell

The 'tails' are formed by plants and animals colonising the watercourses that are created by water flowing over the mounds that surround some of the springs. In situations where a spring does not have a pool, water seeps out of the ground directly forming a 'tail'. Some of the tails gently wind their way across the white, dolomitic limestone for more than 10 kilometres. The dominant tree species in the tails, and surrounding the pools, is the inland paperbark, *Melaleuca glomerata* and the Witjira National Park gets its name from a Lower Southern Arrernte Aboriginal word referring to the paperbarks fringing the springs.

Analysis of the data collected during the Expedition is still underway, however some of the key findings include:

- excellent recovery of native plants since the Park was proclaimed in 1985 and in response to feral animal control (including effects of rabbit-caliciivirus);

- hundreds of date palm seedlings are establishing at the Dalhousie Springs;
- some smaller springs have completely dried up where there are heavy infestations of date palms;
- a threatened plant (*Eleocharis geniculata*) is recovering well after the redesign of the main campground;
- discovering a planigale (*Planigale sp.*) population at the Dalhousie Main Pool;
- capturing plains rats (*Pseudomys australis*) (Nationally Vulnerable) near Mount Crispe;
- presence of marsupial moles (*Notoryctes typhlops*) east of Purnie Bore;
- capturing gidgee skinks (*Egernia stokesii*) at 3 O'Clock Creek;
- and sighting a centralian striped skink (*Ctenotus saxatilis*) – distinctive form.

The recommendations from the 2003 Expedition will be presented to the Park Managers and an ongoing monitoring program will be developed. A trial for removing some mature date palms is planned for targeted areas in which the infestations are threatening the ecology of springs. However, the Park Managers will retain large stands of date palms near the Dalhousie Ruins and at other important sites in the Park in recognition of their cultural, historical and aesthetic importance for these 'oases in the desert.'

The people involved in the survey and monitoring program and the managers of the Witjira National Park thank the Arid Areas Catchment Water Management Board and Western Mining Corporation who provided financial assistance for the survey and monitoring work in 2003.



Monitoring at Dalhousie Springs; Photographer: Michaela Birrell



Main pool of Dalhousie Springs; Photographer: Michaela Birrell

GRASP Trip, January 22-25, 2004

Report provided by Kent Wilson

Expedition participants included: Linton Johnston (Party Leader), John Love (transport and Base Camp), Peter Love and Kent Wilson.

The milder summer weather (relatively speaking, compared to the trip last year) allowed the group to complete the walk in two days.

On early Thursday morning (January 22) the participants left Adelaide, and they arrived at Arcoona Creek Base Camp at 2:25pm. After a quick lunch break they changed the Base Camp Exclusion Zone pluviometer data logger and the water level recorder then undertook the Yellow Footed Rock Wallaby (YFRW) survey.

At the foot of the lower fall on Wallaby Creek there was a smudge of damp soil while at the base of the upper fall there was a minuscule amount of foul water in small hollows scratched by animals. Both moist areas swarmed with bees and large wasps. On the knoll above the saddle the group inspected the new pluviometer but had insufficient water to conduct a test. Evasive Creek was totally dry, however several Euros and YFRWs were sighted.

On the way back to base camp the group noted that goats and roos were gathered around the seeps where the animals had excavated a small hollow amongst the stones. A further group of 16 to 18 goats was seen on the return walk to base camp. On arrival back at base camp at 8:20pm it was still 32 degrees Celsius.

It was decided to forego the morning YFRW survey to avoid putting the YFRWs under stress in view of the heat and minimal water, and the group wanted to make an early start to Vandenberg camp, thereby avoiding the higher temperatures of the middle of the day and the afternoon.

On Friday morning, each walker carried 12 to 15 litres of water up Arcoona Creek. The group arrived at Vandenberg camp at 11:18am. Along the way they noted several groups of goats and plenty of evidence as to the passing of donkeys, but the only sign of water was at The Seeps. The group retired to the water cache cave to eat lunch and cool down. The cave

provided the only complete shade and respite from the heat.

