

THE VICTORIAN GEOLOGIST

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THE GEOLOGICAL SOCIETY OF AUSTRALIA

March 2015

Victoria Division

General Meeting

Thursday 26th March at 6:15 p.m.

Characterisation of acid sulfate soils in south-west Victoria, Australia

Fiona Glover

La Trobe University

Fritz Loewe Theatre, School of Earth Sciences, University of Melbourne

Talk will be preceded by drinks from 5:30 pm in the 4th floor tearoom, cost \$2

Until recently, the distribution of acid sulfate soils (ASS) was believed to be predominantly coastal, but ASS are now recognised to occur inland. While knowledge of inland ASS is growing, little of the published literature has been conducted on a regional scale, and this gap has been highlighted across many areas of Australia, including within the Corangamite Catchment Management Authority. When combined with site investigation, mapping of ASS is important in determining areas potentially at risk of acidification. Using LIDAR topography, geology and Ecological Vegetation Class maps, a mapping process was developed that successfully identified known ASS sites, indicating that the method developed for mapping these areas remotely is accurate.

SPEAKER BIO**Fiona Glover**

Fiona Glover is a Ph.D. student at La Trobe University who submitted her thesis in December 2014. Prior to starting her Ph.D. in 2009, she completed a Bachelor of Environmental Science in 2007, and her honours year in 2008, also at La Trobe University. Her honours project was also on inland acid sulfate soils, where she developed a fascination with various sulfide minerals. She considers herself lucky to have had the opportunities to work on such interesting environmental problems and contribute to a greater scientific understanding of them.

REMINDER FOR SCHOLARSHIP RECIPIENTS

Dear recipients of the GSAV travel scholarship in 2014,

Just a reminder from the treasurer as to the small task we set you when we gave you the money. Remember the lines in the letter you received with the cheque:

“Upon returning from your trip, could you please forward a brief report to the newsletter editor whose details you will find on the back page of “The Victorian Geologist”. Please note that you may be also asked by the committee to present a short talk prior to an upcoming monthly meeting.”

Very few of you who were funded last year managed to complete this task. Just a couple of paragraphs and maybe a photo (such as is provided in this month’s “The Victorian Geologist”) to inform fellow GSAV members what you did at the conference.

Hoping that this gentle reminder nudges a few consciences and looking forward to being inundated with reports.

Dr Barbara Wagstaff
GSAV Treasurer.

GSAV NEWS

The GSAV will now be making available online the content from the talks given at the monthly meetings. Just visit www.gsavic.org/events or our YouTube channel “GSA Victoria”.

Note: Availability and extent of content will vary according to what individual speakers permit.

STUDENT SCHOLARSHIP REPORT

Wendy Stanford
GSAV Student Scholarship Recipient
PhD Candidate, La Trobe University

In April 2014 I attended the 8th Australian Acid and Metalliferous Drainage Conference in Adelaide, Australia. The conference started with a one day short course program of keynote speakers from both industry and academia covering all aspects of Acid Metalliferous Drainage (AMD). This was followed by a four day workshop of keynote speakers complimented with industry/academic presentations based on the conference theme of "What's working, What's Not and What Could Be".

I was privileged to present my research on "Neutralisation of acid mine drainage to form a magnetic sludge", which falls into the "What Could Be" category. The highlight of the conference was a field trip to the Brukunga Mine site, an abandoned mine site with ongoing AMD, which involved a bus to the top of the waste rock pile (no mean feat) and a visit to their neutralising treatment plant. Here I was able to see first hand the workings of the neutralising plant and visualise how I might implement my laboratory bench tests on a larger scale.

