



SEGMENTS

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**Scientific Expedition Group (SEG)
Expedition Marqualpie 2008**
September 13 to 28, 2008

The major SEG expedition for 2008 will be to the Marqualpie region of northern South Australia, approximately 100km north of Innamincka, in Coongie Regional Reserve.

The expedition will provide 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.

The expedition will include surveys of vegetation, invertebrates, reptiles, mammals (including bats at night), birds, fungi, and a search for marsupial moles. Standard biological survey methods will be used to identify, measure, document and release animals caught.

The expedition departs on Sat. September 13 and returns on Sun. September 28. One night will be spent each way at Mt. Lyndhurst Station shearer's quarters (roughly half way).

Costs will be around \$700 per person to cover transport, food and participation in all activities.

To register your interest in the expedition, please contact Trent Porter either via phone (08) 8278 9078 or email on trentasaurus@bigpond.com

*******SEG Calendar 2008*******

July	
July 11-16	VGRaSP July Trip
September	
September 13-28	SEG Expedition Marqualpie 2008
October	
October 2-6	Minnawarra Spring Survey
October 3-8	VGRaSP October Trip
October 17	SEG AGM

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

Expedition Marqualpie 2008
--spaces are strictly limited.

Camp ovens for Marqualpie Expedition

SEG's upcoming expedition is to Marqualpie – in the Coongie Regional Reserve. It will be remote and resupplying food will be difficult so we will need to bake our own bread. We are looking to borrow a few camp ovens – Can anyone help out with this request? Contact phil.cole2@bigpond.com

MINNAWARRA BIODIVERSITY PROJECT
Autumn Survey 23-27 April 2008

Written by Richard Willing

A successful biodiversity survey was conducted at Minnowarra over the Anzac long weekend. It involved a number of volunteers, including young children and secondary and tertiary students.

Of great assistance was an Australia Post Community Development Grant which helped purchase new Elliott traps, which often take a battering during the surveys.

Personnel

The traps were set up and opened on April 23 by a willing band of 20 volunteers. At each of the 8 sites were 6 permanent pitfalls, 15 Elliott and 2 cage traps. (Cont. on page 2)

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The survey went on for 4 days, and traps were closed or pulled up on Sunday April 27. Mammals were identified and processed by Janet Furler and Richard Willing. Sincere thanks are due to all the volunteers who worked so hard to make this a success.

Our regular birdos were not able to make it during the survey, but Ann Turner and Denzil Murfit completed the bird survey at a later time (results follow this article).

To date 31 volunteers have worked a staggering 519 volunteer hours on this survey and 11 young children have been close up and personal with small native mammals.

Weather – A wide range of temperatures were experienced over the five days.

Wed 23 April: 13-22 degrees Celsius calm and clear

Thurs 24 April: 10.7-22.7, calm and clear

Fri 25 April: 11.6-16.5, afternoon cool change with mod wind, overcast with showers

Sat 26 April: 6.3-12.3, cold, showers, SW windy

Sun 27 April: 1.4-10.3 showers, cold

Mammals

167 native small mammals were captured, of which 102 were new, 6 recaptured from previous surveys, and 38 visited traps more than once. Bush rats (*Rattus fuscipes*) produced 35 new animals which were ear-tagged for future recognition; 5 were recaptured from previous surveys. Swamp rats (*Rattus lutreolus*) 28 new; no recaps. Marsupial mice (*Antechinus flavipes*) 39 new, 1 recapture from last survey. In addition 19 House mice (*Mus musculus*) and 2 Black Rats (*Rattus rattus*) were trapped and despatched as they are not native. These numbers are similar to the findings of Autumn 2007, and much larger than last spring.

Other findings

During the first 2 warm days of the survey many skinks were found, mainly in pits. There were 38 skinks in all, 34 Garden skinks (*Lamprolepis guichenotii*), and 2 each of Southern grass skink (*Pseudomoia entrecasteauxii*) and Hemiergis (*H. decresiensis*).

In addition, 3 scorpions and several spiders were caught in pits. 6 brown froglets (*Crinia signifera*) were trapped in pits. Birds also

took an interest, and 1 Grey Shrike-Thrush (*Colluricincla harmonica*) and 2 Grey Currawongs (*Strepera versicolor*) came into cage traps to eat the bait.

Summary

Once again bush animals show how resilient they are to seasonal variations. After the low numbers trapped last spring they have rebounded to similar numbers to last autumn, which had a rain event preceding that survey. It was noticeable that many of the mammals captured this time were very young juveniles, suggesting a reproductive explosion over the last few months, coinciding with small amounts of intermittent rain on the property. Once again the most productive site was Site 1 in the NW swamp, where specimens of most varieties were captured. This looks like a “refuge area” to go to when the season is tough. It was closely followed by Site 8, alongside the southern creek, which also had a good sample of all animals.

The next Minnawarra Biodiversity survey is planned for early October (2-6).

For information and registration please ring Richard 8558 6381; or mobile 0408 807 517; email: willingr@comstech.com

MINNAWARRA BIODIVERSITY PROJECT BIRD SURVEY 29 April 2008

The bird survey was carried out by Ann Turner and Denzil Murfit 2 days after the completion of the main survey. The weather was fine and cool with scattered cloud and intermittent sunshine, with moderate wind.

