

THE VICTORIAN GEOLOGIST



June 2013

THE GEOLOGICAL SOCIETY OF AUSTRALIA
Victoria Division

The A.W. Howitt Lecture

Joint meeting between the GSAV and the Royal Society of Victoria

Thursday 27th June at 7:00 p.m.

**Royal Society of Victoria (9 Victoria St, enter via 8 La Trobe Street,
Melbourne 3000)**

Refreshments available in the Burke and Wills Room from 6:15pm at \$20/head. RSVP to Adele Seymon at secretary@vic.gsa.org.au or 0403 269 462 by Friday, June 21st.

Victoria: Last Frontier in the Quest for Whale Origins

**Dr Erich M.G. Fitzgerald, Senior Curator of Vertebrate
Palaeontology, Museum Victoria**

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?"

STUDENT CONTRIBUTION

Fahmida Perveen
GSAV Student Scholarship Recipient
PhD Candidate
Environmental Geoscience, LaTrobe University

The travel grant awarded from the Victorian Division of the Geological Society of Victoria, supported my recent trip to USA to attend and present my research work at the 2012 American Geophysical Union (AGU) Fall Meeting in San Francisco, USA. AGU is the world's largest forum of space and planetary scientists.

I arrived in San Francisco on the 2nd of December 2012, which was the day before the conference technical sessions began. I registered myself on the same day and it helped me to avoid long queues on Monday morning because it was a scientific gathering of approximately 23,000 delegates from 100 countries. Attendees belonged to a wide range of earth and space sciences disciplines from all over the world.

My poster presentation was the first of the hydrology session on Monday. It was scheduled from 8 am to 12 noon but they allowed the presenters to leave the posters till 6 pm for viewing and I definitely availed this opportunity to get maximum viewers. Title of my presentation was 'The Influence of Subsurface Karst Terrain on Hydrology and Hydrogeology in Southwestern Victoria, Australia'. I voluntarily participated for OSPA and was judged by the two judges selected by the AGU organizers. I was asked some good questions by them and other researchers and had interesting discussion about the research background and its ultimate significance. I also met some people who were interested in my research.

Throughout the week, oral and poster session of Atmospheric Sciences, Biogeosciences, Ocean Sciences, Planetary Sciences, Geodesy, Education and human resources, Global Environmental Change, natural hazards, Geophysics, Seismology, Tectonophysics and Hydrology were organized along with different public lectures. I attended mainly hydrology based presentations which covered broad range of topics including groundwater-surface water interactions, Hydroclimatic data, Characterization of groundwater systems, Remote sensing applications in hydrology, Geothermal systems, Hydrologic data assimilation, Hydroepidemiology, Dynamics of fluids and transport in fractured rocks, catchment hydrology and water quality, CO₂ sequestration and water resources management.

There were some social events, arranged specially for the students. On Tuesday evening I attended "Students Mixer" and met with different students from different parts of the globe. I am very grateful to the Victorian Division of the Geological Society of Australia for providing me with student travel grant as a financial support for this trip. It was a great experience to present my research to my peers and meet with hydrogeologists, geologist and geophysicists from around the world and expand my connections.



Australian Academy of Science
Victorian Regional Group of Fellows



PublicLecture

Australian Academy of Science New Fellows' and Medallists' Symposium

The newly elected Victorian Fellows of the Australian Academy of Science together with this year's medal winners will give brief presentations on their work. This symposium, of special interest to students and scientists of all ages and fields, is open to the public.

Thursday, 4 July 2013

6.00—7.30 pm

Theatre A, Elisabeth Murdoch Building

The University of Melbourne.

Free Admission

Parking: Eastern Car Park, 375 Cardigan Street, Carlton, near the corner of Elgin Street. \$5.00 for 4 hours.

Enquiries: [Robyn Trethowan E: rtret@unimelb.edu.au](mailto:Robyntrethowan@unimelb.edu.au) or T: 8344 4392

Professor Yuri Estrin FAA (Monash University)

Bulk Nanomaterials: Properties and Promises

Professor Michael Sandiford FAA (University of Melbourne)

Shaping the Continents

Professor Geoffrey Taylor FAA (University of Melbourne)

Search for the Higgs Boson

Professor Bryan Williams (Monash Institute of Medical Research)

Molecules and Mechanisms in the Immune System

Dr Benjamin Kile (Walter and Eliza Hall Institute of Medical Research)

Platelets, Bleeding and Cancer Therapy

Dr Lars Kjer-Nielsen (University of Melbourne) - Winner of David Syme Research Prize

Immunity gets its Vitamins

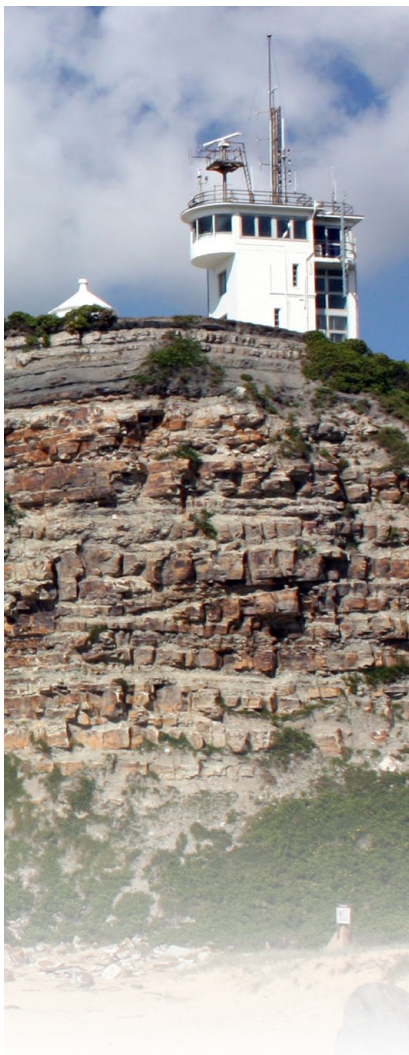


AESC

australian earth sciences
convention

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

NEWCASTLE, NSW, AUSTRALIA



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



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



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 geoh heritage, 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

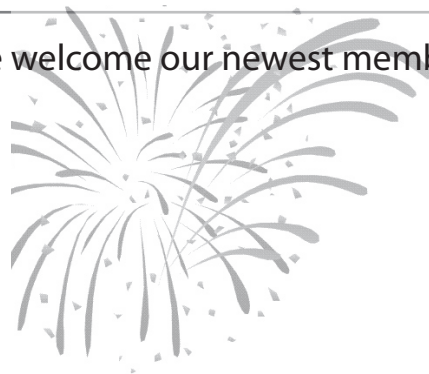
FORTHCOMING SEMINARS AND EVENTS

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.

July 25th	TBA
August 29th	TBA
September 26th	Selwyn Seminar

Please welcome our newest members



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

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

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First Friday of the month except Dec & Jan
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