

# THE VICTORIAN GEOLOGIST



February 2008

THE GEOLOGICAL SOCIETY OF AUSTRALIA  
Victoria Division

Next General Meeting  
Thursday 28th February at 6:15 p.m.

## **Invisible Histories – developments in low-temperature thermochronology, and the geology of missing sections**

Professor Andrew Gleadow  
School of Earth Sciences, University of Melbourne  
President, Geological Society of Australia

**Fritz Loewe Theatre, Earth Sciences Building, University of Melbourne**  
Preceded at 5.30 p.m. by drinks and nibbles in the tea-room, 4th floor, cost \$2.

Extensive data sets of results from the apatite fission-track dating system are now available over large areas in several parts of the world, including most of the exposed basement areas of Australia. It has long been known that the major control on the stability of fission-tracks in minerals is the temperature history of the rocks, so that these results are interpreted in terms of the low-temperature (~60-120°C) cooling history of these regions, and the tectonic and surface processes responsible for that cooling. These interpretations have important implications for the removal of former cover that may no longer be represented in the visible geology. Such interpretations are often not without controversy. Therefore, an important development over the last decade has been the emergence of another low-temperature thermochronometer, the apatite (U-Th)/He system, that can provide complementary information to even lower temperatures (~40-80°C). As work on the new system has progressed, however, a number of analytical problems and complexities have emerged that are still being worked through, and puzzling mismatches exist in the relative behaviour of the two systems, especially in older terranes. These issues and potential solutions will be discussed along with new developments in the automation of fission track analysis that have the potential to greatly enhance the productivity and accessibility of these methods. These developments are likely to be important as the next generation of applications are likely to require even more data than are available now.

Come along for a fascinating talk!

# ESHG Conference Wrap - November 2007



## **The history of geology in the second half of the nineteenth century:**

The story in Australia and Victoria, from Selwyn and McCoy to Gregory – 1853 to 1903

Forty-five registrations were received for the recent ESHG conference, held from Thursday 29th November to Saturday 1st December 2007 in the Fritz Loewe Lecture Theatre, School of Earth Sciences, The University of Melbourne.

On the first day ten papers were presented, and during coffee breaks and lunch, participants were able to inspect a display of volumes from the Earth Sciences Rare Book Collection, a selection of the GSA's *Australian Geology Hall Of Fame* posters, and nine maps on loan from the Geological Survey of Victoria's exhibition for its 150th Anniversary in 2003 - see "Beneath Our Feet" by Peter O'Shea, Technical Record 2003/10 (<http://tinyurl.com/3cqwu4>).

The Earth Sciences Rare Book Collection is held at the Earth Sciences Library. It is an important research collection of rare and early geological and palaeontological texts. The collection includes many seminal works from the 19th and early 20th centuries. It includes over 1,000 volumes and approximately 65% of the items are the only known copy available in Australia (see Earth Sciences Library web site at: <http://www.lib.unimelb.edu.au/collections/earth/rarebooks/index.html>).

On the Thursday evening, at the Monthly meeting of the GSA Victoria Division, Professor Geoffrey Blainey AC gave the Keynote Address, titled "Victorian Gold: A Bird's Eye View of the Victorian Goldfields, from the First Rushes to the First World War." After enthusiastic discussion and comments, many members adjourned for an excellent dinner at Café Italia in Carlton.



*Following his conference Keynote Address to a capacity audience at the November 2007 GSAV meeting, Professor Geoffrey Blainey AC is presented with the conference volumes by ESHG Chair Bernie Joyce.*

On the second day, five papers were presented in the morning, and the ESHG Business Meeting was also held. Minutes of the Business Meeting will appear in a future ESHG Newsletter. In the afternoon, 17 participants attended the Royal Park field trip, led by Bernie Joyce and Doug McCann.

The Deep Leads Field Trip to the Creswick area, led by Guy Holdgate on Saturday 1 December, was attended by 28 participants, and began with a tour of the Creswick Museum, followed by a field inspection of the Berry Deep Lead system. After lunch at the historic mining town of Clunes, the trip concluded with a climb up Mt Greenock scoria cone led by Bernie Joyce, to locate and view

Major Mitchell's 1836 panorama of the local volcanoes.

The conference organisers wish to thank Professor Geoffrey Blainey, Guido Tresoldi of the ES Library, Peter O'Shea of the GSV, Sue Fletcher of the GSA Sydney office, Sandra McLaren, Tom Fromhold and Jonathan Giddings, the Chairs of the conference sessions, and the School of Earth Sciences.

The pre-conference details will now be archived (with a link from the main website) and a new front page reporting more about the conference, providing a compilation of conference presentations, and outlining future activities of the ESHG, will be made available.

At the AESC 2008 meeting in Perth, we hope a new Committee will be taking over the running of the ESHG, with the responsibility of organising a future conference, perhaps with a Western Australia emphasis!

### Conference Volumes For Sale:

Pierson, R.R. (ed.) 2007. The history of geology in the second half of the nineteenth century: the story in Australia, and in Victoria, from Selwyn and McCoy to Gregory – 1853 to 1903. Earth Sciences History Group conference, Thursday 29th November to Saturday 1st December, 2007. Volume of Short Papers, Special Publication No. 1, Earth Sciences History Group, GSA Inc., Melbourne, Victoria. 70p.

Holdgate, G.R., 2007. Creswick deep leads goldfields tour 'Buried rivers of gold'. Saturday 1st December, 2007; Earth Sciences History Group Field Guide Series No. 1., Earth Sciences History Group, GSA Inc., Melbourne, Victoria. 29p. (including Appendix 1: Joyce, Bernie. 2007. Volcanoes of the Creswick Deep Leads region in the Western Uplands of Victoria, pp.17-29.)

Copies of these publications at \$10 each plus postage may be obtained from:

The Secretary

Earth Sciences History Group, GSA Inc.

(Address of current Secretary is available on the GSA web site at <http://www.gsa.org.au>)

### ESHG Committee

Bernie Joyce

Guy Holdgate

Roger Pierson

Doug McCann

*Chair*

*Secretary*

*Treasurer*

*Newsletter Editor*



DO YOU HAVE SOMETHING INTERESTING TO SHARE?

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

If there are any events, happenings, or news that would be of interest to the membership, please send your details and information to Marilyn Moore at the e-mail address on the back page.

**We'd be glad to hear from you.**

## New Scholarship Opportunity



Coca-Cola Amatil, in conjunction with the Centre for Groundwater Studies (CGS), is pleased to announce the offering of a \$5000 scholarship for a highly qualified student entering his or her final or Honours year in a science and/or engineering degree at a CGS member university.

For full conditions of the award, please see website at:

<http://groundwater.com.au/images/stories/education/cca-scholarship-for-2008.pdf>

Application Deadline: Close of business Friday 29th February 2008

Address your application to

Coca Cola Amatil Scholarship  
c/- Centre for Groundwater Studies  
GPO Box 2100  
Adelaide SA 5001

Please note: This offer is only open to Australian Citizens & Permanent Residents.

Further Details:

Professor Craig Simmons      [craig.simmons@flinders.edu.au](mailto:craig.simmons@flinders.edu.au)

Dr David Reynolds      [david.reynolds@uwa.edu.au](mailto:david.reynolds@uwa.edu.au)

## FORTHCOMING EVENTS...



## Australian Earth Sciences Convention 2008 Perth, 20-24 July 2008

### Themes:

- Geoscience in the Service of Society
- Resources: Foundation for our Future
- Evolution of Life and the Solar System
- Earth's Environments: Past, Present and Future
- Dynamic Earth: From Crust to Core

**Registration Deadline: 3 July 2008**

### *Early Bird Rate*

To receive the early bird rate your registration and accompanying payment must be received via e mail or fax by 5.00pm or post-marked on or before Thursday 10 April 2008

### *Student Registration*

To be eligible for the student rate, you must be a full time student. Please provide proof of your student status along with your registration form. A photocopy of your student identification including full time status will be sufficient.

See the website at: <http://www.iceaustralia.com/aesc2008/index.html> for complete information.

## FORTHCOMING TALKS

to be presented at  
GSA (Victoria Division) meetings

Note: unless otherwise indicated, all 2007 talks will be held in the  
Fritz Loewe Theatre, Earth Sciences Building, University of Melbourne.

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28 February	<b>Prof. Andrew Gleadow</b> 6:15 p.m.	Invisible Histories - Developments in low-temperature thermochronology
27 March	<b>Dr Stephen Carey</b>	Megafaunal Trackways: A gem in the proposed Kanawinka Global Geopark
24 April	<b>Prof. David Cantrill</b>	Incoming GSAV Chair, title TBA
29 May	<b>Prof. Stan White</b>	The Highland Controversy of the late 19th Century: Relevance to modern structural geology
19 June	<b>2008 Howitt Lecture</b> Lecture to be held at the Royal Society of Victoria	TBA

Visit the GSAV on [www.vic.gsa.org.au](http://www.vic.gsa.org.au) or the GSA on [www.gsa.org.au](http://www.gsa.org.au)  
• Renewing your GSA membership is easy - it can now be done on-line.

The University of Melbourne Earth Science Postgraduate Student Society (ESPG) presents  
**Microbes on acid: the geomicrobiology of acid mine drainage**

Dr John Moreau, USGS

Friday 22 Feb at 4:00 p.m.

Fritz Loewe Lecture Theatre, Earth Science Building (cnr Swanston and Elgin Streets)

Followed at 4.45 p.m. by drinks and refreshments in the tea-room, 4th floor. \$2 per person.

Further information: [http://www.earthsci.unimelb.edu.au/php/seminars\\_upcoming.php](http://www.earthsci.unimelb.edu.au/php/seminars_upcoming.php)

### GSA (VICTORIA DIVISION) COMMITTEE

Please address all correspondence to the GSA Victoria Division  
GPO Box 2355V, Melbourne, Vic., 3001  
Internet address: [www.vic.gsa.org.au](http://www.vic.gsa.org.au)

#### OFFICE BEARERS

Chair:	Stephen Gallagher	8344 6513 (BH)
Vice-chair:	David Cantrill	9252 2301 (BH)
Secretary:	Adele Seymon	9658 4523
Treasurer:	Peter Pritchard	9431 9582

#### COMMITTEE

Adele Bear	9905 4886 (BH)
Alison Fairmaid	8344 7672 (BH)
Chung Leong Li	8344 9980 (BH)
Marilyn Moore	9844 1072
David Moore	9858 4513 (BH)
Kyle Rebryna	9905 5768 (BH)
Noel Schleiger	9435 8408
Lindsay Thomas	0427 354 828
Fons VandenBerg	9658 4519 (BH)
Susan White	9328 4154

#### SUBCOMMITTEE

#### CONTACTS

Awards:	Ingrid Campbell	9486 7160
Bicentennial Gold:	Gerhard Krummei	9820 2595
Education:	Noel Schleiger	9435 8408
Heritage:	Susan White	9328 4154
Membership:	Peter Pritchard	9431 9582
Newsletter:	Marilyn Moore	9844 1072
Program:	position vacant	
Publications:	position vacant	
Promotions	position vacant	
Webmaster:	Lindsay Thomas	0427 354 828

#### OTHER CONTACTS

Geology of Victoria:	Bill Birch	9270 5049 (BH)
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#### Newsletter deadline

First Friday of the month except Dec & Jan  
[moore.me@bigpond.net.au](mailto:moore.me@bigpond.net.au)

GSA Inc - for membership and subscription enquiries or change of address, please contact Ms Sue Fletcher  
Business Office: Geological Society of Australia, Suite 706, 301 George Street, Sydney NSW 2000  
Email: [sue@gsa.org.au](mailto:sue@gsa.org.au) Tel: (02) 9290 2194 Fax: (02) 9290 2198

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# THE VICTORIAN GEOLOGIST



March 2008

THE GEOLOGICAL SOCIETY OF AUSTRALIA  
Victoria Division

Next General Meeting  
Thursday 27th March at 6:15 p.m.

## **Megafaunal trackways A gem in the proposed Kanawinka Global Geopark**

Dr Stephen Carey  
Geology Department, University of Ballarat

**Fritz-Loewe Theatre, Earth Sciences Building, University of Melbourne**  
Preceded at 5.30 p.m. by drinks and nibbles in the tea-room, 4th floor, cost \$2.

Superbly preserved trackways of the extinct Pleistocene marsupial megafauna provide a record of the behaviour of a community living on the volcanic plains of western Victoria, within the proposed Kanawinka Global Geopark. Volcaniclastic sands host the trackways, and muddy pockets within the trackways surface contain abundant skeletal material. A thin layer of lacustrine carbonate, now partially stripped, has protected the trackways for much of their existence. A close relationship exists between the longest trackways and the sedimentology of the locality. Sand bars and lower-order sedimentary features (ripples, planar stratification and current scours) testify to aqueous deposition, together with partial exposure of the locality at the time the animals were negotiating it.

The longest trackway, made by an animal with the biggest feet, belongs to a diprotodontid, identified as *Zygomaturus trilobus* on the basis of a biomechanical analysis. Other track-makers are giant wombats (probably *Ramsayia*) and wallabies (possibly *Protemnodon*). The accompanying skeletal fossils include the jaw of a marsupial lion, *Thylacoleo carnifex*, the teeth of a wombat and numerous long bones, plus jaws and teeth, of macropodids, including a sthenurine. The bones display abundant evidence of bite marks from rodents, Tasmanian devils or thylacines and possibly even *Thylacoleo*.

*continued overleaf...*

The age of the occurrence remains a major question. Optically stimulated luminescence analysis is being applied to the host sediment of the trackways, U/Th analysis to the carbonate layer overlying the volcanoclastics, and combined U-series/electron spin resonance analysis to teeth from the muddy pockets within the trackways surface.

The presence of the trackways enhances the claim of the volcanic province to formal international recognition through the declaration of the proposed Kanawinka Global Geopark. The cultural and educational significance of the trackways is acknowledged in the decision of Museum Victoria to mould portions thereof during the autumn, with the prospect of incorporating casts in future palaeontological displays in Melbourne and regional Victoria.

Sure to be an interesting talk!

### FORTHCOMING EVENTS...

## 2008 Howitt Lecture

19th June



### Climate change: challenges and opportunities for Victoria

Professor David Karoly

School of Earth Sciences

University of Melbourne

Presented jointly by:

The Geological Society of Australia (Victoria Division) and

The Royal Society of Victoria

More details to follow...

### Australian Earth Sciences Convention 2008

Perth, 20-24 July 2008

#### Themes:

- Geoscience in the Service of Society
- Resources: Foundation for our Future
- Evolution of Life and the Solar System
- Earth's Environments: Past, Present and Future
- Dynamic Earth: From Crust to Core

**Registration Deadline: 3 July 2008**



#### Early Bird Rate

To receive the early bird rate your registration and accompanying payment must be received via e mail or fax by 5.00pm or post-marked on or before Thursday 10 April 2008

#### Highlighted Speakers include:

Barry Drummond - Geoscience Australia

Jeff Taylor - Hawai'i Institute of Geophysics and Planetology

Phil Commander - Principal Hydrogeologist, WA Geological Survey

Donald A. Singer - U. S. Geological Survey

See the website at: <http://www.iceaustralia.com/aesc2008/index.html> for complete information.

# 2008 Selwyn Symposium

25th September

## Neoproterozoic extreme climates and the origin of early life

Climatically, the Neoproterozoic (~750-550 million years ago) is one of the most extraordinary periods of Earth history. During this time, the Earth was alternately subjected to the most severe glacial conditions ("snowball earth events") the planet has ever witnessed with ice present in equatorial latitudes, and then to similarly-widespread tropical greenhouse conditions. These extreme climates, together with the sudden and widespread appearance of soft-bodied metazoan organisms during the Ediacaran (~600-544 million years ago) make the Neoproterozoic one of the most important and enigmatic episodes in Earth history. This symposium brings together leading researchers to examine the causes and effects of these extreme climatic events and the evolution of early metazoan life.



2008 Selwyn Symposium organising committee are:  
Assoc. Prof. Stephen Gallagher and Malcolm Wallace

### Preliminary Program

8.30 am	Registration
9:00 am - 5:00 pm	The Selwyn Symposium - half hour presentations from invited speakers (including Prof. Paul F. Hoffman) Refreshments provided throughout the day.
Venue: Fritz-Loewe Lecture Theatre, University of Melbourne.	
6:30 pm - 7:00 pm	The Selwyn Medal Presentation.
7:00 pm - 8:00 pm	<b>The Selwyn Lecture - Prof. Paul F. Hoffman</b> - The greenhouse effect, sea-level change and continental drift: discoveries impelled by the glacial theory of Pleistocene ice ages
8:00 pm	Selwyn Dinner

The extended abstracts of these proceedings will be published as part of the Geological Society of Australia's abstract series.

WELCOME TO OUR NEW MEMBERS!

Welcome to those joining us for the first time  
and those transferring from another division!

Frans Bos  
Peter Simpson  
Leon Costerman  
David Taylor  
Wouter Schellart  
(Transferral of membership)

DO YOU HAVE SOMETHING INTERESTING TO SHARE?

