

THE VICTORIAN GEOLOGIST



May 2013

THE GEOLOGICAL SOCIETY OF AUSTRALIA
Victoria Division

Next General Meeting

Thursday 30th May at 6:15 p.m.

**Data Metallogenica – building the global encyclopaedia
of ore deposits – training the next generation of
economic geologists.**

**Dr Alan Goode
AMIRA International**

Fritz Loewe Theatre, School of Earth Sciences, University of Melbourne
Talks will be preceded by drinks from 5:30pm in the 4th floor tearoom, cost \$2

The minerals industry, supported by associated geological surveys and professional societies, has invested over A\$4 million to date through AMIRA International to build Data Metallogenica as a web-based not-for-profit global encyclopedia of ore deposits. While the unique core of DM comprises high-quality photographs of over 70,000 representative samples of ore, alteration, host rocks and regolith from thousands of deposits of all styles from around the world, supporting technical data is presently being added for other information such as descriptions, photos, maps and sections. The first compilation list of all Australian geoscience theses was also added to DM as part of its information resource, together with about 70 full theses on deposits from around the world. New samples also continue to be added to DM, and a significant set of samples collected by the late Rod Kirkham in Vancouver from many parts of the world has been acquired. The physical collection is owned by AMIRA International on behalf of the minerals industry, and is stored by the South Australian Government at the DMITRE Core Library in Adelaide.

The Foundation Sponsors who supported the initial projects in difficult times from 1999-2004 included over 100 major and minor mining and exploration companies, government organisations and professional/learned societies from around the world. Apart from being used for training and reference in many organisations and by individuals, DM is now also being used as an educational resource in over 50 universities worldwide. **ABSTRACT CONTINUED PAGE 3...**

GSAV NEWS

A few important news items:

First, at the coming meeting (May 30th) GSAV member Bernie Joyce will be making a large range of books, reports, journals, GSA conference volumes and abstract volumes (including Selwyn Medal and Victorian Universities Earth and Environmental Sciences conferences), maps and other geological and geomorphological material available for GSAV members to come and collect for free.

The collection will be available for perusal in the 4th Floor Tea Room (the usual pre-seminar spot) before the next meeting. This is a one-time offer as following the meeting, the collection will be distributed to various universities where possible and any remaining items will find their way to the Brotherhood of St. Lawrence. This not only presents an opportunity for members to take anything that they wish but also provides an opportunity to bring along and dispose of material themselves.

Secondly, the GSAV is proud to announce that it has elected to enter into a partnership to support TESEP (Teacher Earth Science Education Programme). This includes the naming of the Noel Schleiger GSAV-TESEP PD attendance grant, named in recognition of Noel's effort in the education space on behalf of the GSAV.

2013/2014 GSAV COMMITTEE

The results of the committee nomination from the AGM, held earlier this month, are presented below. All positions remain as they were in 2012/2013 with the exclusion of the Education Subcommittee which is now led by Shannon Burnett. We welcome Shannon to the committee and look forward to the coming year.

| | |
|--|------------------|
| Chairman: | David Cantril |
| Vice Chairman: | Vacant |
| Secretary: | Adele Seymon |
| Treasurer: | Barbara Wagstaff |
| Awards Subcommittee Chairman: | Ingrid Cambell |
| Investments Administrator: | David Moore |
| Heritage Committee Chairman: | Susan White |
| Education Subcommittee Chairman: | Shannon Burnett |
| Newsletter Editor: | Matthew Bliss |
| Melbourne University Student Representative: | Matthew Bliss |
| Monash University Student Representative: | Amir Mahmud |

ABSTRACT CONTINUED

In 2011, with little advertising, the website (www.datametallogenica.com) attracted over 760,000 hits with a significant quantity of data downloaded by subscribers.

DM has been self-funding as a community project since 2004 but the greatly increasing backlog of data plus the increasing need to provide this material for training and reference has led to the need for a new AMIRA International project, P1040 (Building the Global Encyclopaedia of Ore Deposits). The three-year collaborative project began in June 2012 with over 50 sponsors and aims to make major advances in data addition and in key educational aspects for the ultimate benefit of all working in the global mining industry – for reference, training and education, as well as acting as an important data repository for fragile and transient information of value to the industry. While initially focusing on geoscience, the website will extend to cover all technical aspects of mining. It is also intended to develop DM into a wiki to allow all to contribute information if they wish.

An early aim of P1040 has been to develop a new website which will increase the searchability of DM as a data repository and reference as well as providing better training for young geoscientists in industry and in universities. While this website is still being developed, an early promising aspect for training is the potential to provide DM in most languages (including all European and Scandinavian languages, Arabic, Hindi, Swahili, Chinese and Russian) which will allow its use in training and reference to be maximised around the world. Apart from the sample photos, associated spectral mineralogy and summary descriptions, other search categories for deposits will include geology, geophysics, geochemistry, drilling, core photographs, petrography, regolith, remote sensing, selected bibliographies, detailed technical reports, theses, videos, discovery histories, mine construction, mining, mineral processing, environmental, mine closure and historical data.