No different sightings were obtained this time. 31 different species were listed, which is usual for these surveys. The most common birds seen were the low scrub dwellers – Superb fairy wren (*Malurus cyaneus*) and White-browed scrub robin (*Sericornis frontalis*), who were seen at each of the 8 sites. They were followed closely by the Adelaide rosella (*Platycercus elegans*), White throated tree creeper (*Climacteris leucophaea*), Crescent honeyeater (*Phylidonyis pyrrhoptera*) and New Holland honeyeater (*Phylidonyis novaehollandiae*) seen at 7 sites.

The most prolific sites were Site 9 (N hillside) with 17 species listed and Site 4 (N creek) with 16 species listed.

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Scientists Identified Earthquake Faults in Sichuan, China

Article provided by Richard Willing from Science Daily internet site

<http://www.sciencedaily.com/releases/2008/05/080516123837.htm>

In the last year research published by earth scientists in the international journal *Tectonics* concluded that geological faults in the Sichuan Basin, China "are sufficiently long to sustain a strong ground-shaking earthquake, making them potentially serious sources of regional seismic hazard."

Scientists mapped the densely populated Sichuan Basin and adjacent mountains using what is known as 'tectonic geomorphology'. This technique can demonstrate significant changes in ground movement over time, such as observations of offset river channels, disrupted flood plains, abnormally shaped valleys and uplifted landscape features. These subtle signals of deformation, when combined with the ability to measure the age of the disfigured landscapes produce surprising results.

The recent earthquake in Sichuan occurred under some of the steepest and most rugged mountains in the world, the Longmen Shan: the Dragon's Gate Mountains. This dramatic range, steeper than the Himalayas, is the upturned rim of the eastern edge of Tibet, a plateau that has risen to 5km in response to the slow but unstoppable collision of India with Asia that began about 55 million years ago which continues unabated today.

Two long faults in particular, running almost the entire length of the Longmen Shan, showed clear evidence of slip during the last few thousands, and in some cases hundreds of years.

Unlike the Himalaya, which form the southern boundary of Tibet and whose faults chatter continuously with small earthquakes, faults in the Longmen Shan, have historically produced earthquakes of magnitude 6.

Geomorphological evidence, described in the *Tectonics* paper, suggests that the mapped faults are very steep with dominantly lateral or strike-slip displacements taking place over time scales of thousands of years to hundreds of thousand years. This contrasts with shorter-term measurements using Global Positioning Systems which suggest a greater proportion of thrust or shortening displacement than lateral displacement. Observations by seismologists from the

British Geological Survey suggest more thrust in the southwest region nearer the epicentre and more slip toward its direction of propagation, the northeast.

Information adapted from report provided in: British Geological Survey (2008, May 19). Scientists identified Earthquake Faults in Sichuan, China. *ScienceDaily*. Retrieved June 6, 2008, from <http://www.sciencedaily.com/releases/2008/05/080516123837.htm>

Nominations called for the 2008/09 Committee

Nominations are called for election to the SEG Committee for 2008/2009. Nominations must be signed by the nominator and the nominee and sent to:

The SEG Committee Secretary
PO Box 501
UNLEY SA 5061

Nominations need to be received by 20 September 2008.

The present Committee consists of : President Dr Richard L. Willing, Chairman Mr Alun Thomas, Vice-Chairman Mr John Hayes, Secretary Mr John Love, Treasurer Mr Graeme Oats, Committee members Mrs *Linda-Marie McDowell, Messrs Phil Cole Chris Wright, Trent Porter, Duncan MacKenzie, Bruce Gotch, Peter Love, Kevin Burrett, Deon Grantham, Adrian Sherrif.

All members will retire and are eligible for re-election.

John Love, SEG Committee Secretary

*Please note: that due to family commitments Linda-Marie McDowell does not wish to be re-nominated to the SEG Committee and will not be able to continue as the Editor of SEGments. Please notify SEG if you are interested in becoming a future Editor of SEGments.

SA MUSEUM - SCIENCE WEEK Display Saturday 16 to Sunday 24 August

Once again SEG has decided to mount a display for the SA Museum Science Week event. The display area will be in a marquee on the lawn in front of the Museum building on North Terrace.

Help is needed to staff our display, particularly on the two Saturdays and two Sundays. The idea is to talk to people as they go past and give them our brochure if they seem interested. While it is difficult to measure responses to advertisements, we have had some positive results!

If you are able to help out then please respond to jhlove@internode.on.net

John Love, SEG Committee Secretary



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: His Excellency Rear-Admiral Kevin Scarce AO CSC RANR, Governor of South Australia

SEG COMMITTEE Office Bearers

President Dr Richard Willing
 Chairman Alun Thomas
 Vice-Chairman John Hayes
 Hon. Secretary John Love
 Hon. Treasurer Graeme Oats

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SEG WEBSITE www.communitywebs.org/scientificexpeditiongroup

SEG EMAIL ADDRESS segcomms@telstra.com

SUBSCRIPTIONS (Including GST)

Working adult member ----- \$20.00
 Pensioner student or unemployed ----- \$10.00
 Family membership ----- \$25.00
 Organisation membership ----- \$25.00

APPLICATION FOR MEMBERSHIP AND MEMBERSHIP RENEWAL

Name

Address

.

Telephone (H) (W)

E-mail

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

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Applications should be addressed to :

The Hon. Secretary
 Scientific Expedition Group Inc.
 P.O. Box 501
 Unley S.A. 5061