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

If there are any events, happenings, or news that would be of interest to the membership, please send your details and information to Marilyn Moore at the e-mail address on the back page.

**We'd be glad to hear from you.**

## ANNOUNCING...

**New Publications from GSA...**

GSA South Australia members have produced *Abstract 87, Regolith: Mineral Deposits & Environment*, from the 5th Sprigg Symposium. The Association of Australasian Palaeontologists (AAP) have produced a new Memoir – *Memoir 34 Papers in honour of John H. Shergold 1938-2006*. Both these publications are available through the online bookshop or by phoning/emailing the office.

Please see: <http://gsa.org.au/publications/index.html> for more information.

**New reference map covers Australia**

Geoscience Australia has recently released a new version of its popular 1:5 million scale topographic General Reference Map. This is the first version to be fully digitally derived from Geoscience Australia's renowned 1:250 000 scale (GEODATA 250K) vector data whereas previous versions of the map were compiled using traditional cartographic techniques.

Production involved selecting the features to be included on the map from base data and cartographically revising this larger scale data to fit the smaller scale map. Location names were also reviewed to ensure consistency and compliance with the geographic names allocated by state and territory authorities.

Bathymetric features from Geoscience Australia's Australian Bathymetric Topography Grid were included to enhance the map and show the depth of the oceans and seas around the continent. This bathymetry data complements the hypsometric elevation shown on the land areas of the map to create a visually appealing product.

The General Reference Map is packaged in a plastic sleeve which includes an informative cover insert and is available in flat (ideal for framing) and folded versions and should appeal to a wide range of professional and recreational users. It is planned to release the derived data as a 1:5 million GEODATA (vector) dataset for GIS use. The General Reference Map of Australia (fifth edition) is available from map retailers or direct from Geoscience Australia.

**For more information:**

Phone: Geoscience Australia Sales Centre on Freecall 1800 800 173 (within Australia) or +61 2 6249 9966 international direct dial.  
E-mail: [sales@ga.gov.au](mailto:sales@ga.gov.au)

Visit the GSAV on [www.vic.gsa.org.au](http://www.vic.gsa.org.au) or the GSA on [www.gsa.org.au](http://www.gsa.org.au)  
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19 June	<b>2008 Howitt Lecture</b>	Climate change: challenges and opportunities for Victoria Lecture to be held at the Royal Society of Victoria, Victoria Parade at 6:30 p.m.
31 July	TBA	
28 August	TBA	
25 September	<b>Selwyn Symposium</b>	<b>9 a.m. – 5 p.m. at the University of Melbourne</b> Registration details forthcoming.
	<b>Selwyn Lecture</b>	<b>6:30 p.m. Free public lecture</b> Copeland Theatre, University of Melbourne
	Prof. Paul F. Hoffman	The greenhouse effect, sea-level change and continental drift: discoveries impelled by the glacial theory of Pleistocene ice ages

The University of Melbourne Earth Science Postgraduate Student Society (ESPG) presents

### Earth Science Seminars

Fridays at 4:00 p.m.

Fritz Loewe Lecture Theatre, Earth Science Building (cnr Swanston and Elgin Streets)

Followed at 4.45 p.m. by drinks and refreshments in the tea-room, 4th floor. \$2 per person.

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Bicentennial Gold:	Gerhard Krummei	9820 2595
Education:	Noel Schleiger	9435 8408
Heritage:	Susan White	9328 4154
Membership:	Peter Pritchard	9431 9582
Newsletter:	Marilyn Moore	9844 1072
Program:	position vacant	
Publications:	position vacant	
Promotions	position vacant	
Webmaster:	Lindsay Thomas	0427 354 828

#### OTHER CONTACTS

Geology of Victoria:	Bill Birch	9270 5049 (BH)
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#### Newsletter deadline

First Friday of the month except Dec & Jan  
[moore.me@bigpond.net.au](mailto:moore.me@bigpond.net.au)

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April 2008

THE GEOLOGICAL SOCIETY OF AUSTRALIA  
Victoria Division

**Annual General Meeting**  
Thursday 24th April at 6:15 p.m.  
See insert for Committee Nomination Form

**From forests to tundra: The interplay between tectonics  
and climate at the southern end of the world**

Professor David Cantrill  
Chief Botanist and Director, National Herbarium of Victoria  
Royal Botanic Gardens, Melbourne

**Fritz-Loewe Theatre, Earth Sciences Building, University of Melbourne**  
Preceded at 5.30 p.m. by drinks and nibbles in the tea-room, 4th floor, cost \$2.

Antarctica has not always been the glaciated landscape it is today. Mesozoic and Tertiary deposits contain abundant evidence for a forested landmass with the plants having affinities to floras of present day South America, Australia and New Zealand. The changing patterns of vegetation can be clearly related to the break up of Gondwana and the progressive isolation of Antarctica in the polar regions. This talk will bring together information on the geological evolution of the continent together with Earth's climate history to paint a picture of how vegetation changed on the Antarctic landmass.

Sure to be an interesting talk!



# 2008 Annual General Meeting of the Victoria Division of the Geological Society of Australia

## Notice of Meeting

The 2008 Annual General Meeting of the Victoria Division of the Geological Society of Australia will be held at 6:15 p.m. on Thursday 24th April 2008 in the Fritz Lowe Theatre at the University of Melbourne

Stephen Gallagher will present his Chairman's Report for 2007–2008 and the meeting will elect a new Geological Society Victoria Division Committee for 2008–2009.

Stephen Gallagher has indicated that he wishes to pass the Chairmanship of the Division to David Cantrill and has offered to act as Treasurer of the Division; Adele Seymon has indicated that she will continue, if elected, as Secretary in 2008–2009.

## Agenda

1. Minutes of the 2006–2007 of the GSA Victoria Division AGM on Thursday 26th April 2007.
2. GSA Victoria Division Chairman's Report for 2007–2008
3. GSA Victoria Division Financial Report for 2007–2008
4. Bicentennial Gold 88 Endowment Report for 2007–2008
5. Heritage Subcommittee Report for 2007–2008
6. Awards Committee Report for 2007–2008
7. Election of Committee Members for 2008–2009
8. Other business.

## A. Seymon

Secretary of the Division

4th April 2008

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## 2008–2009 GSA(V) Committee Nominations

### Division Officers

Chairman	<i>David Cantrill</i>
Vice chairman	
Secretary	<i>Adele Seymon</i>
Treasurer	<i>Stephen Gallagher</i>
Promotions officer	

### Committee Members

<i>David Cantrill</i>	GSA Victoria Division Chairman
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<i>Adele Seymon</i>	GSA Victoria Division Secretary
<i>Kyle Rebryna</i>	GSA Victoria Division Newsletter Editor
<i>Peter Pritchard</i>	GSA Victoria Division Membership Matters
<i>Stephen Gallagher</i>	GSA Victoria Division Treasurer
<i>Alison Fairmaid</i>	Melbourne University, ESPG (Earth Sciences Postgrad Group) Representative, Newsletter Assistant
<i>Noel Schleiger</i>	GSA Victoria Division Education Subcommittee Chairman
<i>Sue White</i>	GSA Heritage Committee Chairwoman
<i>Lindsay Thomas</i>	GSA Victoria Division Webmaster
<i>David Moore</i>	GSA Victoria Investments Administrator

**Affiliates**

*Gerhard Krummei*     Bicentennial Gold 88 Working Group Chairman

**A. Seymon**

Secretary of the Division

4th April 2008

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## Minutes of the 2007 GSA Victoria Division Annual General Meeting

**1. Opening: time and place**

- a. The meeting opened at 6:15 p.m. on Thursday 26th April 2007 in the University of Melbourne Fritz Lowe Theatre

**2. Minutes of the previous meeting on Thursday 27th April 2006.**

- a. Minutes were taken as read.

**4. Financial report for 2006.**

- a. Lindsay Thomas' Financial Report for the Year Ended 2006 was tabled and accepted by the meeting.

**5. Chairman's Report for 2006–2007.**

- a. Stephen Gallagher presented his Chairman's Report for 2006–2007 and his report was accepted by the meeting.

**6. Election of the Victoria Division Committee for 2007–2008.**

- a. The following members of the Victoria Division were elected or appointed to form the Division's Committee for 2007–2008:

**Division Officers**

Chairman	<i>Stephen Gallagher</i>
Vice chairman	<i>Adrian Pittari</i>
Secretary	<i>Dee Ninis</i>
Treasurer	<i>Peter Pritchard</i>
Promotions officer	

**Division Committee Members**

*Stephen Gallagher*     Division Chairman

---

<i>Adrian Pittari</i>	Division Vicechairman
<i>Dee Ninis</i>	Division Secretary
<i>Peter Pritchard</i>	Division Treasurer
<i>Ingrid Campbell</i>	Division Awards Subcommittee Chairman
	Division Membership Subcommittee Chairman
<i>David Moore</i>	Investments
<i>Marilyn Moore &amp; Kyle Rebryna</i>	Division Newsletter Editors
<i>Adele Bear</i>	GeoViSio Representative
<i>Lindsay Thomas</i>	Division Webmaster/Investments
<i>Noel Schleiger</i>	Division Education Subcommittee Chairman
<i>Sue White</i>	GSA Heritage Committee Chairman

#### **Affiliates**

*Gerhard Krummei*                      Bicentennial Gold 88 Working Group Chairman

#### **7. Other business**

- a.        No other business.

#### **8. Closure**

- a.        The meeting closed at 6:45 p.m.

Minutes accepted at the 2007 GSA Victoria Division Annual General Meeting on 26th April 2007.  
Chairman: Stephen Gallagher

### FORTHCOMING EVENTS...

## 2008 Howitt Lecture

19th June



### **Climate change: challenges and opportunities for Victoria**

**Professor David Karoly**

School of Earth Sciences

University of Melbourne

Presented jointly by:

The Geological Society of Australia (Victoria Division) and

The Royal Society of Victoria

More details to follow...

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#### DO YOU HAVE SOMETHING INTERESTING TO SHARE?

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

If there are any events, happenings, or news that would be of interest to the membership, please send your details and information to Marilyn Moore at the e-mail address on the back page.

**We'd be glad to hear from you.**

# 2008 Selwyn Symposium

25th September

## Neoproterozoic extreme climates and the origin of early life

Climatically, the Neoproterozoic (~750-550 million years ago) is one of the most extraordinary periods of Earth history. During this time, the Earth was alternately subjected to the most severe glacial conditions ("snowball earth events") the planet has ever witnessed with ice present in equatorial latitudes, and then to similarly-widespread tropical greenhouse conditions. These extreme climates, together with the sudden and widespread appearance of soft-bodied metazoan organisms during the Ediacaran (~600-544 million years ago) make the Neoproterozoic one of the most important and enigmatic episodes in Earth history. This symposium brings together leading researchers to examine the causes and effects of these extreme climatic events and the evolution of early metazoan life.



2008 Selwyn Symposium organising committee are:  
Assoc Profs Stephen Gallagher and Malcolm Wallace

### Preliminary Program

8.30 am	Registration
9:00 am - 5:00 pm	The Selwyn Symposium - half hour presentations from invited speakers (including Prof. Paul F. Hoffman) Refreshments provided throughout the day.
Venue: Fritz-Loewe Lecture Theatre, University of Melbourne.	
6:30 pm - 7:00 pm	The Selwyn Medal Presentation.
7:00 pm - 8:00 pm	<b>The Selwyn Lecture - Prof. Paul F. Hoffman</b> - The greenhouse effect, sea-level change and continental drift: discoveries impelled by the glacial theory of Pleistocene ice ages
8:00 pm	Selwyn Dinner

The extended abstracts of these proceedings will be published as part of the Geological Society of Australia's abstract series.

### Australian Earth Sciences Convention 2008 Perth, 20–24 July 2008

#### Themes:

- Geoscience in the Service of Society
- Resources: Foundation for our Future
- Evolution of Life and the Solar System
- Earth's Environments: Past, Present and Future
- Dynamic Earth: From Crust to Core

**Registration Deadline: 3 July 2008**



*Early bird registration has passed. Regular registration is open!*

*Keynote Speakers include:*

Barry Drummond - Geoscience Australia

Jeff Taylor - Hawai'i Institute of Geophysics and Planetology  
 Phil Commander - Principal Hydrogeologist, WA Geological Survey  
 Donald A. Singer - U. S. Geological Survey

*Field Trips Bookings are now open.*

A range of 11 interesting and diversing Field Trips have been developed ranging from 1 day to 7 days running both pre- and post-Conference. Be advised that places are filling quickly!

Paleozoic Geology of the Canning Basin	7 days, ex-Broome	13th–19th July
Archean Crustal Evolution & Mineralization of the Northern Pilbara Craton	6 days, ex-Pt Hedland	14th–19th July
Eastern Goldfields Superterrane, Yilgarn Craton	4 days, ex-Kalgoorlie	16th–19th July
Geology of the Halls Creek Orogen	6 days, ex-Kununurra	25th–30th July
Kalgoorlie, Youanmi, & Narryer Terranes of Yilgarn Craton	6 days, ex-Kalgoorlie	25th–30th July
Kalbarri - A Ramble Through the Red-Beds & more	4 days	25th–28th July
Mines and Wines of south-west Western Australia	4 days	25th–28th July
Geology and Landforms of the Perth region: I	1 day	19th July 2008
Geology and Landforms of the Perth Region: II	1 day	25th July 2008
Meckering Fault Scarp	1 day	25th July 2008
Of Cores - WA in A Day	1 day	25th July 2008

See the website at: <http://www.iceaustralia.com/aesc2008/index.html> for complete information.

**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.

**The TAG June deadline for text is 30 April.**

Please send your news to: [tag@gsa.org.au](mailto:tag@gsa.org.au)

ANNOUNCING...

**New Publications from GSA...**

GSA South Australia members have produced *Abstract 87, Regolith: Mineral Deposits & Environment*, from the 5th Sprigg Symposium. The Association of Australasian Palaeontologists (AAP) have produced a new Memoir – *Memoir 34 Papers in honour of John H. Shergold 1938-2006*. Both these publications are available through the online bookshop or by phoning/emailing the office.

Please see: <http://gsa.org.au/publications/index.html> for more information.

## FORTHCOMING TALKS

to be presented at  
GSA (Victoria Division) meetings

Note: unless otherwise indicated, all 2008 talks will be held in the  
Fritz Loewe Theatre, Earth Sciences Building, University of Melbourne.

24 April	<b>Prof. David Cantrill</b>	From forests to tundra: The interplay between tectonics and climate at the southern end of the world.
29 May	<b>Prof. Stan White</b>	The Highland Controversy of the late 19th Century: Relevance to modern structural geology
19 June	<b>2008 Howitt Lecture</b>	Climate change: Challenges and opportunities for Victoria Lecture to be held at the Royal Society of Victoria, Victoria Parade at 6:30 p.m.
31 July	TBA	
28 August	TBA	
25 September	<b>Selwyn Symposium</b>	<b>9 a.m. – 5 p.m. at the University of Melbourne</b> Registration details forthcoming.
	<b>Selwyn Lecture</b>	<b>6:30 p.m. Free public lecture</b> Copeland Theatre, University of Melbourne
	Prof. Paul F. Hoffman	The greenhouse effect, sea-level change and continental drift: discoveries impelled by the glacial theory of Pleistocene ice ages

Visit the GSAV on [www.vic.gsa.org.au](http://www.vic.gsa.org.au) or the GSA on [www.gsa.org.au](http://www.gsa.org.au)  
• Renewing your GSA membership is easy - it can now be done on-line.

The University of Melbourne Earth Science Postgraduate Student Society (ESPG) presents

### Earth Science Seminars

Fridays at 4:00 p.m.

Fritz Loewe Lecture Theatre, Earth Science Building (cnr Swanston and Elgin Streets)

Followed at 4.45 p.m. by drinks and refreshments in the tea-room, 4th floor. \$2 per person.