Web users can also access global overviews of commodities and deposit types by world experts. This will be extended in P1040, and regional context overviews will also be added for key mineralised areas (eg Athabaskan Basin, Yilgarn Block, Fennoscandian Shield etc). Other aspects of P1040 include financial support to be provided to SEG Student Chapters going on field visits to major ore deposits. In return for this support, students provide reports and photos on those deposits which are then permanently lodged in DM. Previous trials of this approach with Eötvös Loránd University (who went to Bulgaria) and the University of Tasmania (who visited China, South Africa and Botswana) were very successful for all involved.

Students are also supported in P1040 by providing paid technical assistance to prominent individuals to allow them to preserve their often valuable but potentially “fragile” photos of early mines and deposits (an early recipient is Emeritus Professor Spencer Titley, USA). One of the sponsor benefits is to provide free “permanent” access to DM in universities and geological surveys in developing countries, building on previous support. This is a win/win for all, in that universities in these regions will have access to better technical resources and ultimately better graduates (potential employees) will result. This access also applies to universities in developed countries and of course this will achieve one of the key objectives of DM in assisting training the next generation of geoscientists. DM also provides potential lifetime usage of the resource for young graduates, building on the knowledge and experience of current and past geoscientists.

GSA ANNUAL GENERAL MEETING

The Geological Society of Australia Inc Annual General Meeting will be held in Brisbane on Tuesday, 13 August 2013.

Prior the AGM all financial members of the GSA will receive ballot papers to vote on changes to the GSA Constitution (Society Rules). Changes to the GSA constitution are designed to bring the GSA in-line with modern Constitutions and include:

- clearly defined Definitions and Interpretations;
- Objects of the Society;
- improved equity into the area of Discipline timing and standards;
- provisions to utilise technology opportunities and transparency in relation to meetings, notifications, electronically transmitted signatures and the opportunity to approve resolutions circulated to the members of the committee;
- clarification of membership criteria and categories;
- improved member rights;
- clarification of the delegation of powers to committees including Divisions, Branches and Specialist Groups;
- transparent voting process to ensure Divisions are represented on the Governing Council;
- inclusion of Post-nominals;
- standardised terminology so the GSA rules comply with all legal requirements in Australia, including new legislation passed in Dec 2012 governing the not-for-profit sector;
- an Indemnity clause for the Governing Councillors;
- transitioning to the Governing Council and
- provision for streamlining the current process for consolidating the accounts

The constitutional changes have been approved by the GSA Executive Committee and supported by the Divisions, Branches and Specialist Groups. The proposed new constitution will be made available to all members in July with a deadline to lodge a vote for or against, prior to the AGM. Members can vote directly by attending the AGM, or alternatively lodge a proxy vote by post with the Chairman of the meeting, or with another member who will be attending the AGM. Approval of the new constitution will require 75% approval from those members casting a vote.

Kind regards, Sue Fletcher

(on behalf of the Governance Committee)

A.W. HOWITT LECTURE

The Annual Joint Meeting between the GSAV and the Royal Society of Victoria will take place on June 27th at 7pm at the Royal Society of Victoria (9 Victoria St, enter via 8 La Trobe Street, Melbourne 3000). This year's speaker is Dr Erich M.G. Fitzgerald, Senior Curator of Vertebrate Palaeontology, Museum Victoria. The title and abstract for the talk is below.

Victoria: Last Frontier in the Quest for Whale Origins

Stunning fossil discoveries over the last 20 years have made whales poster children of evolution. Key questions still remain in the quest to unravel the history of these most unlikely of mammals. New data are needed from unexplored areas on the map. Of these 'last frontiers', Australia presents the greatest potential. Yet for 175 years, knowledge of our continent's fossil mammals has halted at the edge of the sea—until now. Spearheaded by pioneering discoveries in Victoria, we are beginning to uncover the story of whale evolution in Australian seas, as well as the bizarre marine animals that shared their world. Theirs is an extraordinary tale of shifting fortunes of dwarf whales, shark-toothed dolphins, killer sperm whales, dugongs in Port Phillip, and giant penguins, against the backdrop of tectonic shifts, reorganization of the oceans, and climatic drivers. These insights from the past reveal that the diversity and ecology of present-day marine animals are surprisingly recent phenomena that did not evolve synchronously. Only by heeding this perspective from palaeontology can we begin to comprehend "What is natural?"