The group emerged at 5pm, when it was still 47 degrees Celsius in the sun, but a cooler 32 degrees in the shade, to go and service the Sambot pluviometer. They also looked at Lower Sambot and Sambot waterholes and found both to be dry, though there were goats at Sambot waterhole.

On Saturday the group awoke to a chilly 18 degree start, but were on their way by 7:40 am, just as the sun cleared the hill and light washed over the campsite.

Lizards had wedged themselves in each of the plastic funnels and the measuring cylinder at the Plateau pluviometer. Both lizards were dead and produced a distinctive odour. The group changed the Plateau data logger, taking great care to replace the funnel and cylinder in inverted positions to avoid further tragedies for the lizard population, before they left the site.

At North Tusk, Linton was befriended by a dragon lizard, which showed a desire for a drink by butting Linton's clear plastic water bottle. Linton obliged by pouring water into a hollow in the rock surface thereby enabling the lizard to drink. The trusting behaviour and proximity of this lizard were highlights of the trip.

The group arrived back at Vandenberg camp at 12:10pm. As it was only 32 degrees Celsius in the shade the group ate a quick lunch, packed up camp and left for Wagtail waterhole. From Wagtail, Peter led a steady pace across the hills to arrive at Arcoona South pluviometer at 3:40pm. The group changed the data logger, carried out the prescribed checks before heading back to base camp.

On the final day of the trip, after a quick breakfast and packing up camp the group was ready to head home. Before leaving Arcoona Creek Linton walked to the tank at the Park entrance and poured the reserve water into the tank. The group was back in Adelaide by late afternoon and another excellent GRASP expedition was over.

**MINNAWARRA BIODIVERSITY
PROJECT - AUTUMN SURVEY**
Information Provided by Richard
Willing

Little of the state's natural history was recorded before Europeans colonised South Australia. It is therefore difficult to assess just how much impact practices such as sheep and cattle grazing have had on our native flora and fauna.

Minnawarra, near Myponga, supports remnant native scrub that has been fenced to exclude domestic grazing animals. This property provides an excellent opportunity to research and assess the long-term response of native flora and fauna to the exclusion of introduced grazing animals. For the last few years SEG has helped to conduct seasonal biological surveys at Minnowarra.

The autumn 2004 survey of the Minnowarra Biodiversity Project will be held between Thursday 22 and Monday 26 of April (Anzac Day holiday). As the survey will be held during school holidays, young people are encouraged to participate. Volunteers are invited to help set up the pitfall traps on Thursday 22nd April (BYO lunch, BBQ available) or stay longer to help with the whole survey.

Those who attend the four-day survey will be camping near a large shed that has electricity, cooking gear and a heater, but will need to bring their own food and camping gear. A small marquee can be erected for communal use. Toilet facilities are in the farm house 100 metres away.

The survey will be conducted at eight sites in accordance with DEH Biological survey methods. Three different trap types will be used to sample mammals and reptiles. **Pitfall traps**, plastic lined holes sunk into the ground with a small fence running across them, are used to capture small animals such as lizards and rodents. **Elliott traps**, metal boxes with a spring-loaded trap door, are baited with oats and peanut paste to trap small mammals such as bush rats. **Cage traps**, metal cages with a trap door, are placed at each end of the pitfall line to capture larger animals.

All traps will be inspected each morning and evening. Trapped animals will be

identified, weighed, marked and released. The findings of the survey are then entered into the 'South Australian Biodiversity Survey'.

It is expected that the survey will record the presence of bush rats, swamp rats, antechinus (marsupial mice) and potentially pygmy possums, as well as a variety of frogs and reptiles. During the day vegetation, bird, and invertebrate (spiders and insects) surveys will be conducted at the eight sites. In the evenings (after dinner) animals and plants will be identified. In addition, a bat-detector will be used to record different bat calls and identify the bat species that occur in on the property.