Further information: [http://www.earthsci.unimelb.edu.au/php/seminars\\_upcoming.php](http://www.earthsci.unimelb.edu.au/php/seminars_upcoming.php)

### GSA (VICTORIA DIVISION) COMMITTEE

Please address all correspondence to the GSA Victoria Division  
GPO Box 2355V, Melbourne, Vic., 3001  
Internet address: [www.vic.gsa.org.au](http://www.vic.gsa.org.au)

#### OFFICE BEARERS

Chair:	Stephen Gallagher	8344 6513 (BH)
Vice-chair:	David Cantrill	9252 2301 (BH)
Secretary:	Adele Seymon	9658 4523
Treasurer:	Peter Pritchard	9431 9582

#### COMMITTEE

Adele Bear	9905 4886 (BH)
Alison Fairmaid	8344 7672 (BH)
Chung Leong Li	8344 9980 (BH)
Marilyn Moore	9844 1072
David Moore	9858 4513 (BH)
Kyle Rebryna	9905 5768 (BH)
Noel Schleiger	9435 8408
Lindsay Thomas	0427 354 828
Fons VandenBerg	9658 4519 (BH)
Susan White	9328 4154

#### SUBCOMMITTEE

#### CONTACTS

Awards:	Ingrid Campbell	9486 7160
Bicentennial Gold:	Gerhard Krummei	9820 2595
Education:	Noel Schleiger	9435 8408
Heritage:	Susan White	9328 4154
Membership:	Peter Pritchard	9431 9582
Newsletter:	Marilyn Moore	9844 1072
Program:	position vacant	
Publications:	position vacant	
Promotions	position vacant	
Webmaster:	Lindsay Thomas	0427 354 828

#### OTHER CONTACTS

Geology of Victoria:	Bill Birch	9270 5049 (BH)
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#### Newsletter deadline

First Friday of the month except Dec & Jan  
[moore.me@bigpond.net.au](mailto:moore.me@bigpond.net.au)

GSA Inc - for membership and subscription enquiries or change of address, please contact Ms Sue Fletcher  
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The Geological Society of Australia Inc.  
GPO Box 2355  
Melbourne VIC 3001

PRINT POST APPROVED

# Special Seminar Alert

## The Warm Earth We Know

Ted Moore Ph.D.  
University of Michigan, U.S.A.



Based on studies of Earth's modern climate, we have a fairly good idea how increases in global green house gases will affect Earth's climate in the future, including higher global temperatures, rising sea level, and more intense storms. Research shows that ~50 million years ago during the Eocene, Earth experienced a "green house" climate similar to that predicted for our immediate future. Will the lessons learned from the Eocene help us to mitigate predicated changes in modern climate? This talk will describe Earth's Eocene climate as revealed by samples collected through scientific drilling and will explore its relevance to modern issues.

Ted has a distinguished record of service to three generations of ocean drilling programs. Almost immediately after earning a Ph.D. from Scripps Institution of Oceanography in 1967, Ted began participating in scientific ocean drilling. He sailed three times with DSDP, twice with ODP, and once with IODP. His contributions to science were instrumental in developing the field of palaeoceanography. Early in his career, he participated in the original CLIMAP reconstruction of glacial maximum temperatures in the Pacific Ocean. While his study areas have included the Arctic Ocean and South Atlantic, he remains partial to understanding Pacific Ocean sedimentation, stratigraphy, and palaeoceanography.

Thursday 15th May at 4.15–5:15p.m.

**Fritz-Loewe Theatre, Earth Sciences Building, University of Melbourne**  
Followed by drinks and refreshments.

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## 2008–2009 GSAV Committee Nomination Form

I nominate: \_\_\_\_\_ For the position of: \_\_\_\_\_

Nominator: \_\_\_\_\_ Seconded by: \_\_\_\_\_

All nominations will be presented and voted upon at the GSAV AGM on 24th April, 2008, commencing at 6:15 p.m.

Please detach and mail this completed form specifying your 2008–2009 GSAV Committee nomination no later than 21 April to:

The Geological Society of Australia Inc.  
GPO Box 2355  
Melbourne VIC 3001

Alternatively, you may bring the completed form to the AGM meeting and present it in person.

# THE VICTORIAN GEOLOGIST



May 2008

THE GEOLOGICAL SOCIETY OF AUSTRALIA  
Victoria Division

**Next Meeting**  
Thursday 29th May at 6:15 p.m.

## **The Highland Controversy of the late 19th Century and its relevance to modern structural geology**

**Professor Stan White**  
Emeritus Professor, Utrecht University  
Honorary Fellow, University of Melbourne

**Fritz-Loewe Theatre, Earth Sciences Building, University of Melbourne**  
Preceded at 5.30 p.m. by drinks and nibbles in the tea-room, 4th floor, cost \$2.

The Highland Controversy was one of three controversies that characterised the founding of British geology. All flowed from the map of William Smith published in 1815. He concentrated on the Carboniferous and younger rocks as his mapping was driven by the need to find coal to fuel the Industrial Revolution. Attention turned to the rocks underlying the Carboniferous. Three people stand out. De la Beche, founding director of the British Geological Survey (BGS) and the School of Practical Geology, the latter to become the Royal School of Mines within Imperial College, defined the Devonian. Sedgwick, the Woodwardian Professor at Cambridge, introduced the Cambrian. However the dominant figure was Murchison, a former military man and fox hunter who, with persuasion from his wife and mother-in-law, took up geology and defined the Silurian System in 1835. He argued with both Sedgwick and De la Beche over the position of the lower and upper boundaries, respectively, of his Silurian System.

In 1855, Murchison became the 2nd director of the BGS which he appears to have ruled in a militaristic manner. In 1858, he published a paper based on his studies in northern Scotland in which he claimed the rocks, between the crystalline rocks in the west and the Devonian Old Red Sandstones in the east, were all Silurian and formed a continuous stratigraphic sequence younging to the east. He acknowledged they were largely metamorphic rocks and offered quaint explanations why the younger rocks were the most metamorphosed. His map, made with his assistant, Geike, was published in 1861. The area had also been mapped by Nicol, Professor of Natural History at Aberdeen. His map was published in 1858 and the accompanying paper in 1861 but was known to Murchison in 1858. Nicol recorded, in the Eriboll area, repetition in the sediments below a major zone of dislocation which he had traced to the south for ca 150 miles and which consistently placed the metamorphic rocks of Murchison over the unmetamorphosed sediments to the west. Murchison did not accept the findings of Nicol whom he regarded, along with

*continued overleaf..*

other university geologists, as an 'amateur'. However he was worried by Nicol's observation that some sediments under the zone of dislocation were inverted. He sent Geike to investigate.

The opposing views of Murchison and Nicol formed the basis of what became known as the 'Highland Controversy'.

Little attention was paid to this controversy until after the death of Murchison in 1871 and the appointment of Geike as the 4th director of the BGS in 1882. Geological interest concentrated on the Silurian in the Southern Uplands of Scotland. Lapworth, a local school teacher who went on to the chair of Geology and Mineralogy at Birmingham (1881), demonstrated, in 1879, through a pioneering use of graptolites as stratigraphic indices that both structurally induced repetitions of units and facies variations occurred in the region. Lapworth also found that much of what the BGS had mapped as Silurian was a new system which he first named Ordovician and subsequently renamed 'Ordovician'. The BGS had to remap the area.

In 1882 Lapworth turned his attention to Eriboll and revealed the structural complexity of the area due to overthrow faulting, folding and the interleaving of slices of sediments, schists and gneisses. His results were published in three papers in 1883 in which he concluded not only that Nicol was correct but also that the North-west Highlands was an eroded mountain belt not unlike an eroded version of the Alps.

In 1883, Geike dispatched a field party, under Peach and Horne, to the Eriboll area as the start of a BGS programme to map the NW Highlands.. He still believed that Murchison was correct. Further results from Lapworth and the first from the BGS Group were summarised in *Nature* in 1885. Peach and Horne (et al) published their full results in the classical North-west Highlands memoir of 1907. Peach and Horne, in their 1885 presentation, also indicated that Nicol was correct.

Geike had difficulty accepting that Murchison had erred again. But in 1893, *Nature* published an article by de Lapparent in which it was claimed that Geike and the BGS had proven Murchison wrong. He did not acknowledge the publications of Nicol and Lapworth. The furore that this invoked was to threaten the BGS and eventually led to Geike leaving the BGS in 1901. The 'amateurs' had struck back.

The works of Lapworth, Peach and Horne and Nicol were important in the founding of modern British structural geology. In his work at Eriboll, Lapworth recognised and defined mylonites as the products of mechanical metamorphism and recorded that there were multiple zones of mylonites not all of which were active at the same time. He, along with Peach and Horne and Teall (1918), recognised that both brittle and ductile deformation processes produced the type mylonite, had difficulty in separating mylonites from schists, thought that the displacement along the grand dislocation was substantial (many miles) and pondered the significance of its associated pronounced mineral lineation. The mapping and sections of Peach and Horne remain classic examples of thrust tectonics.

We still have problems distinguishing mylonites from schists, in interpreting the deformation processes that contribute to a mylonite microstructure, in recognising and dating different movement phases in mylonites and the displacements associated with each. And we still repeat Murchison's mistake, namely to include bedding parallel, or even strike parallel, mylonite zones as a part of the regional stratigraphy. Many structural lessons were learnt from Eriboll but many were also forgotten.

Sure to be an interesting talk!

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## 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 Kyle Rebryna at [kyle.rebryna@sci.monash.edu.au](mailto:kyle.rebryna@sci.monash.edu.au).

**We'd be glad to hear from you**



## Committee Reports from the 2008 Annual General Meeting of the Victoria Division of the Geological Society of Australia

### CHAIRMAN'S REPORT FOR 2007–2008 GSAV Annual General Meeting Thursday 24 April 2008

This year has been a busy one for the division with various well attended events including the Selwyn Symposium, Howitt Lecture and a special Monash Science Centre presentation by Prof Vickers-Rich. The year was marked by celebrity presentations to the GSAV from Tim Flannery and Geoffrey Blainey. It has also been a year of moderate growth for the division with an increase in members up from 320 to 327. The growth figures are encouraging, however we need to ensure we retain these new members by providing them with encouragement and a sense of belonging to the geological community.

Other highlights of 2007/2008 include:

- (i) Our first (and last) lunch-time meeting in May was given by Hugh Rutter who gave an animated sometimes controversial talk to commemorate the International Polar Year jointly with the ASEG. Unfortunately, we were not able to compete with PESA Vic/Tas and their luncheon meeting successes as only 15 people turned up to ours.
- (ii) We sponsored three postgraduate students to present papers at international conferences: Estee Woon, Jon Giddings and Chung Leong Li from Melbourne University. We also sponsored a student field trip to the Pilbara by Geovisio run by the Monash Postgrad society.
- (iii) Congratulations to Erin Carswell (Melbourne) who won the Frank Canavan Award and Aiden Trotter (Monash) who won the D.E. Thomas Medal. Chris Davis (Melbourne) also got an honourable mention. The awards were presented by John Thomas and I at the July meeting. Proud parents & friends of the recipients were there for the night. Thanks to Ingrid and the awards committee for organizing these prizes.
- (iv) The GSAV had an exhibit at the Geography Teachers' Association of Victoria 41st Annual Conference at Camberwell High School from Sunday 12 August to Monday 13 August 2007. Greg McNamara provided a selection of handouts for distribution during the conference. New 'Factite' sheets, about earthquakes, tsunamis, volcanoes and the mining of copper and gold, proved very popular with conference attendees. Excursion reports on selected areas were also provided. The GSAV thanks Noel Schleiger and his assistant Dorothy Mahler of the FNCV (Geology Group) who organised and manned the display. The exhibit was worthwhile outreach exercise promoting geology and the GSAV. Helping to interest students in earth science is seen as more important than ever now that Geology is no longer a VCE subject in Victoria. Thanks Noel!
- (v) A superb well attended (joint GSAV/Vic Royal Soc) Howitt Lecture by Prof Mike Sandiford on climate change and tectonics.
- (vi) GSAV was a gold sponsor for the VUEESC (Victorian Universities Earth and Environmental Science Conference) at La Trobe University on 25th September 2007. This went well with lots of people and good recognition for the GSA as a major sponsor. Fons Vandenberg presented the best paper and poster prizes to Linden Ashcroft (Melbourne) and Matthias Raber (La Trobe).
- (vii) A successful Selwyn Symposium, on "Climate or humans? Australia's megafauna extinction" on Thursday 27th September. After a plenary address by John Long (Museum of Victoria) ten invited speakers from the geological and archaeological fields around Australia to discuss the controversies surrounding this contentious issue. The symposium attracted 215

*continued overleaf...*

delegates (including 100 free student delegates), many of whom were from interstate (WA, NSW, QLD, ACT). The symposium was followed by the annual Selwyn Lecture and award ceremony in the Copland Theatre, which attracted over 450 people. Professor Tim Flannery, Australian of the Year 2007, followed with a superb Selwyn Memorial Lecture on "A climate change update to September 2007". The presenters and many others then relaxed at the Selwyn Dinner at Graduate House.

- (viii) Congratulations to Prof Patricia Vickers-Rich and Dr Tom Rich who received the 2007 Selwyn Medal at the Selwyn Symposium.
- (ix) Thanks to Bernie Joyce and his ESHG committee the GSAV was able to co-chair a fantastic informative evening lecture by Geoffrey Blainey on the Victorian gold history in November.

Concerning our publications: we have had moderate sales this year; we need to continually market our flagship GOV3 while it is still "fresh". The "Introducing Victorian Geology" volume is out of print. The volume has been scanned (thanks to Sue White, chair of the heritage committee, see attached report) and eventually should be made available freely online.

I'd like to thank Lindsay Thomas and David Moore who continually maintain our share portfolio and for all their advice and help. I appreciated the great help of Adrian Pittari (Vice-Chair) and Dee Ninis (Secretary) who left the committee in 2007. Adele Symons has kindly taken over the secretary's position and is proving to be very thorough and efficient.

Marilyn Moore produced our excellent Newsletter for part of 2007 I appreciate all her assistance over the years. Kyle Rebryna and Alison Fairmaid have now taken over this important task (thanks guys!).

I am stepping down as chair this year, handing the reins to geologist/botanist Prof David Cantrill of the Botanical Gardens, I wish him luck in his endeavours, I'm sure he will ably guide the GSAV through 2008/2009. I will be taking over (at least in the short term) the position of treasurer from Peter Prichard. Looking forward to 2008, the GSAV has an exciting schedule with a large variety of talks, for example our Howitt Lecture will be by Prof David Karoly (joint winner of a Nobel Prize with the IPCC). One of the highlights should be our Selwyn Symposium in September on "Neoproterozoic extreme climates and the origin of life", many speakers have agreed to present, including Prof. Paul F. Hoffmann (Harvard University & "snowball earth" expert) and Prof Malcolm Walter.

If you are reading this and you have not yet renewed your GSA Membership for 2008, please remember to renew, your continued support is essential so we can effectively promote geology in Victoria.

Stephen Gallagher  
*Chairman, GSA(V)*

## The Geological Society of Australia Victoria Division

presents the

# Selwyn Symposium 2008

Thursday 25th September 2008  
at the University of Melbourne

Symposium 9:00 a.m. to 5:00 p.m. (registration required; flyer in this issue)

**Neoproterozoic extreme climates and the origin of early life**

Selwyn Lecture 6:30 p.m. (free public lecture)  
Professor Paul Hoffman

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## FINANCIAL REPORT 2007–2008

The 2007–2008 Financial Report and accompanying auditor's statement of the GSAV accounts were not available when going to press. They will be included in the June 2008 newsletter.

Peter Pritchard  
*Treasurer*

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### BICENTENNIAL GOLD 88 ENDOWMENT COMMITTEE Report for 2007–2008

During the year, two articles from previous grant recipients were published, while one is awaiting a publication slot. In the latter half of the year, applications for the year 2008 grants were processed and recommendations forwarded to the Director of the Endowment Fund for consideration by the Trustees.

There were four successful applications for grants from this Endowment for 2008 in the areas of honours and Ph.D. research and conference attendance.

A total of \$10,000 was distributed among the recipients as follows:

- **Monash University**  
To assist with isotope analyses to further understanding of magma mixing processes operating in the near-mantle environment.
- **The University of Melbourne**  
Support for two Ph.D. students to attend and present research results in the US and Canada respectively.
- **The University of New England**  
Assistance with field costs for an honours thesis research project focused on ways of rehabilitating an abandoned arsenic mine in NSW.

As of the end of 2007 Don Larkin, the CEO of the AusIMM and Director of the AusIMM Education Endowment Fund, which includes the Bicentennial Gold 88 Endowment, has relinquished his position after some 9 years of service. He has been replaced in these positions by Michael Catchpole, who assumed his roles in early 2008. These changes at the top have, unfortunately, led to some delays in payments to the 2008 award recipients.

There have also been some movements in personnel providing administrative services. Emma Leavers, who took over from Simone Cuzuppe at the start of 2007, has herself been replaced by Di McQuay. We thank these ladies for their secretarial input during the year and Don for his co-operation and support during the period of his tenure.

The contributions of Prof. David Gray and Ms. Ingrid Campbell to the assessment process are also gratefully acknowledged.

GERHARD K. KRUMMEI  
*Chairman, BG88 Endowment Working Group*

WELCOME TO OUR NEW MEMBERS!

Welcome to those joining us for the first time!

Kent Balas  
Emily Hepburn  
Katherine Charlton  
Rafika Ismail  
Siddharth Paleri  
Matthew Durrant  
Chiao-Li (Zoe) Yu  
Alexander Ure

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## HERITAGE COMMITTEE

### Report for 2007–2008

The sub-committee has continued to work for geological heritage but has had a substantially less busy year than last year. This is due to many of the current members having a range of issues that have occupied their time making significant less time available for heritage work. The sub-committee has currently 8 members with a wide range of geological expertise as well as others who support our activities. I thank them for all their work.