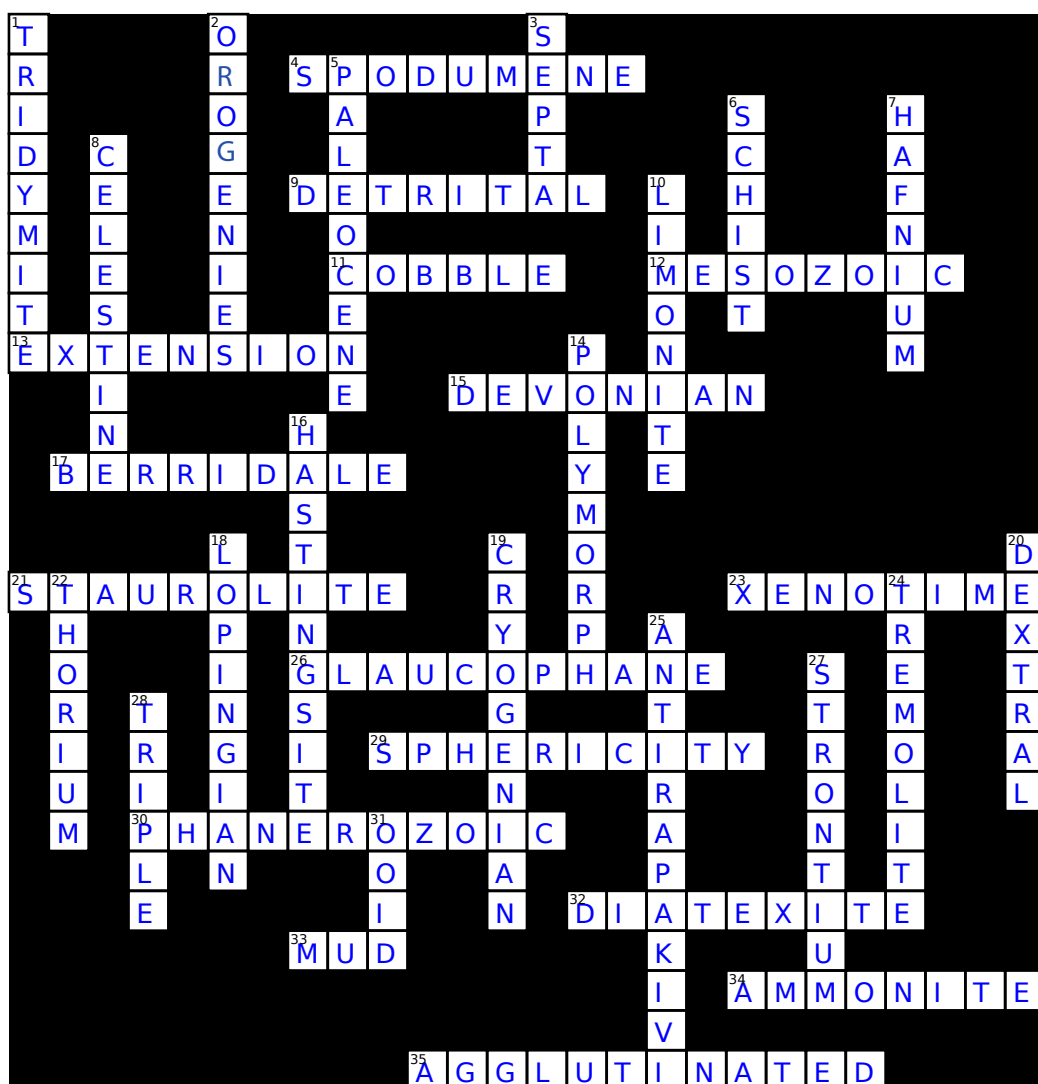


Brukunga Mine Site, South Australia (Picture Courtesy: Dr John Webb)

Of course you cannot go to Adelaide and not sample some of what the state has to offer so a trip to Hahndorf (in particular the cheese shop) was a necessity as was a trip to the iconic Glenelg Beach and a fun night at a uni pub quiz night which we unfortunately didn't win.

This conference provided an opportunity to promote my research and discuss with key personnel the possibility of implementing my methodology in a field trial. I wish to thank GSAV for their generous support which assisted in my conference registration fee.

CROSSWORD SOLUTION



Across

4. Li pyroxene
9. Describes grains in some sedimentary rocks
11. Coarser than a pebble, finer than a boulder
12. The 'middle' era
13. Either side moving apart
15. Roughly 416-359 Ma
17. Well-known Lachlan Fold Belt batholith
21. Known for its cruciform shape
23. Yttrium phosphate
26. A Na, Mg amphibole
29. A characteristic used to define the shape of a clast
30. One of the eons
32. Might be called a 'dirty' granite
33. Smaller than silt
34. Might be described as ceratitic
35. Describes forams with clumped particles

Down

1. Orthorhombic, biaxial form of SiO₂
2. Benambran, Tabberabberan and Bindian are...
3. Some fossils have these
5. Earliest epoch of the Cenozoic
6. A foliated metamorphic rock
7. One of most abundant elements in zircon
8. Strontium sulphate
10. Cryptocrystalline iron oxide and hydroxide
14. Another form of a mineral
16. Fe³⁺ rich version of ferro-pargasite
18. Latest epoch of the Permian
19. Cold period in the neoproterozoic
20. A sense of movement
22. Uranium-_____-lead
24. Mg-rich actinolite
25. Rims of K-feldspar on crystals of plagioclase
27. An element named after part of the UK
28. _____ junction
31. A grain surrounded by many layers

AUSTRALIAN EARTH SCIENCES CONVENTION NEWS



Uncover Earth's Past to
Discover Our Future

26 - 30 June 2016 – Adelaide Convention Centre

aesc2016.gsa.org.au

Call for AESC theme and session suggestions

An exciting series of themes, symposia, fieldtrips and workshops is being put together by the AESC 2016 Organising Committee.