This survey is an excellent opportunity for anyone interested in the environment or natural history to learn more about native vegetation and animals and the processes used to determine their presence and abundance. Young people and adults are encouraged attend for one or several days. As SEG is a not for profit organisation, a \$10 donation to the Scientific Expedition Foundation would be appreciated.

For information and registration of interest please ring 8558 6381 or 0408 807 517; or fax 8558 6212; or e-mail willingr@comstech.com

**SEG VISIT TO THE PLANT
BIODIVERSITY CENTRE**

SEG have arranged with the Plant Biodiversity Centre (formerly Herbarium SA) situated in the old tram barn on Hackney Road Hackney for an after hours visit of behind the scenes botany collection.

TUESDAY 4TH MAY 2004 @ 7.30PM

REGISTER YOUR INTEREST BY
EMAILING
Graeme Oats - oatsgd@senet.com.au

Numbers will be limited and **only current financial members** will be accepted.

If you are in doubt as to your financial standing with SEG
Check with Graeme Oats (Treasurer) –
8278 3179

Moonabie Expedition Update
Information Provided by Trent Porter

Unfortunately, due to a lack of SEG leaders and expeditioners the April 2004 SEG Expedition to Moonabie on the west coast of Eyre Peninsula has had to be cancelled.

However, you can still **plan ahead for a HOLIDAY WITH A DIFFERENCE!**

The Scientific Expedition Group (SEG) is now planning ahead to organise a scientific expedition to the Moonabie Range in the Munyaroo Conservation Park on Eyre Peninsula for Easter 2005.

The purpose of the trip is to add to the knowledge of the biodiversity of this little known Conservation Park.

This is a great opportunity for people of all ages and expertise to observe and participate in professionally conducted field survey work with experienced biologists and natural historians from the SA Museum and National Parks & Wildlife.

Survey work will be undertaken on:

- terrestrial vegetation
- invertebrates, (insects & arachnids)
- vertebrates (reptiles, birds & mammals), all to be trapped by various humane methods, measured, documented and released

There will also be an Adventure Phase involving a 2 to 3 day coastal bush-walk.

Estimated Costs: Transport and Food to be provided for around \$400 (student concession) or \$550 for non-students.

To get further information or to register your interest, phone Trent Porter on 8278 9078 AIH or e-mail trentasaurus@bigpond.com

HURRY -- PLACES WILL BE LIMITED!!!

GRASP trip for April 2004

Are you doing anything on ANZAC weekend?

Why not join other SEG members in visiting the beautiful and unique Gammon Ranges in the northern Flinders Ranges.

This is a normal GRASP trip that will involve bushwalking up Arcoona Creek to the Gammon Ranges Plateau.

The scientific work will involve changing data loggers, searching for Yellow Footed Rock Wallabies and other botanical and biological survey work.

For Further details contact Linda-Marie McDowell, phone 8278 4795.

Pre-trip meeting on Tuesday evening April 13.

Hurry Places are limited!

GRASP Leaders Meeting

Monday May 10th at the Bureau of Meteorology 7:30pm

The purpose of the meeting is to review GRASP activities over the last year, update leaders on new monitoring activities and plan for the year ahead.

For further information on GRASP activities contact:

Chris Wright (8278 8818)
or
Linda-Marie McDowell (8278 4795)

Dining with Carnivores

Richard Willing

Last May Gwen and I spent a couple of pleasant weeks in Tasmania. With business and social functions completed we found that we could not get an earlier ferry back to the mainland, and had days to wait. This was not difficult, as it is a beautiful part of the world. The scenery is impressive, but the forest logging is worrying. We had previously spent a few days in the northwest corner of the island, but there were still some spots that we had never visited.