The major work for the year can be listed as follows:

- Further advice on significance of sites was given to various organizations. The GSA system of significance and site numbering for sites of significance is used to assist in various management decisions. Close relations with the Landscape Committee of the National Trust have been mutually beneficial. The website material on vegetation and geological sites is appreciated by several consultants and agencies.
- The data base continues to be upgraded but this is slow and painstaking work. Significant numbers of sites were entered or upgraded from the hard copy files. Assessment of sites on various 1:250000 geological sheets continued. Concentration on the Queenscliff sheet has meant that most known sites on that sheet are currently being upgraded. The confusion between excursion sites and sites of significance continues to be of concern.
- The committee continues to be involved in the Committee of Management of the Council Trench Geological Reserve at Bacchus Marsh (Triassic Park!). GSA members have completed more signage and park notes. This continues to be a significant exercise for GSA as we have often been critical of the management of important geological sites and this gives us an opportunity to make a positive contribution to and example of the best management of sites.
- The committee has also been involved in management and planning issues in a number of areas. Some have had reasonable outcomes, but others have not. Communication with the Landscape committee of the National Trust continues. Concern continues to be felt over consultation with some government departments especially Parks Victoria and VicRoads, but other agencies have been much more co-operative. We continue to work on such issues. There is potential to influence management of geological sites through Environmental and heritage planning overlays at local government level.
- The long running VCAT issue about rock crushing and vegetation clearance problems in the Harman Valley, Southern Grampians Shire that caused damage to important volcanic features on a highly significant site has been resolved but these activities take a lot of energy. The problems of development in the western district volcanic areas is ongoing and just as an area appears to have resolution another one appears or an old one reappears.
- We maintain contact with the Geoparks group in UNESCO through Joanne Knight. We continue to be involved in the UNESCO assessment and the ongoing development of the Kanawinka Geopark in western Victoria and south eastern South Australia.

I sincerely thank all the other members of the subcommittee.

Susan White  
*Chairman, Heritage Committee*

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## AWARDS COMMITTEE

### Report for 2007–2008

I wish to thank the members of the Awards Committee for their continued support during the year. The following awards were given:

#### 2007 Selwyn Medals

For the first time, **two Selwyn Medals** were awarded. **Professor Patricia Vickers-Rich** of Monash University and her partner **Dr Tom Rich** of the Museum of Victoria were each awarded a Selwyn Medal in recognition of their outstanding contributions to the understanding of Mesozoic life in Australia. In their investigations of vertebrate palaeontology in

Australia, Dr. Rich and Prof. Vickers-Rich have accumulated an extraordinary record of life from the Age of Dinosaurs in Australia ranging from dinosaurs to mammals. This has completely revised our understanding of Mesozoic life at high latitudes and provided us with new knowledge and understanding of our world and the GSAV has recognised their contribution with a Selwyn Medal.

**The 2007 Canavan Prize** was awarded to Erin Carswell (Melbourne University) who achieved the highest marks for second year in 2007.

**The 2007 Thomas Medal** was awarded to Aidan Trotter (Monash University) for his Honours mapping project on “The Geological Evolution of the Palaeo- to Meso-proterozoic Southeastern Gawler Craton, South Australia.”

Christopher Davis (Melbourne University) was awarded a Highly Commended Merit Award on “Structural Control on Mineralisation within the Robins Area, Fosterville, Victoria”, which was deemed to deserve merit under the guidelines for the Thomas Medal.

Ingrid Campbell  
*Chairman, Awards Committee*

## FORTHCOMING EVENTS...

# 2008 Howitt Lecture

Thursday 19th June

**Lies, damn lies and climate change sceptics: What has caused recent global warming?**



**Professor David Karoly**  
School of Earth Sciences  
University of Melbourne



**The Royal Society of Victoria**  
PROMOTING SCIENCE SINCE 1854

In 2007, the Intergovernmental Panel on Climate Change (IPCC) released its Fourth Assessment Report, providing a comprehensive global assessment of climate change. Two of the main conclusions are that warming of the climate system is unequivocal over the last 100 years, and that most of the increase in global average temperatures since the mid-20th century is very likely due to the increase in anthropogenic greenhouse gases. However, there is still a substantial amount of discussion and misinformation spread in opinion pieces in the media questioning the role of human activity in recent global warming.

This talk will consider many of the arguments that have been used that seek to refute the role of increasing greenhouse gases in recent global warming. It will also briefly present some of the many lines of evidence that support the IPCC conclusions above.

### Lecturer Profile

David Karoly is a Professor of Meteorology and Federation Fellow in the School of Earth Sciences at the University of Melbourne, where he started in May 2007. Prior to this, he held the Williams Chair in Meteorology at the University of Oklahoma. He is an expert in climate change science and was very heavily involved in the preparation of the Fourth Assessment report of the Intergovernmental Panel on Climate Change released in 2007, as a member of the Core Writing

Team for the Synthesis Report, as a lead author in the Working Group II report on Impacts, Adaptation and Vulnerability, and as a Review Editor for the Working Group I report on the Physical Science Basis.

Presented jointly by:

The Geological Society of Australia (Victoria Division) and  
The Royal Society of Victoria

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**Australian Earth Sciences Convention 2008**  
**Perth, 20–24 July 2008**

**Themes:**

- Geoscience in the Service of Society
- Resources: Foundation for our Future
- Evolution of Life and the Solar System
- Earth's Environments: Past, Present and Future
- Dynamic Earth: From Crust to Core



**Registration Deadline: 3 July 2008**

*Early bird registration has passed. Regular registration is open!*

*Keynote Speakers include:*

Barry Drummond - Geoscience Australia  
Jeff Taylor - Hawai'i Institute of Geophysics and Planetology  
Phil Commander - Principal Hydrogeologist, WA Geological Survey  
Donald A. Singer - U. S. Geological Survey

*Field Trips Bookings are now open.*

A range of 11 interesting and diversing Field Trips have been developed ranging from 1 day to 7 days running both pre- and post-Conference. Be advised that places are filling quickly!

Paleozoic Geology of the Canning Basin	7 days, ex-Broome	13th–19th July
Archean Crustal Evolution & Mineralization of the Northern Pilbara Craton	6 days, ex-Pt Hedland	14th–19th July
Eastern Goldfields Superterrane, Yilgarn Craton	4 days, ex-Kalgoorlie	16th–19th July
Geology of the Halls Creek Orogen	6 days, ex-Kununurra	25th–30th July
Kalgoorlie, Youanmi, & Narryer Terranes of Yilgarn Craton	6 days, ex-Kalgoorlie	25th–30th July
Kalbarri - A Ramble Through the Red-Beds & more	4 days	25th–28th July
Mines and Wines of south-west Western Australia	4 days	25th–28th July
Geology and Landforms of the Perth region: I	1 day	19th July 2008
Geology and Landforms of the Perth Region: II	1 day	25th July 2008
Meckering Fault Scarp	1 day	25th July 2008
Of Cores - WA in A Day	1 day	25th July 2008

See the website at: <http://www.iceaustralia.com/aesc2008/index.html> for complete information.

# History of the Geology Department Project

School of Earth Sciences **Note No. 2 - May 2008**

The University of Melbourne **By E. B. Joyce**

**Professor Herbert St. John Summers**  
**1876–1963**



*Professor Summers in the field (No date; perhaps at Bacchus Marsh, in the Lerderderg Gorge area?)*

1906	Caroline Kay Scholar in the Geology Department
1907	Assistant Demonstrator in the Geology Department
1909	Lecturer (later Senior Lecturer) and Demonstrator in the Geology Department
1923–1935	Member of Council
1921–1941	Associate Professor of Geology and Mineralogy, University of Melbourne
1931–1932	President of the Royal Society of Victoria
1939	Appointed sub-Dean of the Faculty of Science, University of Melbourne
1941–1944	Professor of Geology and Mineralogy, University of Melbourne

Professor Summers was a member of the Department of Geology at The University of Melbourne for many years, succeeding Skeats as Professor in 1941 before retiring in 1944. Recently the family of the late

Professor Summers donated some material to the archives of the School of Earth Sciences (which includes the former Department of Geology) at The University of Melbourne.

Paul Mason, who was a geologist with CRA Exploration, is a grandson of Dr Summers. He recalls as a child watching Professor Summers, in retirement, drawing maps with ink mapping pens on a small desk at home, for use in school geology and geography courses in State and Private schools. (Teaching maps drawn by Professor Summers were sometimes referred to as depicting “Summersland”). In his spare time Dr Summers was a good carpenter, and constructed some of the small wooden specimen boxes used in the exam sets sent out to schools.

Among the material in the archives are the following items:

- Eight printing plates of geological maps
- Eight printed maps, matching these plates (some are actual locations around Melbourne, such as the Yarra Valley; other appear to be imaginary landscapes.)
- Ten manilla folders with examination papers, maps, hand-drawn cross-sections and notes, and details of Technical Schools Annual Examinations in Geology in the 1950s and 1960s.
- 27 pages of handwritten notes in a small ring binder on a public lecture on aspects of geology, including details of slides used. The notes begin “The subject set down for

tonight..." (no date).

- Copy of typescript 'Biographical essay' by Bronwyn Lee, with handwritten title "HISTORY AND OBITUARY".
- Copies of reprints of Summers' article 'The Teachers of Geology in the Australian Universities'.
- Set of ten pamphlets of lectures (complete set was eleven pamphlets?) on "REALITIES OF RECONSTRUCTION" printed by the University Extension Board, 1943.
- Autographed copy of 'Addresses 1939-1940' by Sir John Medley, Vice-Chancellor of The University of Melbourne, 1938-1951, published by Melbourne University Press.

A complete list will be placed on the web (see URL below).

After his retirement in 1944, Professor Summers continued to be active within the University, taking part in the University's post-war reconstruction, including the establishment of the Mildura campus of the University. He also set and assessed Technical Examinations in geology across the state, including in many country towns. He finally retired from the University in 1950, when he was 74 years old.

### References

Biographical essay by Bronwyn Lee; 10 pp. + appendices and illustrations; 18 July 1994.

Summers, H. S., 'The Teachers of Geology in the Australian Universities', *Journal and Proceedings of The Royal Society of New South Wales*, vol. lxxx, 1947, pp. 122-146.

### Note

The History of the geology department Project is being carried out by Bernie Joyce and Doug McCann. See:

<http://www.earthsci.unimelb.edu.au/history/>



*Professor Summers at his desk. Past staff and students may recognise the typical desk and office chair from 60 or more years ago. (Where and when was the photograph taken? The windows are not those in the 1927 building, now known as "Old Geology." Are they from the earlier 1907 Geology, Mining and Metallurgy building, which was next to the Engineering building?)*

### CSIRO Student Research Scheme needs your help!

The Student Research Scheme is a national program that offers selected senior secondary science students, the opportunity to complete a brief research project under the supervision of practising researchers in laboratories, offices, and field study areas. Here is your chance to capture the hearts and minds of tomorrow's scientists! If you have a project and are willing to participate in the program, please see the website and get involved!

<http://www.csiro.au/csiro/channel/pch9r.html>

## FORTHCOMING TALKS

to be presented at  
GSA (Victoria Division) meetings

Note: unless otherwise indicated, all 2008 talks will be held in the  
Fritz Loewe Theatre, Earth Sciences Building, University of Melbourne.

29 May	<b>Prof. Stan White</b>	The Highland Controversy of the late 19th Century: Relevance to modern structural geology
19 June	<b>2008 Howitt Lecture</b>	Lies, damn lies and climate change sceptics: What has caused recent global warming? Lecture to be held at the Royal Society of Victoria, Victoria Parade at 6:30 p.m.
31 July	<b>Joane McKnight, Mirjam Bröhl, and Bernie Joyce</b>	Australia's first UNESCO Global Geopark: The Kanawinka Geopark on the volcanic plains from Colac to Mt Gambier
28 August	TBA	
25 September	<b>Selwyn Symposium</b>	<b>9 a.m. – 5 p.m. at the University of Melbourne</b> Registration details forthcoming.
	<b>Selwyn Lecture</b>	<b>6:30 p.m. Free public lecture</b> Copeland Theatre, University of Melbourne
	Prof. Paul F. Hoffman	The greenhouse effect, sea-level change and continental drift: discoveries impelled by the glacial theory of Pleistocene ice ages
30 October	TBA	

Visit the GSAV on [www.vic.gsa.org.au](http://www.vic.gsa.org.au) or the GSA on [www.gsa.org.au](http://www.gsa.org.au)  
• Renewing your GSA membership is easy - it can now be done on-line.

The University of Melbourne Earth Science Postgraduate Student Society (ESPG) presents

### Earth Science Seminars

Fridays at 4:00 p.m.

Fritz Loewe Lecture Theatre, Earth Science Building (cnr Swanston and Elgin Streets)

Followed at 4.45 p.m. by drinks and refreshments in the tea-room, 4th floor. \$2 per person.

Further information: [http://www.earthsci.unimelb.edu.au/php/seminars\\_upcoming.php](http://www.earthsci.unimelb.edu.au/php/seminars_upcoming.php)

### GSA (VICTORIA DIVISION) COMMITTEE

Please address all correspondence to the GSA Victoria Division  
GPO Box 2355V, Melbourne, Vic., 3001  
Internet address: [www.vic.gsa.org.au](http://www.vic.gsa.org.au)

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Treasurer:	Stephen Gallagher	8344 6513 (BH)

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Alison Fairmaid	8344 7672 (BH)
Chung Leong Li	8344 9980 (BH)
David Moore	9858 4513 (BH)
Kyle Rebryna	9905 5768 (BH)
Noel Schleiger	9435 8408
Lindsay Thomas	0427 354 828
Fons VandenBerg	9658 4519 (BH)
Susan White	9328 4154

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#### CONTACTS

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Bicentennial Gold:	Gerhard Krummei	9820 2595
Education:	Noel Schleiger	9435 8408
Heritage:	Susan White	9328 4154
Membership:	Peter Pritchard	9431 9582
Newsletter:	Kyle Rebryna	9905 5768
Program:	position vacant	
Publications:	position vacant	
Promotions	position vacant	
Webmaster:	Lindsay Thomas	0427 354 828

#### OTHER CONTACTS

Geology of Victoria:	Bill Birch	9270 5049 (BH)
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#### Newsletter deadline

First Friday of the month except Dec & Jan  
[kyle.rebryna@sci.monash.edu.au](mailto:kyle.rebryna@sci.monash.edu.au)

GSA Inc - for membership and subscription enquiries or change of address, please contact Ms Sue Fletcher  
Business Office: Geological Society of Australia, Suite 706, 301 George Street, Sydney NSW 2000  
Email: [sue@gsa.org.au](mailto:sue@gsa.org.au) Tel: (02) 9290 2194 Fax: (02) 9290 2198

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# THE VICTORIAN GEOLOGIST



June 2008

THE GEOLOGICAL SOCIETY OF AUSTRALIA  
Victoria Division

Joint Meeting with the Royal Society of Victoria

Thursday 19th June at 8:00 p.m.

## **Annual A. W. Howitt Lecture**

**Lies, Damn Lies and Climate Change Sceptics: What has caused recent global warming?**

Professor David J Karoly  
Professor, Federation Fellow  
School of Earth Sciences, University of Melbourne

**The Royal Society of Victoria, 9 Victoria Street, Melbourne**

Cost \$15 (Includes light refreshments following the lecture)

**Bookings are essential** – see booking slip on insert. Telephone bookings encouraged.

**RSVP 16th June**

If unable to book by telephone, RSVP to [kyle.rebryna@sci.monash.edu.au](mailto:kyle.rebryna@sci.monash.edu.au) and bring payment on night.

In 2007, the Intergovernmental Panel on Climate Change (IPCC) released its Fourth Assessment Report, providing a comprehensive global assessment of climate change. Two of the main conclusions are that warming of the climate system is unequivocal over the last 100 years, and that most of the increase in global average temperatures since the mid-20th century is very likely due to the increase in anthropogenic greenhouse gases. However, there is still a substantial amount of discussion and misinformation spread in opinion pieces in the media questioning the role of human activity in recent global warming.

This talk will consider many of the arguments that have been used that seek to refute the role of increasing greenhouse gases in recent global warming. It will also briefly present some of the many lines of evidence that support the IPCC conclusions above.

## FORTHCOMING EVENTS...

# 2008 Selwyn Symposium

25th September

## Neoproterozoic extreme climates and the origin of early life

Climatically, the Neoproterozoic (~750-550 million years ago) is one of the most extraordinary periods of Earth history. During this time, the Earth was alternately subjected to the most severe glacial conditions ("snowball earth events") the planet has ever witnessed with ice present in equatorial latitudes, and then to similarly-widespread tropical greenhouse conditions. These extreme climates, together with the sudden and widespread appearance of soft-bodied metazoan organisms during the Ediacaran (~600-544 million years ago) make the Neoproterozoic one of the most important and enigmatic episodes in Earth history. This symposium brings together leading researchers to examine the causes and effects of these extreme climatic events and the evolution of early metazoan life.