EARTH SCIENCE NEWS

The world's recent fascination with impact events has continued over recent months with NASA observing a large impact on the Moon on March 17. With an explosion equivalent to 5 tonnes of TNT, the impact was visible to the naked eye here on Earth. Elsewhere, the social media world was abuzz with pictures of a green meteor streaking across the English sky earlier this month. According to The Independent (www.independent.co.uk), the meteor is likely part of the Eta Aquardis, debris left by Halley's Comet which the Earth passes through twice a year.

Research has also been meteorite-focussed lately. Science Daily (www.sciencedaily.com, May 20, 2013) reports that new research out of the University of Cincinnati suggests either a direct meteorite impact or the grazing of our atmosphere by a comet some 12, 800 years ago led to sudden and abrupt climate change, ultimately resulting in the mass extinction that saw the end of the woolly mammoth and other species. Evidence for the impact or near impact comes in the form of carbon spherules found at 18 sites across four continents that likely formed from the combustion of rock and could only result from a global event. Meanwhile, researchers from Michigan State University are examining a meteorite originating from Mars in the hope it will shed some light on the possibility of life on Mars (see *Geochimica et Cosmochimica Acta*, 112, p. 208-225 for more details).

Finally, TIME have provided a fantastic series of timelapse images from over 30 years of LANDSAT data. Available for viewing at <http://world.time.com/timelapse/> the images provide a stunning visual history of the evolution of our planet from the growth of cities to the movement of glaciers and is well worth a look.

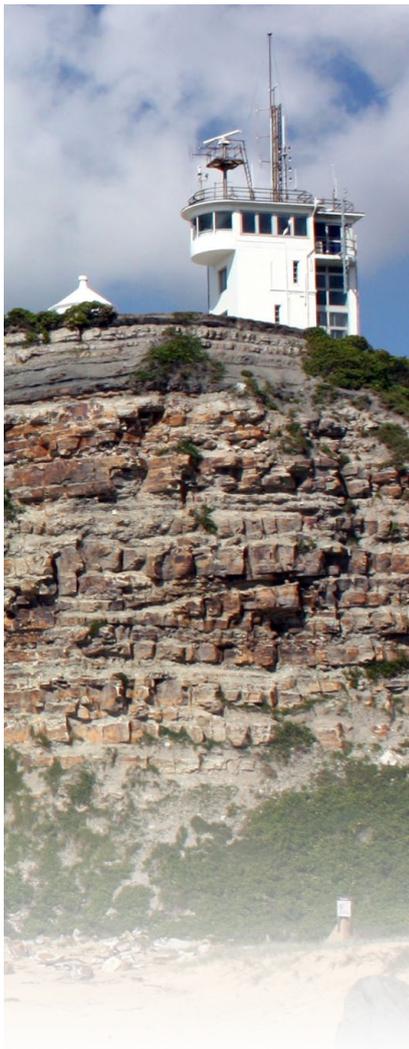


AESC

australian earth sciences
convention

**Sustainable
Australia:**
7-10 July 2014

NEWCASTLE, NSW, AUSTRALIA



Coalfield Geology Council
of New South Wales

AESC 2014 will be held in Newcastle, a vibrant port city that is characterised by its working harbour, beautiful surf beaches and proximity to many of Australia's most prestigious wineries.

It is the gateway to the Hunter Valley – heart of the Sydney Basin coalfields, centre of power generation for New South Wales, and home of the NSW Institute for Frontier Geoscience, a joint initiative of the University of Newcastle and the NSW Department of Trade and Investment. Combined with the city's focus on energy efficiency via the Federal Government's Smart Grid, Smart City initiative and the CSIRO Energy Centre, Newcastle is an ideal site for our convention – **Sustainable Australia.**

The convention will be based around the themes of energy, basin geology, geodynamics, resources and the environment. Dedicated symposia include the 39th Symposium on the Advances in the Study of the Sydney Basin and Comparisons & Contrasts in Circum-Pacific Orogens.

AESC 2014 offers all geoscientists a unique opportunity for professional development and a chance to hear firsthand the latest developments in geosciences.

Plan your trip to Newcastle

Call for Abstracts:
October 2013

Abstracts Deadline:
March 2014

The website is coming soon,
in the interim please contact:
info@gsa.org.au

Presentation: Oral and poster

Registration: early 2014

Workshops and field trips:

The convention invites proposals for short courses, workshops and field trips.

Exhibition:

The convention will host an exhibition. We welcome companies and businesses to participate so they can promote the emerging opportunities in their organisation, state or territory.

Supporters:

The organising committee invites companies, institutions and technology providers to support this meeting.