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A preliminary taste of what is to come and who to contact if you want to make suggestions is outlined below.

- Earth's Environment** — Past to Present
- Tectonics of the Earth and Other Planets** — Craton and Continental Formation and Evolution, Ocean Plate Tectonics, Plate Margin and Plate Interior Tectonism
- Deep Earth Geodynamics** — Core, Asthenosphere and Lithosphere Dynamics, Coupling the Dynamic Deep Earth with Surface Tectonics
- Mineral Endowment** — Formation and Exploration of Mineral Deposits, their Tectonic and Geochemical Environment and Significance
- Geoscience for Society** — Geotourism, Education, Integration and Translation of Earth Sciences for Societal Benefit, Open the Gate, Geoscience and Community Engagement
- The Earth Science of Energy** — From Hydrocarbons to Hot Rocks

Committee

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PHOTO: Pleistocene sediments of the Hindmarsh Clay (red) and unconformably overlying Bridgewater Formation (white) in cliff exposures at Balgowan, Yorke Peninsula, South Australia. Photo courtesy of Caroline Forbes

www.aesc2016.gsa.org.au

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STUDENT FUNDING OPPORTUNITIES

Geological Society of Australia (Victoria Division) Student Research Scholarships

The scholarship is valued at up to \$500 for travel within Australia and \$700 for travel outside of Australia. The number of and value of the scholarships awarded each year is made at the discretion of the GSA(Vic) committee.

Funding will not be granted retrospectively and applicants are asked to submit forms no later than 6 weeks prior to their trip to give the committee time to consider the application.



Eligibility

Applicants must be members of the GSA and enrolled in a full-time degree at a Victorian Tertiary institution and undertaking research in Geology. The scholarship will be awarded to assist with conference travel for honours and postgraduate students, who are presenting (either poster or talk) at the conference.

Honours and postgraduate students that receive this scholarship will be required to submit a report for publication in 'The Victorian Geologist' newsletter following to their trip. A presentation may also be requested by the committee, which will consist of a short 10-15 minute presentation prior to the monthly seminar.

Students who have previously received a GSAV research scholarship are not eligible. Scholarships and bursaries from other sources are acceptable.

Applications forms can be scanned and emailed to: secretary@vic.gsa.org.au

or mailed to:

Geology Research Scholarships Victoria
Geological Society of Australia (Victoria Division)
GPO Box 2355
Melbourne VIC 3001

More information can be found by contacting Barbara Wagstaff (wagstaff@unimelb.edu.au)

Something interesting to share? Want to see your name in print?

Don't be bashful, contribute to the GSA(V) monthly newsletter!

If there are any events, happenings, news, or views that would be of interest to the membership, please send your details and information to Kieran Iles at kiles@student.unimelb.edu.au

We'd be glad to hear from you

FORTHCOMING SEMINARS AND EVENTS

to be presented at
GSA (Victoria Division) meetings

Note: unless otherwise indicated, all 2014 talks will be held in the
Fritz Loewe Theatre, Earth Sciences Building, University of Melbourne.

March 26th:

Monthly Meeting: Fiona Glover

Characterisation of acid sulfate soils in south-west Victoria, Australia

April 30th:

AGM: Julie Boyce

The Newer Volcanics of Victoria

May 28th:

Howitt Lecture: Bill Birch

Victorian gemstones; more than just history

Later this year (watch this space!):

Ken Grimes (tentatively for August) - Northern Australian sandstone pseudokarsts

Helen Green - Dating Aboriginal Rock Art

Please welcome our newest members

Ivan Semenov

Vera Korasidis

Ben Mather



Visit the GSAV on www.gsavic.org or the GSA on www.gsa.org.au
• Renewing your GSA membership is easy - it can now be done online. •

CONSIDER CONTRIBUTING TO TAG!

It is member contributions which make TAG a member magazine – please keep the contributions coming and assist with informing all of the membership (not just your Division) about your activities.

Please send your news to: tag@gsa.org.au



GSA (VICTORIA DIVISION) COMMITTEE

Please address all correspondence to the GSA Victoria Division
GPO Box 2355, Melbourne, VIC, 3001
Internet address: www.gsavic.org

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Chair:	David Cantrill	9252 2301 (BH)
Vice-chair:	position vacant	
Secretary:	Adele Seymon	0403 269 462
Treasurer:	Barbara Wagstaff	8344 6537 (BH)

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Newsletter deadline:

First Friday of the month except Dec & Jan
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