2008 Selwyn Symposium organising committee:  
Assoc. Profs. Stephen Gallagher and Malcolm Wallace

### Detailed Program

- |             |  |
|-------------|--|
| 8:00–9:00   | Symposium registration   |
| 9:00–9:15   | Introduction: Stephen Gallagher & Malcolm Wallace  |
| 9:15–9:20   | Opening address: Peter Rathjen, Deputy Vice Chancellor (Research), Melbourne University                                    |
| 9:20–10:00  | <b>Plenary Address:</b> Malcolm Walter, Macquarie University<br>The murky history of the eucaryotes prior to the Ediacaran |
| 10:00–10:30 | Patricia Vickers Rich, Monash University<br>Salt, Oxygen, Gargantuan Mountains and the Rise of the Animalia                |
| 10:30–11:00 | Morning Tea  |

Chairs of session: Paul Hoffman & Wolfgang Preiss

- |             |  |
|-------------|--|
| 11:00–11:30 | Kath Grey, Geological Survey of Western Australia<br>Biostratigraphic correlation of Neoproterozoic glacial successions in Australia |
| 11:30–1:00  | Jim Gehling, South Australian Museum<br>Ediacarans on the Edge: Environmental Controls on Diversity of the Ediacara biota            |
| 12:00–12:30 | Malcolm Wallace & Estee Woon, Melbourne University<br>Giant Cryogenian reefs as a window into pre-Ediacaran life                     |
| 12:30–1:30  | Lunch  |

Chairs of session: Rick Squire & Malcolm Walter

- |           |   |
|-----------|---|
| 1:30–2:00 | Paul F. Hoffman, Harvard University<br>Evidence for large glacioeustatic changes associated with the 635 ma glaciation in Namibia |
| 2:00–2:30 | Wolfgang Preiss, PIRSA<br>The tectonic and palaeogeographic setting of Australia's Neoproterozoic rock record                     |
| 2:30–3:00 | Jon Giddings, Melbourne University<br>Evidence for ocean stagnation during the Cryogenian   |

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3:00–3:30 Clive Calver, Geological Survey of Tasmania

Tasmanian Neoproterozoic glacial deposits

3:30–4:00 Afternoon tea

Chairs of session: Clive Calver & Kath Grey

4:00–4:30 Galen Halverson, University of Adelaide

A Neoproterozoic Oxygenation Event

4:30–5:00 Rick Squire, Monash University

Supermountains, Hendrix and the O<sub>2</sub>-rich elixir for animal life

5:00–5:30 Forum & discussion chaired by Patricia Vickers-Rich & Paul Hoffman

5:30–6:30 Drinks & refreshments

6:30–6:45 **Selwyn Medal** presentation at the Copeland Theatre

6:45–8:00 **GSA(V) SELWYN LECTURE**

By **Prof. Paul F. Hoffman**, Harvard University

The greenhouse effect, sea-level change and continental drift: discoveries impelled by the glacial theory of Pleistocene ice ages

8:15 **Selwyn Dinner** at University House, Melbourne University

The extended abstracts of these proceedings will be published as part of the Geological Society of Australia's abstract series.

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## 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 Kyle Rebryna at [kyle.rebryna@sci.monash.edu.au](mailto:kyle.rebryna@sci.monash.edu.au).

**We'd be glad to hear from you**

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### ATTENTION ALL UWA GEOLOGY ALUMNI

You are invited to attend a lunch function for all UWA Geology Alumni to be held in Melbourne on Sat 28th June. This event will provide an opportunity for the Chair of the UWA Geoscience Foundation, Dr Jim Ross, to update Alumni on the exceptional progress of the Foundation in helping to strengthen Geoscience at UWA. More than \$3m in new funds have been committed over the last 4 years and the outlook is very positive.

For further information contact:

Bill Burdett

9592 9094 mob 0438087644; or

Bob Appleyard

9819 5636 mob 0417342064

**Australian Earth Sciences Convention 2008**  
**Perth, 20–24 July 2008**

**Themes:**

- Geoscience in the Service of Society
- Resources: Foundation for our Future
- Evolution of Life and the Solar System
- Earth's Environments: Past, Present and Future
- Dynamic Earth: From Crust to Core

**General registration deadline: 3 July 2008**



*Field Trips – Bookings close 18 June. See previous issues or AESC website (below) for locations.*  
*Workshops – Running throughout the Convention. Bookings open until 4 July.*

- Drafting public reports that conform to the JORC Code
- Crustal history and tectonics of the Northern Tasman Orogenic Zone
- The Precambrian timescale: issues and possible changes
- Core logging – observing, measuring and interpreting structural elements
- EarthCaching: combining geoscience, learning and outdoor fun with GPS and the Internet
- Mineral prospectivity analysis and quantitative resource assessments
- Smart exploration with pre-competitive hyperspectral mineral mapping data from Queensland

See the website at: <http://www.iceaustralia.com/aesc2008/index.html> for complete information.

## Exploration Geologists

### Looking for a new, exciting and fun challenge?

AngloGold Ashanti is a leading global gold producer with 21 operations on four continents, a substantial project pipeline and an extensive, worldwide exploration program. The Australian region conducts its operations predominantly in Western Australia through the Perth Corporate Office, Sunrise Dam Gold Mine, Boddington Gold Mine (JV with Newmont Group) and the Tropicana Project (JV with Independence NL).

AngloGold Ashanti Australia has several vacancies for Exploration Geologists ranging from graduate level to senior positions. Applicants must hold a relevant Geoscience qualification along with well developed skills in relevant software packages, data management and quality control techniques.

#### **TROPICANA**

Tropicana, a new multi-million ounce gold orebody discovery, lies in a previously unexplored gold district. The Tropicana project is currently undergoing a pre-feasibility study while extensive regional exploration continues. This new and exciting project aims to be a leader in environmental management. Geologists work a flexible campaign style roster with field and Perth based activities.

We offer our employees opportunities for development, career advancement and are rewarded with competitive remuneration and a range of benefits with salary packaging options. Safety is our number one value and we promote trust, teamwork and accountability.

If you are looking to join a great team and a growing organisation, log on to:

[www.careers.anglogoldashanti.com.au](http://www.careers.anglogoldashanti.com.au)

#### **SUNRISE DAM**

Sunrise Dam Gold Mine is one of WA's premier gold mines. In 2007, the operation produced 600,000 ounces of gold from open pit and underground mining. Employees work an attractive 8/6 FIFO roster, and are accommodated in first class site facilities. Sunrise Dam offers the opportunity to gain leading edge experience in gold mining and exploration.



**ANGLOGOLD ASHANTI**

## FORTHCOMING TALKS

to be presented at  
GSA (Victoria Division) meetings

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31 July	<b>Joane McKnight, Mirjam Bröhl, and Bernie Joyce</b>	Australia's first UNESCO Global Geopark: The Kanawinka Geopark on the volcanic plains from Colac to Mt Gambier
28 August	TBA	
25 September	<b>Selwyn Symposium</b>	<b>9 a.m. – 5 p.m. at the University of Melbourne</b> Registration details forthcoming.
	<b>Selwyn Lecture</b>	<b>6:30 p.m. Free public lecture</b> Copeland Theatre, University of Melbourne The greenhouse effect, sea-level change and continental drift: discoveries impelled by the glacial theory of Pleistocene ice ages
	Prof. Paul F. Hoffman	
30 October	TBA	
27 November	TBA	

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• Renewing your GSA membership is easy - it can now be done on-line. •

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Fridays at 4:00 p.m.

Fritz Loewe Lecture Theatre, Earth Science Building (cnr Swanston and Elgin Streets)

Followed at 4.45 p.m. by drinks and refreshments in the tea-room, 4th floor. \$2 per person.

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Internet address: [www.vic.gsa.org.au](http://www.vic.gsa.org.au)

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Secretary:	Adele Seymon	9658 4523
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Chung Leong Li	8344 9980 (BH)
David Moore	9858 4513 (BH)
Kyle Rebryna	9905 5768 (BH)
Noel Schleiger	9435 8408
Lindsay Thomas	0427 354 828
Fons VandenBerg	9658 4519 (BH)
Susan White	9328 4154

#### SUBCOMMITTEE

#### CONTACTS

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Bicentennial Gold:	Gerhard Krummei	9820 2595
Education:	Noel Schleiger	9435 8408
Heritage:	Susan White	9328 4154
Membership:	Peter Pritchard	9431 9582
Newsletter:	Kyle Rebryna	9905 5768
Program:	position vacant	
Publications:	position vacant	
Promotions	position vacant	
Webmaster:	Lindsay Thomas	0427 354 828

#### OTHER CONTACTS

Geology of Victoria:	Bill Birch	9270 5049 (BH)
----------------------	------------	----------------

#### Newsletter deadline

First Friday of the month except Dec & Jan  
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Founded 1854

**Patron:**

*The Governor of Victoria*  
Prof. David de Kretser AC

**President**

Prof. Graham D. Burrows AO KCSJ MD DSc

## JOINT MEETING OF THE ROYAL SOCIETY OF VICTORIA and GEOLOGICAL SOCIETY OF VICTORIA

### ANNUAL A. W. HOWITT LECTURE

- SPEAKER:** **PROFESSOR DAVID J. KAROLY**  
Professor of Meteorology and Federation Fellow, School of Earth Sciences,  
The University of Melbourne
- TOPIC:** **LIES, DAMN LIES AND CLIMATE CHANGE SCEPTICS: WHAT HAS CAUSED  
RECENT GLOBAL WARMING?**
- VENUE:** **The Royal Society of Victoria, 9 Victoria Street, Melbourne**
- DATE:** **THURSDAY, 19<sup>th</sup> JUNE, 2008 at 8.00 p.m.**
- COST:** **\$15.00** per person includes light refreshments served after the lecture  
**Bookings are essential** - see booking slip below  
**RSVP: Monday 16<sup>th</sup> June**

The RSV initiated this annual lecture to mark the vital role that the geological sciences have played in our development as a society and as a community: this address is the fifth in the series.

In 2007, the Intergovernmental Panel on Climate Change (IPCC) released its Fourth Assessment Report, providing a comprehensive global assessment of climate change. Two of the main conclusions are that warming of the climate system is unequivocal over the last 100 years, and that most of the increase in global average temperatures since the mid-20<sup>th</sup> century is very likely due to the increase in anthropogenic greenhouse gases. However, there is still a substantial amount of discussion and misinformation spread in opinion pieces in the media, questioning the role of human activity in recent global warming.

The talk will consider many of the arguments that have been used that seek to refute the role of increasing greenhouse gases in recent global warming. It will also briefly present some of the many lines of evidence that support the IPCC conclusions above.

-----✂-----  
The Royal Society of Victoria, 9 Victoria Street, Melbourne Vic. 3000 Tel: (03) 9663 5259  
**RSVP 10<sup>th</sup> JUNE BOOKING SLIP FOR HOWITT LECTURE Thursday, 19<sup>th</sup> June, 2008**  
I/we wish to attend and enclose a cheque for \$..... (\$15.00 per person). Payment by credit card  
also welcome.)

MasterCard/VisaCard No. ....Expiry ...../...../.....

Name on card: .....Signature: .....

Name: .....Tel: .....

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# THE VICTORIAN GEOLOGIST



July 2008

THE GEOLOGICAL SOCIETY OF AUSTRALIA  
Victoria Division

## Next Meeting

Thursday 31st July at 6:15 p.m.

### **The Kanawinka Geopark on the volcanic plains from Colac to Mt Gambier**

**A special two-part presentation  
on Australia's first UNESCO Global Geopark  
as part of the International Year of Planet Earth**

Associate Professor Bernie Joyce  
School of Earth Sciences, University of Melbourne  
and

Joane McKnight  
Chair, Kanawinka Geopark Board

"Geoparks" is a new initiative supported by UNESCO which aims to identify nationally important geological sites and lead to their use for local economic development, employment and geotourism.

A UNESCO Geopark will:

- encompass one or more sites of scientific importance for geology as well as archaeology, ecology or cultural value;
- have a management plan which fosters sustainable geotourism and socio-economic development;
- provide a means for teaching geoscientific disciplines and broader environmental issues;
- be part of a global network that demonstrates best practice in earth heritage conservation and its integration into sustainable development strategies.

The important aspects of the development of an Australian Geopark Network are the links between the geology and the people, their stories, culture, art and history that build into a sustainable source of geotourism, bring jobs to rural and indigenous people and in turn assist to educate all to the importance of protecting sites of importance and promoting geoheritage.

The Volcanic Plains of SE Australia provide an ideal area for an Australian Geopark, combining natural and cultural features into a tourist attraction, which can both educate the public, and provide assistance with promoting geological heritage management.

Two talks will be presented covering the significant aspects of the establishment of the Kanawinka Global Geopark:

## The Volcanic Plains: geology, geomorphology and heritage

Bernie Joyce

The University of Melbourne

After four years of work by local people, UNESCO approved the proposed Kanawinka Global Geopark in Western Victoria and SE South Australia on Monday the 23rd June 2008 at a meeting in Germany. It is Australia's first Geopark, and one of only a few in the Southern Hemisphere.

The geology of the Geopark, which stretches from near Colac in Western Victoria, to Mt Gambier and beyond in South Australia (see picture at right), is based on scientific study going back over 150 years, and the area is one of the best studied of the world's young basaltic lava fields. Equally important to the success of the application have been the studies of local history, plants and animals, and indigenous features, as well as cultural aspects including art and architecture.



*Map showing the area of Victoria and South Australia encompassed by the newly established Kanawinka Geopark*

The young volcanic areas of the Western Plains of Victoria and adjacent South Australia have more than one hundred small scoria cones, maars and lava shields, built up by Strombolian/Hawaiian eruptions over the past 5 million years. Fluid basalt flows have spread laterally around vents, and often for many tens of kilometres down river valleys. These plains are a part of a larger region known as the Newer Volcanic Province of SE Australia, which includes a contrasting Uplands volcanic region to the immediate north of the plains, in Central Victoria.

In April 2003 Australian UNESCO representative Dr Sue Turner contacted me about her work towards future Geoparks in Australia. We discussed how we might collaborate on a listing of possible Geoparks for Australia. In June 2004 I was able to make the suggestion to Sue Turner that the young volcanoes of the Newer Volcanic Province, and especially the Western Plains of Victoria, might make a good candidate for a future Geopark in Australia, a suggestion then taken up by Joane McKnight and the Volcanoes Discovery Trail Committee.

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## **The Kanawinka Geopark and its place in the Asia-Pacific Global Geopark Network**

Joane McKnight

Chair of the Kanawinka Geopark Board

The Australian Geopark Network now includes one recognized National Geopark, and Aspiring National Geoparks in New South Wales, Western Australia and Victoria. This growing network allows for exchange of ideas and networking in a country of immense area and small population and very small funding available for initiatives such as Geoparks. An Australian Geopark Network Committee held its first meeting in June 2007.

The Kanawinka Geopark, Australia's First National Geopark recognized in September 2006, applied for UNESCO Global status in December 2006 and now forms the keystone for further development of a National Network of Geoparks. The Kanawinka Geopark was assessed by UNESCO in June 2007, and approved in June 2008 as Global Geopark Number 57 in Osnabruck, Germany, during the European Geoparks Network meeting.

The Accepted and Aspiring Geoparks provide an expanded range of opportunities for education and interpretation that are consistent with the enjoyment and protection of the natural environment, especially with an emphasis on earth sciences.

The important aspects of Australian National Geoparks are the links between the geology and the people, their stories, culture and history that build into a sustainable source of geotourism, bring jobs to rural and indigenous people and in turn help protect sites of significance and promote geoheritage.

The establishment of the Kanawinka Geopark is a timely reminder that 2008 is the International Year of Planet Earth.



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### **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 Kyle Rebryna at [kyle.rebryna@sci.monash.edu.au](mailto:kyle.rebryna@sci.monash.edu.au).

**We'd be glad to hear from you**

## FORTHCOMING EVENTS...

### **Are you concerned about the lack of geology being taught in schools?**

Then help us promote geology at:

The Geography Teachers' Association of Victoria Inc.  
42nd Annual Conference  
Sunday 10th – Tuesday 12th August 2008  
Camberwell High School

#### **CALL FOR VOLUNTEERS**

The GTAV conference is aimed at assisting teachers in exploring many key issues and topics and the theme of this year's conference is Planet Earth. The Victorian Division of the GSA will have a table displaying rock specimens and fact sheets, with the aim of promoting geology (and the GSAV!) and making it feature more prominently in schools. We will be talking with geography teachers from all over Australia and getting them excited about rocks!

Delegates will be at the venue on Sunday and Monday (Tuesday is a field trip day).