We travelled west and finished up at Cradle Mountain for lunch. It was raining, (what's new?) so we went north again. Driving through Wilmot we headed for Leven Gorge and had a spectacular view from the new lookout. This gives an aerial view of the river cutting through steep wooded hills with pleasant farming land on the river flats. The chance finding of an advertisement in a shelter nearby led us a few miles down the valley to the Wilderness Holiday Cabins to seek accommodation for the night. Eventually we stayed for three days!

The owners, Len and Pat, have developed a wildlife sanctuary with family cabins set on a grassy plain by the Leven River. Pat was down there looking for platypus when we arrived. We were interested to gossip with the owners about preservation of native vegetation, as we have done on our farm (see article on page 6). We catered for ourselves, but the animals fared much better! Before sunset Len brought pellets and lumps of meat to the cabin to entice wildlife to visit. With an ample supply of wood and a big log fire to keep warm we settled in for the evening wildlife show.

The first arrivals were the pademelons, a few dozen of them, hopping around outside the hut. Thumps and bangs heralded the arrival on the veranda of two brush-tailed possums. More stealthily came a Tasmanian devil who devoured his meat a metre or two away from us. Later in the evening came an Eastern quoll to finish meat that the devil had left. This was impressive, but the next evening was even more spectacular. Following the pademelons and possums came two squeaking, snarling, grunting, ferocious-looking devils to tear at the meat, followed

a little later by the much less common spotted-tail quoll to tidy up the leftovers. It was a brilliant view of the local wildlife.

By day it is worth looking for a platypus in the river, watching birds, walking through the bush or climbing into a shallow cave containing glow-worms. In such a small place it does not take long to drive to other places – we went back and saw Cradle Mountain in sunshine. An hour's drive north is Ulverstone and the north coast. We have no commercial interest in this, but if it sounds like your scene you can find out more by contacting Mountain Valley Wilderness Holidays, phone 03 6429 1394; fax 03 6429 1229; or e-mail mountainvalley@microtech.com.au. Enjoy!

Kids Corner

The hidden words are taken from the article by Richard Willing called 'Dinning with Carnivores'. The words are hidden in all directions. Can you find them all?

S	A	N	C	T	U	A	R	Y	E	B	I	Y	X	Q
F	J	M	T	Q	C	T	A	S	M	A	N	I	A	H
K	N	A	I	N	A	M	S	A	T	X	D	N	J	T
P	I	L	V	E	G	E	T	A	T	I	O	N	Q	R
M	S	L	G	L	O	W	W	O	R	M	S	O	K	O
O	N	O	I	T	A	D	O	M	M	O	C	C	A	N
U	N	U	K	M	Y	B	A	O	C	A	B	I	N	S
N	I	Q	J	V	A	P	O	S	S	U	M	S	K	C
T	G	C	R	A	D	L	E	E	C	E	N	J	O	Y
A	H	P	Z	L	I	M	L	V	J	D	N	A	F	I
I	T	C	J	L	L	Q	E	N	I	H	S	N	U	S
N	B	V	K	E	O	S	U	P	Y	T	A	L	P	M
X	F	K	L	Y	H	C	O	A	S	T	A	K	W	X
W	E	R	O	V	I	N	R	A	C	R	E	N	N	E
D	E	V	I	L	P	A	D	E	M	E	L	O	N	E

Word List

ACCOMMODATION	CABINS
CARNIVORE	COAST
CRADLE	DEVIL
ENJOY	GLOWWORMS
HOLIDAY	MOUNTAIN
NATIVE	NIGHT
NORTH	PADEMELON
PLATYPUS	POSSUMS
QUOLL	SANCTUARY
SUNSHINE	TASMANIA
TASMANIAN	VALLEY
VEGETATION	



SCIENTIFIC EXPEDITION GROUP - Membership

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 receive regular information on SEG activities and expeditions

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

COMMITTEE

President Emeritus C. Warren Bonython AO

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SEG WEBSITE www.communitywebs.org/scientificexpeditiongroup

SEG EMAIL ADDRESS segcomms@telstra.com

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)

E-mail

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