Expressions of interest:

info@gsa.org.au

Convention location:

Newcastle City Hall

T + 61 2 9290 2194

F + 61 2 9290 2198

Email: info@gsa.org.au

Convention Website: coming soon



AESC

australian earth sciences
convention

**Sustainable
Australia:**
7-10 July 2014

NEWCASTLE, NSW, AUSTRALIA



Earth scientists recognise that the key to sustaining the Australian society, economy and environment into the future lies in an understanding of the make-up, structure and deep-time history of the continent, and its setting in an evolving planet.

THEMES

Energy

Increases in the global demand for energy has been driving advances in the efficiency of coal and conventional hydrocarbon extraction, while also urging the rapid growth of interest in unconventional hydrocarbons. Future energy supplies are likely to include all fossil fuels, nuclear sources, and significant increases in the use of renewable energy and cleaner alternatives. Building on the public debate to be stimulated by the 'Energy 2050' public forum, the Energy theme will encompass Earth Science perspectives on energy sources, exploration and extraction methods, and environmental consequences and solutions.

Resources

In an era of increasing demand for mineral resources from the developing Asian economies, and declining rates of discovery of new deposits, new mineral exploration strategies are vital. Discovery will be stimulated by new technologies, new methods of data interpretation and dissemination, refined and novel understandings of mineral systems and ore environments, and the strength of the pre-competitive geological and geophysical data sector, all addressed under the Resources theme.

Environment

Earth's environment is a dynamic and responsive system with a long geological record of change and an immediate and future impact on society, particularly in an Australian context. High-resolution records of past climates (including outcome of the International Ocean Drilling Program), assessments of the state and future of our ground- and surface-water resources, predictions of the response of the Australian environment to climate change, and studies specific to the Australian arid and semi-arid zones, will be major elements of the Environment theme.

Service and Community

The Earth Sciences have an ongoing role of service by informing, influencing, and supporting Australian society, and a proud history of education and research. The Service and Community theme will address the geoscience response to distributed grid computing and cloud storage, the dissemination of geoscience information in a high-bandwidth environment, the continuing and evolving role of geoscience outreach and education, geohazard studies and their role in protecting the community, the contributions of geotourism and geoheritage, and the historical record and influence of Earth scientists.

Dynamic Planet

Today's Earth is the sum of 4.5 billion years of geological processes. The Dynamic planet theme will address: the geodynamic evolution of Australia and other continents from the Hadean to the present; the evolution of the Earth-Moon system and the meteoritic impact record; the expression of the circulation driven by the Earth's heat engine in lithospheric plate tectonics, mantle dynamics and differentiation, and core evolution; the processes that govern deposition and deformation in intracratonic settings; processes of crustal growth and recycling, at convergent margins and in other settings; geophysical and geochemical evidence of the structure and composition of the deep subsurface; and the influence of all of these elements on the formation and distribution of mineral and energy resources.

Living Earth

Life has fundamentally influenced the development of the Earth, making it unique with respect to its planetary neighbours. The Living Earth theme will investigate: the evolution of life as witnessed in the fossil record; consider novel methods to supplement traditional palaeontological approaches; investigate the major events in the evolution of life, the hydrosphere and atmosphere; and draw contrasts and comparisons with other planets.

SYMPOSIUM

39th Symposium on the Advances
in the Study of the Sydney Basin
Comparisons & Contrasts
in Circum-Pacific Orogens



Coalfield Geology Council
of New South Wales

T + 61 2 9290 2194
F + 61 2 9290 2198

Email: info@gsa.org.au
Convention Website: coming soon

STUDENT FUNDING OPPORTUNITIES**Geological Society of Australia (Victoria Division) Student Research Scholarships**

The GSAV are pleased to offer up to \$10,000 per year in scholarships available to honours and postgraduate students for assistance with travel costs associated with conferences and field work.



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.

Students that receive this scholarship are required to submit a report for publication in the newsletter, "The Victorian Geologist", following 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.

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 including eligibility criteria can be found on the form and 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 Matt Bliss at mbliss@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 2013 talks will be held in the Fritz Loewe Theatre, Earth Sciences Building, University of Melbourne.

| | |
|----------------|---|
| June 27th | A.W. Howitt Lecture (Joint meeting with the RSV) Dr. Erich Fitzgerald (Museum Victoria) <i>Victoria: Last Frontier in Quest for Whale Origins</i> |
| July 25th | TBA |
| August 29th | TBA |
| September 26th | Selwyn Seminar |

Please welcome our newest members



Ritipurna Das
Phillip Robertson

Visit the GSAV on www.vic.gsa.org.au 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.vic.gsa.org.au

OFFICE BEARERS

Chair: David Cantrill 9252 2301 (BH)
Vice-chair: position vacant
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Treasurer: Barbara Wagstaff 8344 6537 (BH)

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David Moore 0409 977 120
Susan White 9328 4154
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