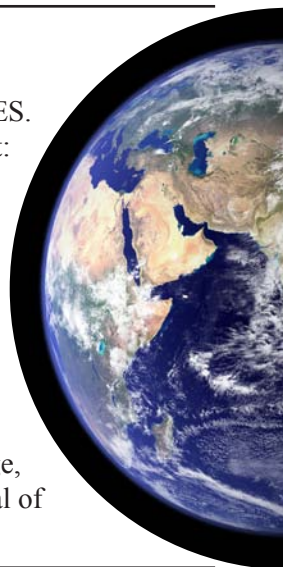
If you would like to lend a hand at the table on either Sunday or Monday (or both), or would like more information, please contact Noel Schleiger on (03) 9435 8408 or email [secretary@vic.gsa.org.au](mailto:secretary@vic.gsa.org.au)

See also GTAV website: <http://www.gtav.asn.au/index.htm>

### **Google (un)Earths Meteorite Crater**

It is not often that a paper is advertised in the media before it hits the pages of AJES. However, the Sydney Morning Herald of 25 March had a headline: 'Sudden impact: Google unearths rare meteorite crater' reporting a newly discovered, morphologically well-preserved crater with a mean diameter of 260 m in the Ophthalmia Range, Western Australia. What really made the headlines was that the discovery was made by Arthur Hickman while using GoogleEarth to look for channel iron deposits! The crater is located in hilly terrain ~36 km north of Newman, and is situated in the Palaeoproterozoic Woongarra Rhyolite and the overlying Boolgeeda Iron Formation. Check out the full article in AJES:

A Y Glikson, A H Hickman and J Vickers, 2008, 'Hickman Crater, Ophthalmia Range, Western Australia: Evidence supporting a meteorite impact origin'. Australian Journal of Earth Sciences, Vol. 55, p8.



### **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.

**Deadline for September issue is 31 July**

Please send your news to: [tag@gsa.org.au](mailto:tag@gsa.org.au)



## FORTHCOMING TALKS

to be presented at  
GSA (Victoria Division) meetings

Note: unless otherwise indicated, all 2008 talks will be held in the  
Fritz Loewe Theatre, Earth Sciences Building, University of Melbourne.

31 July	<b>Bernie Joyce and Joane McKnight</b>	Australia's first UNESCO Global Geopark: The Kanawinka Geopark on the volcanic plains from Colac to Mt Gambier
28 August	TBA	
25 September	<b>Selwyn Symposium</b>	<b>9 a.m. – 5 p.m. at the University of Melbourne</b> Registration details forthcoming.
	<b>Selwyn Lecture</b>  Prof. Paul F. Hoffman	<b>6:30 p.m. Free public lecture</b> Copeland Theatre, University of Melbourne The greenhouse effect, sea-level change and continental drift: discoveries impelled by the glacial theory of Pleistocene ice ages
30 October	TBA	
27 November	TBA	

Visit the GSAV on [www.vic.gsa.org.au](http://www.vic.gsa.org.au) or the GSA on [www.gsa.org.au](http://www.gsa.org.au)  
• Renewing your GSA membership is easy - it can now be done on-line. •

The University of Melbourne Earth Science Postgraduate Student Society (ESPG) presents

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Fridays at 4:00 p.m.

Fritz Loewe Lecture Theatre, Earth Science Building (cnr Swanston and Elgin Streets)

Followed at 4.45 p.m. by drinks and refreshments in the tea-room, 4th floor. \$2 per person.

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Internet address: [www.vic.gsa.org.au](http://www.vic.gsa.org.au)

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Publications:	position vacant	
Promotions	position vacant	
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#### OTHER CONTACTS

Geology of Victoria:	Bill Birch	9270 5049 (BH)
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The Geological Society of Australia Victoria Division  
invites you to the

## SELWYN SYMPOSIUM 2008

Thursday 25 September 2008

the Fritz-Loewe Theatre, McCoy Building, Earth Sciences  
at the University of Melbourne

[www.vic.gsa.org.au](http://www.vic.gsa.org.au)

### Neoproterozoic extreme climates and the origin of early life

Climatically, the Neoproterozoic (~750-550 million years ago) was one the most extraordinary periods in the Earth's history. This symposium brings together leading researchers to examine the causes and effects of extreme climatic events and the evolution of early metazoan life.

#### PROGRAM

**Selwyn Symposium @ the Fritz-Loewe Theatre** (8-9am registration; 9am-5pm symposium)

**Presenters:** Prof. Malcolm Walter, Macquarie Univ (Plenary address), Dr. Jim Gehling, South Australian Museum, Assoc. Prof Malcolm Wallace, Melbourne University, Estee Woon, Melbourne University, Prof. Patricia Vickers Rich, Monash University, Jon Giddings, Melbourne University, Assoc. Prof. Rick Squire, Monash University, Dr. Galen Halverson, University of Adelaide, Dr. Kath Grey, Geological Survey of WA, Dr. Wolfgang Preiss, PIRSA, Prof. Paul Hoffman, Harvard University, Dr. Clive Calver, Geological Survey of Tasmania.

**Selwyn Lecture @ the Copland Theatre 6.30pm by Professor Paul F. Hoffman, Harvard University**

*The greenhouse effect, sea-level change and continental drift: discoveries impelled by the glacial theory of Pleistocene ice ages*

Symposium Conveners: Assoc. Prof Stephen Gallagher & Assoc. Prof. Malcolm Wallace, University of Melbourne

Email: [sjgall@unimelb.edu.au](mailto:sjgall@unimelb.edu.au) (RSVP)

**Cost:** Full delegate @ \$120.00 including GST Retired delegate @ \$50.00 including GST

Student delegate @ \$20.00 including GST (Cost includes: Lunch, morning/afternoon tea, abstract volume)



*The Selwyn Symposium of the Geological Society of Australia (Victoria Division)*

*c/- Assoc Prof Stephen Gallagher School of Earth Sciences, University of Melbourne, Victoria 3010.*

**BOOKING FORM for the Selwyn Symposium on Thursday 25 September 2008:** I/we wish to attend & enclose a cheque for \$..... payable to The Geological Society of Australia (Victoria Division). Credit Card payment below if preferred. Cost: **\$120** for full delegates; **\$50** retirees; **\$20** for full time students. (all costs GST inclusive)

VisaCard / Mastercard No. \_\_\_\_\_

Name on card: \_\_\_\_\_

Expiry Date: \_\_\_\_ / \_\_\_\_

Signature: \_\_\_\_\_

Name & affiliation: \_\_\_\_\_ email: \_\_\_\_\_ Tel: \_\_\_\_\_

**Please select the event you wish to attend:**

I/we will be attending the Selwyn Symposium [ ]

I/we will be attending the FREE Selwyn Lecture [ ] (RSVP: [sjgall@unimelb.edu.au](mailto:sjgall@unimelb.edu.au) to guarantee a seat)

I/we wish to go to the Selwyn Dinner @ 8.15pm [ ] for **\$53** (GST inclusive); 3 course dinner at University House, places limited, booking essential.



The Geological Society of Australia Victoria Division

## SELWYN SYMPOSIUM 2008

Thursday 25 September 2008

Fritz-Loewe Theatre, McCoy Building, Earth Sciences

University of Melbourne

[www.vic.gsa.org.au](http://www.vic.gsa.org.au)

### Neoproterozoic extreme climates and the origin of early life

#### DETAILED PROGRAM

<b>8.00-9.00</b>	<b>Symposium registration</b>	
9.00-9.15	<b>Introduction:</b> Assoc Prof Stephen Gallagher & Assoc Prof Malcolm Wallace	
9.15-9.20	<b>Opening address:</b> Prof. Peter Rathjen Deputy Vice Chancellor (Research) Melbourne University	
9.20-10.00	<b>Plenary Address:</b> Prof Malcolm Walter Macquarie University	The murky history of the eucaryotes prior to the Ediacaran
10.00-10.30	Patricia Vickers Rich, Monash University	Salt, Oxygen, Gargantuan Mountains and the Rise of the Animalia
<b>10.30-11.00</b>	<b>Morning Tea</b>	
	Chairs of session: Paul Hoffman & Wolfgang Preiss	
11.00-11.30	Kath Grey, Geological Survey of WA	Biostratigraphic correlation of Neoproterozoic glacial successions in Australia
11.30-12.00	Jim Gehling, South Australian Museum	South Australian Museum "Ediacarans on the Edge: Environmental Controls on Diversity of the Ediacara biota
12.00-12.30	Malcolm Wallace & Estee Woon, Melbourne University	Giant Cryogenian reefs as a window into pre-Ediacaran life
<b>12.30-1.30</b>	<b>Lunch</b>	
	Chairs of session: Rick Squire & Malcolm Walter	
1.30-2.00	Paul F. Hoffman Harvard University	Evidence for large glacioeustatic changes associated with the 635-Ma glaciation in Namibia
2.00-2.30	Wolfgang Preiss, PIRSA	The tectonic and palaeogeographic setting of Australia's Neoproterozoic rock record
2.30-3.00	Jon Giddings, Melbourne University	Evidence for ocean stagnation during the Cryogenian
3.00-3.30	Clive Calver, Geological Survey of Tasmania	Tasmanian Neoproterozoic glacial deposits
<b>3.30-4.00</b>	<b>Afternoon tea</b>	
	Chairs of session: Clive Calver & Kath Grey	
4.00-4.30	Galen Halverson, University of Adelaide	A Neoproterozoic Oxygenation Event
4.30-5.00	Rick Squire, Monash University	Supermountains, Hendrix and the O <sub>2</sub> -rich elixir for animal life
5.00-5.30	<b>Forum &amp; discussion chaired by</b> Patricia Vickers-Rich & Paul Hoffman	
<b>5.30-6.30</b>	Drinks & refreshments	
<b>6.30-6.45</b>	<b>Selwyn Medal</b> presentation at the Copeland Theatre to	
<b>6.45-8.00</b>	<b>GSAVIC SELWYN LECTURE</b> <b>By Prof Paul F. Hoffman</b> Harvard University	The greenhouse effect, sea-level change and continental drift: discoveries impelled by the glacial theory of Pleistocene ice ages
8.15-	Selwyn Dinner	At University House, Melbourne University.

**Symposium Summary:** Climatically, the Neoproterozoic (~750-550 million years ago) is one the most extraordinary periods of Earth history. During this time, the Earth was alternately subjected to the most severe glacial conditions ("snowball earth events") the planet has ever witnessed (with ice present in equatorial latitudes), and then to similarly-widespread tropical greenhouse conditions. These extreme climates, together with the sudden and widespread appearance of soft-bodied metazoan organisms during the Ediacaran (~600-544 million years ago) make the Neoproterozoic one of the most important and enigmatic episodes in Earth history. This symposium brings together leading researchers to examine the causes and effects of these extreme climatic events and the evolution of early metazoan life.

# THE VICTORIAN GEOLOGIST



August 2008

THE GEOLOGICAL SOCIETY OF AUSTRALIA  
Victoria Division

**Next Meeting**  
Thursday 28th August at 6:15 p.m.

## **Tectonic evolution of western and central Victoria: new interpretations from the deep seismic transect.**

Ross Cayley  
Senior Geologist, Geoscience Victoria

**Fritz Loewe Theatre, Earth Sciences Building, University of Melbourne**

Preceded at 5.30 p.m. by drinks and nibbles in the tea-room, 4th floor, cost \$2.

The deep-seismic transect acquired in 2006 is a collaborative project between the predictive mineral discovery Cooperative Research Centre (pmd\*CRIC), Geoscience Australia, GeoScience Victoria, DIIRD and industry partners. Four overlapping transect lines extend east from near Stawell in western Victoria, past Bendigo to Violet Town in central Victoria, and north towards Cobram on the Murray River. Line length totals 395 km. It is the first major seismic survey to be conducted across the world-class Victorian orogenic gold province.

Previous deep-seismic reflection surveys in the region are short but gave a tantalising glimpse of the subsurface geometry of major structures such as the west-dipping Heathcote, and east-dipping Moyston faults. The current transect links the earlier surveys together, traversing the entire width of the Western Lachlan Fold Belt (the Stawell, Bendigo and Melbourne zones), and a small part of the Central Lachlan Fold Belt (the Tabberabbera Zone).

Processed data was geologically interpreted by a team including Geoscience Australia, GeoScience Victoria, the University of Melbourne and members of the pmd\*CRIC project. The final results—detailed cross-sections that represent a vertical slice through the full thickness of the earth's crust (nearly 40 km) across central Victoria—represent the consensus view.

*continued overleaf...*

The interpreted sections shed new light on the distribution and development of various rock types and faults in the earth's crust, some of which are considered to represent source rocks and fluid pathways for gold deposits in the central Victorian goldfields. Specifically, the seismic data has shed light on a few crucial questions that have been a source of debate for many years, questions such as:

1: Are Lachlan Fold Belt structures thin-skinned (as has long been interpreted), or thick-skinned?

Well, the answer is...both!

Many structures visible within the lower crust of the Melbourne Zone cannot be traced to surface. Instead they appear disconnected from the open folds known to occur in the upper crust here. This appears to be the 'thin-skinned' style of deformation (where structures at depth appear to have developed independently from structures in overlying rocks) that geologists had previously proposed for the region.

But interestingly, this 'thin-skinned' style of deformation does not appear to extend west into the older Bendigo and Stawell zones as previously interpreted. Instead, many of the structures mapped at surface can be traced in the seismic data, unbroken, to the deepest levels of the crust imaged—depths of nearly 40 km. Direct structural linkage between the upper and lower crust in the Bendigo Zone suggests a 'thick-skinned' style of deformation—where the whole crust was deformed together—when this area underwent crustal shortening and thickening in the Late Ordovician-Early Silurian. This is a really important advance on previous interpretations. It allows our understanding of the rocks and structures visible and directly measurable at surface to be projected down through the entire crust. This also has enormous implications for modelling mineralisation endowment of the region.

2: Can the data help discriminate between different tectonic models proposed for the region?

Yes! Big differences exist between the seismic character of the mid and lower crust of the Stawell and Bendigo zones to the west, and the Melbourne Zone farther east. The differences suggest a lower crustal substrate beneath the Melbourne Zone that is of different composition and with a different structural evolution to adjacent regions. Large lateral changes in lower crustal seismic character tend to support geological models for Victoria that advocate diversity in lower crustal composition as a way to explain structural and temporal variations in the upper crust—the Selwyn Block model is one such example. While regions like the Bendigo Zone comprise structurally thickened Palaeozoic oceanic rocks—Cambrian mafic volcanics exposed at surface in the Heathcote Fault Zone and at Stawell can be traced unbroken down into the intervening mid- and lower-crust—adjacent regions like the Melbourne Zone may be underlain by a completely different, possibly older, crystalline crust.

The new seismic data has forged a significant advance in our understanding of the structural evolution of the whole region. The 'thick-skinned' revelation allows for well-constrained attempts to 'undeform' the whole crust, restoring balanced cross-sections of the central Victorian goldfields region to possible undeformed configurations that existed prior to strong deformation events over 440 million years ago. This critical analytical step allows geologists to validate models of the geometry of the crust, including at the time of deformation when deep crustal gold sources and fluid pathways and the world-class gold deposits of the region were most-likely evolving.

Results of the seismic interpretation are being used to inform a regional scale 3D geological model of Victoria currently being built by GeoScience Victoria, and are being fed into new predictive mineralisation models for the region. This work is ongoing—watch this space!

## AWARDS

## 2008 Selwyn Medal Winner

### Associate Professor Malcolm Wallace

The Selwyn Medal is named in honour of Sir Alfred Selwyn, an eminent Victorian pioneering geologist and founder of the Geological Survey of Victoria in 1852. It is awarded to recognise significant ongoing or former contributions of high calibre to any field of Victorian geology. The Geological Society of Australia (Victoria Division) is pleased to announce that the winner of the Selwyn Medal for 2008 is Professor Malcolm Wallace from the University of Melbourne.



Associate Professor Wallace's research is primarily in the field of sedimentary geology, but he has also published on a wide variety of other topics including carbonate hosted ore deposits, giant meteorite impact events, active tectonics and petroleum geology, including a number of papers in the high-profile, high-impact journals *Nature* and *Geology*. His research on the young tectonic evolution of southeast Australia has resulted in a Stillwell Medal by the Geological Society of Australia as the best paper published in the *Journal of Earth Sciences* in 2005. Malcolm's research contributions in economic geology have had significant benefit for the minerals and petroleum industries. His applied research has focussed on two topics: lead-zinc deposits in carbonate rocks and seismic exploration as it relates to the petroleum industry. Malcolm's stratigraphic and sedimentological research has contributed fundamentally to the understanding of the evolution of the shelf regions of southeast Australia during the Cenozoic. He has supervised 13 PhD students to completion as well as 65 honours students, many of whom have worked on problems of Victorian Geology. He is currently supervising 5 PhD students, working on a wide variety of research problems including Neoproterozoic extreme climates.

This year the Selwyn Medal will be awarded at a presentation prior to the GSAV's 2008 Selwyn Memorial Lecture by Professor Paul Hoffman (Harvard) at 6:30pm in the Copland Theatre, 25th September 2008. The Selwyn Lecture follows the Selwyn Symposium in the Fritz Loewe Theatre at the School of Earth Sciences on "Neoproterozoic extreme climates and the origin of early life". Check <http://www.vic.gsa.org.au> for details.

## 2008 Frank Canavan Award

### Ashleigh Hood

The Frank Canavan Award was set up in 1996 by Mrs Canavan in honour of her late husband Frank, a well known Victorian geologist who was very active in promoting geological education and was a member of the Education Subcommittee of the Division. The Award is a cash sum for the purchase of geological textbooks, and is awarded to the most promising student who has finished second year geology at a Victorian university, as judged by the student's academic performance.

The Geological Society of Australia (Victoria Division) is pleased to announce that the winner of the Canavan Prize in 2008 is Ashleigh Hood from the University of Melbourne.

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## ANNOUNCEMENTS & FORTHCOMING EVENTS

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This year, the University of Melbourne is hosting the 2008 Victorian Universities' Earth & Environmental Sciences Conference. VUEESC is an annual conference providing honours and postgraduate students in the Earth & Environmental Sciences the opportunity to present their research to their peers, academics and industry. It is hosted by a different university each year, alternating between La Trobe University, Monash University and the University of Melbourne.

This year, the conference will be held on the 26th of September in the Fritz Loewe Theatre at the University of Melbourne. Students will be presenting 12 minute talks, with three talks to a session. Poster presentations will take place during the morning, lunch and afternoon tea breaks. Prizes will be awarded to the best oral and poster presentations on the day.

Our secretary, Adele Seymon, has kindly agreed to be a judge on the day. For more information and registration, see <http://www.earthsci.unimelb.edu.au/vueesc>.

All welcome!

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WELCOME TO OUR NEW MEMBER

Maurice Gubiani

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## Special thanks...

A month full of travelling editors meant that getting last month's newsletter out on time required an extra hand. The TVG editors would like to thank Peter Hollies at the University of Melbourne for his last minute stand in as mail-out coordinator.

Thanks Peter!

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## Kanawinka Global Geopark Website

Last month's launch of the Kanawinka Global Geopark is accompanied by a comprehensive website. Go to <http://www.kanwinkageopark.com> for more information.

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**FORTHCOMING TALKS**  
to be presented at  
**GSA (Victoria Division) meetings**

Note: unless otherwise indicated, all 2008 talks will be held in the  
Fritz Loewe Theatre, Earth Sciences Building, University of Melbourne.

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28 August	Ross Cayley	Tectonic evolution of western and central Victoria: new interpretations from the deep seismic transect.
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	Prof. Paul F. Hoffman	Copeland Theatre, University of Melbourne The greenhouse effect, sea-level change and continental drift: discoveries impelled by the glacial theory of Pleistocene ice ages
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Promotions	position vacant	
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Geology of Victoria:	Bill Birch	9270 5049 (BH)
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# THE VICTORIAN GEOLOGIST



September 2008

THE GEOLOGICAL SOCIETY OF AUSTRALIA  
Victoria Division

This month features:

## **The Selwyn Symposium**

Thursday 25th September

Registration commences at 8:00 a.m.  
Fritz Loewe Theatre, University of Melbourne

### **The Selwyn Lecture**

---

**The greenhouse effect, sea-level change and continental  
drift: discoveries impelled by the glacial theory of  
Pleistocene ice ages**

Professor Paul F. Hoffman  
Harvard University

6:30 p.m.  
Copland Theatre, University of Melbourne



# 2008 Selwyn Symposium

25th September

**Neoproterozoic extreme climates and the origin of early life**

## Detailed Program

- |   |   |
|---|---|
| 8:00–9:00   | Symposium registration  |
| 9:00–9:15   | Introduction: Stephen Gallagher & Malcolm Wallace   |
| 9:15–9:20   | Opening address: Peter Rathjen, Deputy Vice Chancellor (Research), Melbourne University   |
| 9:20–10:00  | <b>Plenary Address:</b> Malcolm Walter, Macquarie University<br>The murky history of the eucaryotes prior to the Ediacaran  |
| 10:00–10:30                                       | Patricia Vickers Rich, Monash University<br>Salt, Oxygen, Gargantuan Mountains and the Rise of the Animalia   |
| 10:30–11:00                                       | Morning Tea   |
| Chairs of session: Paul Hoffman & Wolfgang Preiss |   |
| 11:00–11:30                                       | Kath Grey, Geological Survey of Western Australia<br>Biostratigraphic correlation of Neoproterozoic glacial successions in Australia  |
| 11:30–1:00  | Jim Gehling, South Australian Museum<br>Ediacarans on the Edge: Environmental Controls on Diversity of the Ediacara biota   |
| 12:00–12:30                                       | Malcolm Wallace & Estee Woon, Melbourne University<br>Giant Cryogenian reefs as a window into pre-Ediacaran life  |
| 12:30–1:30  | Lunch   |
| Chairs of session: Rick Squire & Malcolm Walter   |   |
| 1:30–2:00   | Paul F. Hoffman, Harvard University<br>Evidence for large glacioeustatic changes associated with the 635 ma glaciation in Namibia   |
| 2:00–2:30   | Wolfgang Preiss, PIRSA<br>The tectonic and palaeogeographic setting of Australia's Neoproterozoic rock record   |
| 2:30–3:00   | Jon Giddings, Melbourne University<br>Evidence for ocean stagnation during the Cryogenian   |
| 3:00–3:30   | Clive Calver, Geological Survey of Tasmania<br>Tasmanian Neoproterozoic glacial deposits  |
| 3:30–4:00   | Afternoon tea   |
| Chairs of session: Clive Calver & Kath Grey       |   |
| 4:00–4:30   | Galen Halverson, University of Adelaide<br>A Neoproterozoic Oxygenation Event   |
| 4:30–5:00   | Rick Squire, Monash University<br>Supermountains, Hendrix and the O <sub>2</sub> -rich elixir for animal life   |
| 5:00–5:30   | Forum & discussion chaired by Patricia Vickers-Rich & Paul Hoffman  |
| 5:30–6:30   | Drinks & refreshments   |
| 6:30–6:45   | <b>Selwyn Medal</b> presentation at the Copeland Theatre  |
| 6:45–8:00   | <b>GSA(V) SELWYN LECTURE</b><br>By <b>Prof. Paul F. Hoffman</b> , Harvard University<br>The greenhouse effect, sea-level change and continental drift: discoveries impelled by the glacial theory of Pleistocene ice ages |
| 8:15  | <b>Selwyn Dinner</b> at University House, Melbourne University  |

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MONTHLY HIGHLIGHTS  
AND ANNOUNCEMENTS

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## GSAV at the 2008 GTAV Conference

### Noel Schleiger

The Society manned a table at the recent Geography Teachers Conference on Sunday August 6 and Monday August 7. This has become an annual activity for us. Thanks to the handouts provided by Stephen Gallagher, from Shona of Geoscience Australia and from the GSA Federal Division, we were able to offer teachers some helpful resources on earthquakes, tsunamis, and rocks as well as mining information on copper, iron and gold prepared by Greg McNamara (Education Officer). Accompanying me on Sunday were Sue White and Jill (Education) and Leon Costermans on Monday. I am grateful for the time and effort they spent in assisting.

The conference was well attended and we had lots of people to talk to between the time-tabled workshops. Meals were supplied and were very good, as were the morning and afternoon teas.

Our public relations with the Geography Teacher's Association of Victoria by supplying resource material to help their teaching of disasters and geomorphology has proved useful and it was much appreciated. I quote the Education Officer of GTAV Inc., Anne Dempster in her letter of 13th August: "Thank you again for supporting our conference with your wonderful resources".

## IUGS World Heritage Site Evaluators

### Peter Bobrowsky

Each year, as an Advisory Body to the UNESCO World Heritage Committee for natural heritage, IUCN (the International Union for Conservation of Nature) is required to evaluate new nominations for the UNESCO World Heritage List. IUCN's year-long evaluation process involves seeking comments from international experts on the global importance and integrity of the nominated sites, whether they are nominated for their geological, biological or scenic values.

In the evaluation of geological sites, IUCN works closely with the International Union of Geological Sciences (IUGS) in order to identify expert reviewers that are interested in providing a technical, desk top review of one of the new proposals nominated for geological values. Occasionally reviewers are asked to participate in actual on-site evaluations.

Volunteer IUGS reviewers are being sought to provide input into the IUCN evaluation process. These reviewers will contribute to the conservation of globally outstanding geological heritage as well as to IUCN's efforts to maintain the credibility of the World Heritage Convention by providing high quality technical advice to the World Heritage Committee.

All IUGS reviewers will be provided with electronic access to the nomination files, and guidelines and a checklist on how to review the nominations. All comments, whether short or long, general or detailed, are welcome and are critical to IUCN's evaluation process. All comments will be treated as confidential. This year IUGS reviewers have been asked to assess 6 candidate submissions.

*continued overleaf...*

If you would like to be added to the IUGS database of evaluators please contact the IUGS Secretary General (pbobrows@nrcan.gc.ca) immediately with full details regarding your contact coordinates (email, mailing address, telephone, etc.) and a clear indication of your particular area of geo-specialization.

## FORTHCOMING EVENTS & ARTICLES



This year, the University of Melbourne is hosting the 2008 Victorian Universities' Earth & Environmental Sciences Conference. VUEESC is an annual conference providing honours and postgraduate students in the Earth & Environmental Sciences the opportunity to present their research to their peers, academics and industry. It is hosted by a different university each year, alternating between La Trobe University, Monash University and the University of Melbourne.

This year, the conference will be held on the 26th of September in the Fritz Loewe Theatre at the University of Melbourne. Students will be presenting 12 minute talks, with three talks to a session. Poster presentations will take place during the morning, lunch and afternoon tea breaks. Prizes will be awarded to the best oral and poster presentations on the day.

GSAV Secretary Adele Seymon has kindly agreed to be a judge on the day. For more information and registration, see <http://www.earthsci.unimelb.edu.au/vueesc>.

All welcome!

## One World - OneGeology

OneGeology is an international initiative of the geological surveys of the world and a flagship project of the International Year of Planet Earth. Its aim is to provide dynamic geological map data of the world via the web. Check it out at:

<http://www.onegeology.org/>

## Aviation and geology collide in the Aleutians

Ash from the recent eruptions of Kasatochi Volcano in the western Aleutians drifted over the southeast Alaska panhandle and parts of western Canada forcing airlines to alter flight paths. Kasatochi is the third Aleutian volcano to erupt in recent months.

<http://www.reuters.com/article/domesticNews/idUSN1132219720080811>

WELCOME TO OUR NEW MEMBERS

Anthony Caughey  
Douglas Langton

**FORTHCOMING TALKS**  
to be presented at  
**GSA (Victoria Division) meetings**

Note: unless otherwise indicated, all 2008 talks will be held in the  
Fritz Loewe Theatre, Earth Sciences Building, University of Melbourne.

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28 August	Ross Cayley	Tectonic evolution of western and central Victoria: new interpretations from the deep seismic transect.
25 September	<b>Selwyn Symposium</b>	<b>9 a.m. – 5 p.m. at the University of Melbourne</b> See flyer for registration details.
	<b>Selwyn Lecture</b>	<b>6:30 p.m. Free public lecture</b>
	Prof. Paul F. Hoffman	Copeland Theatre, University of Melbourne The greenhouse effect, sea-level change and continental drift: discoveries impelled by the glacial theory of Pleistocene ice ages
30 October	Guy Holdgate	Has Port Phillip Bay dried up since 6000 yr BP? Seabed evidence, core dating and modelling.
27 November	TBA	

Visit the GSAV on [www.vic.gsa.org.au](http://www.vic.gsa.org.au) or the GSA on [www.gsa.org.au](http://www.gsa.org.au)  
• Renewing your GSA membership is easy - it can now be done on-line. •

The University of Melbourne Earth Science Postgraduate Student Society (ESPG) presents

**Earth Science Seminars**

Fridays at 4:00 p.m.

Fritz Loewe Lecture Theatre, Earth Science Building (cnr Swanston and Elgin Streets)

Followed at 4.45 p.m. by drinks and refreshments in the tea-room, 4th floor. \$2 per person.

Further information: [http://www.earthsci.unimelb.edu.au/php/seminars\\_upcoming.php](http://www.earthsci.unimelb.edu.au/php/seminars_upcoming.php)

### GSA (VICTORIA DIVISION) COMMITTEE

Please address all correspondence to the GSA Victoria Division  
GPO Box 2355V, Melbourne, Vic., 3001  
Internet address: [www.vic.gsa.org.au](http://www.vic.gsa.org.au)

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Vice-chair:	position vacant	
Secretary:	Adele Seymon	9658 4523
Treasurer:	Stephen Gallagher	8344 6513 (BH)

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Chung Leong Li	8344 9980 (BH)
David Moore	9858 4513 (BH)
Kyle Rebryna	9905 5768 (BH)
Noel Schleiger	9435 8408
Lindsay Thomas	0427 354 828
Susan White	9328 4154

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#### CONTACTS

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Bicentennial Gold:	Gerhard Krummei	9820 2595
Education:	Noel Schleiger	9435 8408
Heritage:	Susan White	9328 4154
Membership:	Peter Pritchard	9431 9582
Newsletter:	Kyle Rebryna	9905 5768
Program:	position vacant	
Publications:	position vacant	
Promotions	position vacant	
Webmaster:	Lindsay Thomas	0427 354 828

#### OTHER CONTACTS

Geology of Victoria:	Bill Birch	9270 5049 (BH)
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#### Newsletter deadline

First Friday of the month except Dec & Jan  
[kyle.rebryna@sci.monash.edu.au](mailto:kyle.rebryna@sci.monash.edu.au)

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# THE VICTORIAN GEOLOGIST



October 2008

THE GEOLOGICAL SOCIETY OF AUSTRALIA  
Victoria Division

**Next Meeting**  
Thursday 30th October at 6:15 p.m.

## **Has Port Phillip Bay dried up since 6000 yr BP? Seabed evidence, core dating and modelling.**

Guy Holdgate  
Research Fellow, University of Melbourne

**Fritz Loewe Theatre, Earth Sciences Building, University of Melbourne**  
Preceded at 5.30 p.m. by drinks and nibbles in the tea-room, 4th floor, cost \$2.

Spectacular imagery (as revealed by recent multibeam surveys) now exists of river channel meanders on the present seabed of Port Phillip Bay down to 22 m water depths. The channels comprise continuous seabed indentations 5 m deep x 100 m wide that meander their way south along the deepest points in the bay. Bay floor indentations were evident and mappable from 1970's GSV sub-bottom seismic profiles, but their plan view as meanders was not able to be imaged at the time. These indentations overlie and cut into older infilled Pleistocene channels that were considered to be cut by the Yarra and Werribee rivers during the last glacial low stand maximum 10000 yr BP. Seabed vibrocore data nearby appears to indicate these younger channels cut into shelly bay-floor muds that grade down within a meter or so into mostly non-marine mud facies. Two new vibrocore C14 shell dates 1 and 1.5 m below seabed have ages of 4400 and 6000 yr BP respectively. The channelling, which appears to be of river cut origin, implies Port Phillip Bay may have dried out after 6000-4400 yr BP during a time of known stabilized sea-levels at around present sea-level. The implication is 'did Port Phillip become isolated from the ocean near the end of the Holocene transgression because the present day tide-dominated entrance channels blocked with sand?' At some time during this isolation period (and presumably during a pronounced dry period), Port Phillip evaporation exceeded fresh water rain and river input. Therefore was this enough to dry up most of Port Phillip allowing the Yarra to meander south across a progressively dessicated surface? Currently, evaporation in the bay probably exceeds river input. The

*continued overleaf...*

results have wide implications on the Port Phillip Bay water balance, salinity, pre-European climatic events, what happened if the sand blockages at the bay entrance suddenly cleared, and Aboriginal occupation.

## MONTHLY HIGHLIGHTS AND FORTHCOMING EVENTS

# Report from the 2008 Selwyn Symposium

## Stephen Gallagher



The Geological Society of Australia Victoria Division (Associate Professor Stephen Gallagher, organiser) presented a highly successful Selwyn Symposium on “Neoproterozoic extreme climates and the origin of early metazoan life” at the School of Earth Sciences, the University of Melbourne on Thursday 25 September 2008. This symposium attracted a near capacity group of 112 delegates (many travelling from interstate TAS, WA, NSW and the ACT). The symposium was opened by Professor Peter Rathjen (Deputy Vice Chancellor of Research, the University of Melbourne) with an inspiring introduction. Professor Malcolm Walter

(University of NSW) followed with a superb plenary address on the early history of the eucaryotes. This set the scene for many invited speakers from universities and geological surveys around Australia to discuss stratigraphic, sedimentological and palaeontological evidence for extreme climate events from 750 to 550 million years ago. Evidence for changes from global icehouse (“Snowball Earth” events) to greenhouse conditions was presented and much discussion ensued about how this related to the origin of animal life and oxygen in the world’s oceans. The GSAV would like to thank all the invited speakers: Kath Grey, Geol. Survey of WA; Clive Calver Geol. Survey of Tasmania; Patricia Vickers-Rich & Rick Squire (Monash Univ.); Jim Gehling (Museum SA); Paul Hoffman (Harvard Univ.); Wolfgang Preiss (PIRSA); Jonathan Giddings, Malcolm Wallace and Estee Woon (Melb. Univ.); Galen Halverson (Univ. Adelaide) and Mark Fanning (ANU) for their excellent presentations.

The symposium was followed by the annual Selwyn Lecture and award ceremony at 6.30pm. This attracted 250 to 300 people to the Copland Theatre. The Selwyn Medal was awarded to Associate Professor Malcolm Wallace (the University of Melbourne) by Ingrid Campbell chairperson of the GSAV awards committee. Prof Paul Hoffman (Harvard University, right) followed with a superb Selwyn Memorial Lecture on “Historical Geology, the Pleistocene glacial controversy and the rise of modern Earth science”. This well received presentation gave a historical perspective on controversies in geology. The many questions that followed, showed that there is strong interest in this



subject in the geological and general community. The presenters and many others then relaxed at the Selwyn Dinner at University House.

To purchase copies of the Selwyn Symposium extended abstracts (\$25 each, with many colour figures) please contact Stephen Gallagher: [sjgall@unimelb.edu.au](mailto:sjgall@unimelb.edu.au).

The GSAV would also like to thank Patrick Daley (GSA publicist), who through several well timed media releases in the week of the symposium, helped promoted this event (and geology in general) internationally and nationally. Some of the outcomes of this brilliant promotional work can be found at the following:

ABC News:	<a href="http://www.abc.net.au/news/stories/2008/09/25/2373849.htm?section=australia">http://www.abc.net.au/news/stories/2008/09/25/2373849.htm?section=australia</a>
COSMOS Magazine:	<a href="http://www.cosmosmagazine.com/news/2215/change-ancient-seas-allowed-life-spread">http://www.cosmosmagazine.com/news/2215/change-ancient-seas-allowed-life-spread</a>
The University of Melbourne:	<a href="http://www.earthsci.unimelb.edu.au/php/news_latest.php?news_id=120">http://www.earthsci.unimelb.edu.au/php/news_latest.php?news_id=120</a>

Links to photographs of the event can be found here:

<http://www.earthsci.unimelb.edu.au/basinstudies/SelwynSymposium2008.htm>

## Report from VUEESC 08

### 2008 VUEESC Organising Committee

The 22nd Annual Victorian Universities Earth and Environmental Sciences Conference was held on the 26th of September at the University of Melbourne. The day was a huge success with 19 talks presented over the course of the day and posters on display in the Earth Sciences Foyer.

The conference was well received by all who attended, which included both students and researchers from Monash University, La Trobe University, The University of Ballarat, The University of Melbourne, and Museum Victoria. Participants presented talks and posters on a wide range of disciplines including Hydrogeology, Geothermal Energy, Economic Geology, Tectonics, Volcanology, Climate and Palaeontology. Awards were presented to presentations in several categories for which the overall winners were:

Best overall oral presentation: Sarah Wright (The University of Melbourne)

Best overall poster presentation: Rachel Chesler (The University of Melbourne)

Other prize winners included:

Best Hydrogeology oral presentation: Matt Currell (Monash University)

Best Economic Geology oral presentation: Mark Lindsay (Monash University)

Best Geothermal Systems oral presentation: Sarah Wright (The University of Melbourne)

Best Palaeontology oral presentation: Tim Holland (Monash University)

Best Climate oral presentation: Campbell Watson (The University of Melbourne)

Best Earth Dynamics and Chemistry oral presentation: Chris Folkes (Monash University)

The GSAV donated two copies of *The Geology of Victoria* as prizes for best oral presentation and best poster and were awarded to:

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Best Geological Oral Presentation: Maddy Willcock (Monash University)

Best Geological Poster Presentation: Rachel Chesler (The University of Melbourne)

A huge thank you goes to the GSAV representative judge, Adele Seymon, who along with fellow judges had to decide the prize winners. The quality of presentations was very high, making this an extremely tough job. Thank you also to all our sponsors, without whom this day could not go ahead. The 23rd VUEESC will be hosted by Monash University and we eagerly look forward to next year's conference.

Thanks again Adele!

# STAVCON



## Science Teachers' Association of Victoria Conference

CALL FOR VOLUNTEERS

27 - 28 November 2008  
La Trobe University, Bundoora

STAVCON is the annual conference of the Science Teachers' Association of Victoria. The conference is open to any person involved or interested in science education; this includes student teachers, laboratory technicians, primary, secondary and tertiary educators. The theme of this year's conference is Experience, Experiment & Explore science.

The Victorian Division of the GSA will have a table displaying rock specimens and fact sheets, with the aim of promoting geology (and the GSAV!) and making it feature more prominently in schools.

If you would like volunteer some time at this conference on either day, or would like more information, please contact Noel Schleiger on (03) 9435 8408 or email [secretary@vic.gsa.org.au](mailto:secretary@vic.gsa.org.au)

For more information, see the STAVCON website: <http://www.sciencevictoria.com.au/STAVCON.html>

WELCOME TO OUR NEW MEMBER

James Blackwell

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## 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 Kyle Rebryna at [kyle.rebryna@sci.monash.edu.au](mailto:kyle.rebryna@sci.monash.edu.au).

**We'd be glad to hear from you**



### Volunteer welcomed for position of Vice-Chairperson!

The Geological Society of Australia was established as a learned not-for-profit organization in 1952 and is represented by an associated division in Victoria. The Victorian Division holds scientific meetings, publishes geological books, and acknowledges geological leadership and accomplishment through various awards. Meetings are held on a monthly basis and newsletters are produced to advise members of upcoming activities.

Whilst the Victorian division has over 300 members, it is always difficult to find people willing to assist in the running of the Division and we currently have a number of vacancies on the committee. We are seeking an enthusiastic person to fill the Vice-Chairperson position to help strengthen the committee. As Vice-Chairman you will help the Chair fulfil responsibilities including occasionally chairing the monthly meetings.

The Victorian Division holds a number of successful events and educational activities including:

- The Selwyn Symposium and Selwyn Lecture
- The Annual Howitt Lecture
- Booths at the Geography Teachers' Conference and Science Teachers Association Victoria Conference
- Selwyn medal and Canavan prize awards

If you are interested in joining this committee please contact our secretary Adele Seymon:

[secretary@vic.gsa.org.au](mailto:secretary@vic.gsa.org.au)

or chairperson David Cantrill:

[David.Cantrill@rbg.vic.gov.au](mailto:David.Cantrill@rbg.vic.gov.au)



### Triassic Park

Invites you to visit during Earth Sciences Week 2008  
Saturday 18th October

National Earth Science Week this year runs from 12 to 18 October and has the theme 'NO CHILD LEFT INSIDE'. Young people are encouraged to get away from television, leave their computers and explore geoscience outdoors.

With this in mind Triassic Park (Council Trench Crown Land Reserve), near Bacchus Marsh, Victoria, welcomes children with their parents and friends to visit on Saturday 18 October at 10.30 a.m. till around noon.

A hands-on activity suitable for all ages, and tours of the park with explanations of its special geological features and its geological, colonial and more recent history are planned for the day. Triassic Park is located off Tramway Lane, Darley at Melway Map 333 C 3. Car parking is in Tramway Lane.

For more information contact Roger Pierson of the Triassic Park Committee of Management by emailing [rogerp@deakin.edu.au](mailto:rogerp@deakin.edu.au) or by telephoning (03) 9251 7191 during business hours.



The poster features a dark blue background with a silhouette of a person sitting in a chair, looking up at a night sky filled with colorful fireworks. The text is arranged in a structured layout with a mix of bold sans-serif and elegant script fonts.

**NZ GEOTHERMAL  
WORKSHOP &  
NZGA SEMINAR**  
11-13 NOVEMBER 2008  
TAUPO, NEW ZEALAND

*Celebrating*  
**30** YEARS  
OF GEOTHERMAL  
RESEARCH

2008 is the 30th anniversary of the Geothermal Workshop, New Zealand's longest running energy conference.

We hope you will join us for this very special occasion.

Our theme this year is **CELEBRATION!** - of our people, of our past achievements and of the exciting future of geothermal energy use around the world, in particular New Zealand's contributions to the research, education and development of the resource.

In 2008, we also celebrate the 50th anniversary of the Wairakei Power Station. So with the collaboration and support of Contact Energy, this Workshop and Seminar will be held at the Great Lake Centre, Taupo, New Zealand.

Geothermal Workshop:	11 - 12 November
New Zealand Geothermal Association Seminar:	13 November

Deadline for early registration is 20th October. For complete details, including a list of keynote speakers, see the website at:

<http://www.nzgeothermal08.com/nzgeothermal/>

### **CSIRO Student Research Scheme needs your help!**

The Student Research Scheme is a national program that offers selected senior secondary science students, the opportunity to complete a brief research project under the supervision of practising researchers in laboratories, offices, and field study areas. Here is your chance to capture the hearts and minds of tomorrow's scientists! If you have a project and are willing to participate in the program, please see the website and get involved!

<http://www.csiro.au/csiro/channel/pch9r.html>

### **Go exploring!**

The Sydney Mineral Exploration Discussion Group website contains nearly a terabyte of information relating to mineral exploration, especially discovery case histories. It's all free and there are over 200 links to other sites with Earth science connections.

<http://www.smedg.org.au>

**FORTHCOMING TALKS**  
to be presented at  
**GSA (Victoria Division) meetings**

Note: unless otherwise indicated, all 2008 talks will be held in the  
Fritz Loewe Theatre, Earth Sciences Building, University of Melbourne.

---

30 October	Guy Holdgate	Has Port Phillip Bay dried up since 6000 yr BP? Seabed evidence, core dating and modelling.
27 November	John Moreau	What on Earth do we know about life on Mars? Insights from geomicrobiology
December	TBA	TBA

Visit the GSAV on [www.vic.gsa.org.au](http://www.vic.gsa.org.au) or the GSA on [www.gsa.org.au](http://www.gsa.org.au)  
• Renewing your GSA membership is easy - it can now be done on-line. •

The University of Melbourne Earth Science Postgraduate Student Society (ESPG) presents

**Earth Science Seminars**

Fridays at 4:00 p.m.

Fritz Loewe Lecture Theatre, Earth Science Building (cnr Swanston and Elgin Streets)

Followed at 4.45 p.m. by drinks and refreshments in the tea-room, 4th floor. \$2 per person.

Further information: [http://www.earthsci.unimelb.edu.au/php/seminars\\_upcoming.php](http://www.earthsci.unimelb.edu.au/php/seminars_upcoming.php)

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GPO Box 2355V, Melbourne, Vic., 3001  
Internet address: [www.vic.gsa.org.au](http://www.vic.gsa.org.au)

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Vice-chair:	position vacant	
Secretary:	Adele Seymon	9658 4523
Treasurer:	Stephen Gallagher	8344 6513 (BH)

#### COMMITTEE

Alison Fairmaid	8344 7672 (BH)
Chung Leong Li	8344 9980 (BH)
David Moore	9858 4513 (BH)
Kyle Rebryna	9905 5768 (BH)
Noel Schleiger	9435 8408
Lindsay Thomas	0427 354 828
Susan White	9328 4154

#### SUBCOMMITTEE

#### CONTACTS

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Bicentennial Gold:	Gerhard Krummei	9820 2595
Education:	Noel Schleiger	9435 8408
Heritage:	Susan White	9328 4154
Membership:	Peter Pritchard	9431 9582
Newsletter:	Kyle Rebryna	9905 5768
Program:	position vacant	
Publications:	position vacant	
Promotions	position vacant	
Webmaster:	Lindsay Thomas	0427 354 828

#### OTHER CONTACTS

Geology of Victoria:	Bill Birch	9270 5049 (BH)
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#### Newsletter deadline

First Friday of the month except Dec & Jan  
[kyle.rebryna@sci.monash.edu.au](mailto:kyle.rebryna@sci.monash.edu.au)

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# THE VICTORIAN GEOLOGIST



November 2008

THE GEOLOGICAL SOCIETY OF AUSTRALIA  
Victoria Division



**Last General Meeting for 2008**  
Thursday 27th November at 6:15 p.m.

Followed by the GSAV Christmas BBQ at 7:15 p.m.  
Full details on page 2.

## **What on Earth do we know about life on Mars? Insights from geomicrobiology**

John Moreau  
Lecturer, University of Melbourne

**Fritz Loewe Theatre, Earth Sciences Building, University of Melbourne**

Preceded at 5.30 p.m. by drinks and nibbles in the tea-room, 4th floor, cost \$2.

To know whether Mars ever harboured life (as we currently understand it) would fundamentally impact our views on the evolution of life on Earth. In the ongoing (decades-long, multinational, billion-dollar) search for evidence of past or present Martian life, we rely heavily on our knowledge of the evolution and diversity of terrestrial microorganisms. We have made an underlying fundamental assumption that terrestrial and potential Martian lifeforms would be recognizably similar in structure and/or function. On Earth, microbes commonly leave behind biogeochemical signatures of their metabolic activity. We'll discuss some of these "biosignatures", and their potential for occurrence and preservation in the Martian lithosphere. We'll also consider what Martian environmental factors would challenge any biological activity there, and what strategies (if any) have evolved among terrestrial microbes to cope with similar challenges.

Dr. Moreau has worked on NASA Astrobiology Institute teams at Arizona State University and the University of California-Berkeley, investigating the potential for life on Europa and Mars.

## MONTHLY HIGHLIGHTS AND FORTHCOMING EVENTS

# Earth Science Week at Triassic Park

## Roger Pierson

In association with National Earth Science Week, the management committee of Triassic Park (the Council Trench Crown Land Reserve), near Bacchus Marsh organised an open day on October 18th.

The theme for Earth Science Week this year was 'NO CHILD LEFT INSIDE'. Young people were encouraged to get away from television, leave their computers and explore geoscience outdoors. With this in mind, children and their families were invited to visit Triassic Park. Advertising in local papers and through flyers given out by local primary schools resulted in a pleasing crowd of visitors on a warm and windy day.



*Management Committee member, Susan White (left) with Earth Science Week open day visitors in the Council Trench at Triassic Park.*

An introduction to the geological, colonial and recent histories of the park, which is home to the only known outcropping of Triassic sedimentary rock in Victoria, began proceedings. A game that gave the young and not-so-young an understanding of the immensity of geological time, with special consideration for the Triassic Period, its climate, and its plants and animals followed. Children participating in the game finished their visit with sweets and cordial and earth science related material to take home.

Feedback from visitors indicated that, without exception, they enjoyed their time at Triassic Park. For those whose interest has been aroused by this short piece, Triassic Park is open 365 days of the year and is located off Tramway Lane, Darley at Melway Map 333 C 3. Educational panels near the entrance gate provide an excellent explanatory resource for the Park.

WELCOME TO OUR NEW MEMBER

Matthew Sheppard

## 2008 Christmas BBQ

To celebrate 2008, the GSAV is pleased to host a Christmas BBQ Party following the seminar on 27th November. Please join us to bring to a close this year's calendar of successful events.

Time: 7:15pm  
Place: 4th floor balcony and tea room  
School of Earth Sciences, University of Melbourne  
Cost: \$5 for food/drinks

## FORTHCOMING TALKS

to be presented at  
GSA (Victoria Division) meetings

Note: unless otherwise indicated, all 2008 talks will be held in the  
Fritz Loewe Theatre, Earth Sciences Building, University of Melbourne.

27 November    John Moreau

What on Earth do we know about life on Mars?  
Insights from geomicrobiology

Christmas BBQ

7:15 p.m.  
4th floor balcony and tea room  
School of Earth Sciences, University of Melbourne  
\$5 for food and drinks.

Visit the GSAV on [www.vic.gsa.org.au](http://www.vic.gsa.org.au) or the GSA on [www.gsa.org.au](http://www.gsa.org.au)  
• Renewing your GSA membership is easy - it can now be done on-line. •

## *Editor's Prerogative... A once-a-year note.*

As the editor of The Victorian Geologist, I'll seize this privilege to make a few end of year comments. I send my apologies out for a few late printings this year, but at the same time I wish to thank everyone who submitted material during the past 12 months. If there are any comments, things you like to see, things you don't like to see, or suggestions for content, I'm always keen to hear from the readership. I hope you enjoy some of the stylistic changes I've been experimenting with and look forward to another (partial) year of editing this digest. I will be submitting my thesis at some point in the first half of 2009; soon thereafter I will likely be heading back to my native Canada. Please ponder a while and consider if you would like to take on the mantle, around May of next year, of TVG editor and let me know. It has been an extremely informative and enjoyable experience learning the basics of layout and content editing, especially raging at the persistence of double spacing after periods, fiddling with grammar, and trying to find an artistic theme that is pleasing to look at whilst reading. All the best for the new year and those that follow. A colossal thank you to Alison Fairmaid for collecting and collating all the data from the meetings. You made things run smoothly, Ally. Also, thank you to Marilyn Moore for her careful and continuing proofing duties. I wish everyone an enjoyable holiday.

### GSA (VICTORIA DIVISION) COMMITTEE

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