



## **EARTH SCIENCES HISTORY GROUP**

**(A Specialist Group of the Geological Society of Australia Inc.)**

*Email Bulletin No. 56*

*10 May 2020*

### **Tom Vallance Medal 2021**

The Tom Vallance Medal was introduced in 2011 to recognise people who have made a significant contribution to researching, recording, investigating, documenting and/or publishing about people or places or events of historical importance to the geological sciences in Australia or Australasia. It is awarded biennially and presented at the biennial Convention of the Geological Society of Australia (or similar event).



Dr Thomas George Vallance (1928–1993), geologist and historian of science, was formerly Associate Professor at the University of Sydney. Originally a petrologist, his work tracing geological expertise in Sydney during the late 18th and early 19th centuries shed unexpected light on scientific activity in our young colony and ignited his interest in the history of geology and early workers in the earth sciences. He researched and published many articles and papers on famous, infamous and little-known early pioneers in this field. His legacy was in the form of 3000 index cards of information, memorabilia and jottings on miners, geologists, surveyors, prospectors and mining engineers, which was compiled over a number of years and gathered from a wide variety of sources - especially from 19th century mining journals. After his death this rich resource was compiled into a database, which should prove invaluable for researchers. The 1994 meeting of INHIGEO was dedicated to the memory of Tom Vallance, a foundation member and for some years one of its Vice-Presidents. The ESHG is proud that its award should bear the name **Tom Vallance Medal**.

#### **Past Tom Vallance Medal Recipients**

- **2018**, Dr Susan Turner, announced at the AGC in Adelaide in October 2018, and presented privately to Susan in Brisbane
- **2016**, Tom Darragh, announced at AESC2016 in Adelaide and presented at a meeting of the Victorian Division on 28 July 2016;
- **2014**, David Oldroyd, presented at AESC2014 in Newcastle;
- **2012**, David Branagan, presented at the 34th IGC 2012.

At this stage, plans are still underway for the holding of the AESC in Hobart in February 2021. Therefore, nominations for the medal to be presented in Hobart in 2021 are now open. The deadline for nominations for the 2021 award will close on **Wednesday 30 September 2020**.

A nomination form will accompany this Bulletin as an attachment, but it can also be downloaded from the ESHG website.

[https://www.gsa.org.au/Public/Specialist/Earth\\_Sciences\\_History\\_ESHG/Tom\\_Vallance\\_Medal/Public/Specialist\\_Groups/ESHG\\_Sub\\_Pages/ESHG\\_Recognition.aspx?hkey=0cc09a0a-b483-459c-9a1a-e1088650b325](https://www.gsa.org.au/Public/Specialist/Earth_Sciences_History_ESHG/Tom_Vallance_Medal/Public/Specialist_Groups/ESHG_Sub_Pages/ESHG_Recognition.aspx?hkey=0cc09a0a-b483-459c-9a1a-e1088650b325)

### **Australian Geology Hall of Fame**

You will remember a poll being taken last year amongst the GSA membership for the naming of a new medal to honour the contributions of Australian women Earth Scientists. The medal was to be named after an influential Australian woman Earth Scientist. Short biographies of the proposed names were circulated as part of this poll. As

a result of the poll, the medal is to be named after the late Professor Beryl Nashar and will be presented for the first time at the AESC in Hobart.

The ESHG webpages include short biographies of influential Australian geologists. However, noticing that the webpage was deficient in having only one woman (Germaine Joplin) amongst the biographies posted there, Susan Turner and Ian Withnall expanded the short biographies used in the poll and they were added to the webpage late last year. The female Earth Scientists now honoured there are Ida A. Brown, Irene Crespin, Germaine Joplin, Nelly Ludbrook, Beryl Nashar and Mary Wade.

Biographies of many other influential Australian geoscientists are yet to be included here, and a list of possible candidates is given below. Readers are welcome to submit short biographies (500-600 words plus a photograph or image and links or main references to more detailed information) of these or any others to the Secretary of the Earth Science History Group John Jell - [j.jell@bigpond.com](mailto:j.jell@bigpond.com) or email to [eshg.gsa@gmail.com](mailto:eshg.gsa@gmail.com)

- Edward de Courcy Clarke
- Richard Daintree
- Samuel Benson Dickinson
- Norman Henry (Doc) Fisher
- Charles Gould
- John Walter Gregory
- Dorothy Hill
- Edwin Sherbon Hills
- Terence D Hills
- Joseph Beete Jukes
- Clive Loftus-Hills
- Lyndon Charles Noakes
- Reginald Claude Sprigg
- William Harper Twelvetrees
- George Henry Frederick Ulrich
- Leonard Keith Ward
- Samuel Warren Carey

## INHIGEO News

### Another award for David Branagan

The Vladimir V. Tikhomirov History of Geology Award for 2020 has been bestowed on David Branagan (Australia) on recommendation from the INHIGEO Board. The award for 2020 is a medallion that was cut, polished, and engraved from semiprecious obsidian from Armenia, the site of the first (1967) and 50<sup>th</sup> anniversary INHIGEO conferences (2017). It was produced under consultation and care of Gourgen Malkhasyan of INHIGEO's Armenian delegation, following a suggestion by INHIGEO President Barry Cooper. The medallion was first sent to Vienna and from there to Australia where Barry will present the award to David Branagan.

The new INHIGEO Board 2020-2024 should have been appointed in New Delhi in early March 2020 and subsequently approved by the IUGS Council. It only can take up its duties after appointment by IUGS.

The 36<sup>th</sup> International Geological Congress and its associated business and Council meetings originally scheduled for 2-8 March 2020 have been postponed (somewhat optimistically!) until 9-14 November 2020. The INHIGEO Board has decided that the existing office bearers for 2016-2020 remain in place and the smooth transition to the new administration will take place on 31 August 2020.

### Future INHIGEO Conferences (2021-2024)

2021 – 46<sup>th</sup> INHIGEO Symposium, Poland, Krakow: 18-24 July

Main themes of the conference:

Formation of geological surveys and their creators.

Mining history

2022 – 47<sup>th</sup> INHIGEO Symposium, Russia (yet to be formally decided)

2023 – 48<sup>th</sup> INHIGEO Symposium, Location to be decided.

2024 – 49<sup>th</sup> INHIGEO Symposium, South Korea, (in association with the 37<sup>th</sup> IGC))

The 26<sup>th</sup> International Congress on the History of Science and Technology (25ICHST) – 25-31 July 2021 will take place in Prague.

## Lyell's Notebooks Saved!



In the last eNews, we mentioned the campaign to save Charles Lyell's 294 notebooks from being sold to an unknown foreign buyer by the family to meet inheritance tax. A temporary export ban was imposed, giving the University of Edinburgh and over 1,100 supporters from Scotland, the United Kingdom and around the world the opportunity to raise the necessary funds to purchase them. The sum required was £1,444,000; major donors pledged more than a third of the total needed, and middle and small donors 'crowd-funded' the balance.

Charles Lyell (1797-1875) is well known as a key figure in history of science, particularly for his part in the Darwinian evolutionary debates and in convincing readers of the significance of 'deep time'. During the past decade, Lyell's geographical theory of climate and his subdivision of recent geological strata have gained renewed attention in connection with discussions of climate change and the Anthropocene. The Lyell archive is almost certainly the most important manuscript collection relating to nineteenth century science still in private hands. At its core are 294 notebooks, which provide a daily record of Lyell's private thoughts, travels, field observations and conversations.

The University of Edinburgh Library, which already has the largest collection of Lyell material from a 1920s bequest will be the new home of the notebooks and they will eventually become available as a free-to-view digital resource that everyone can access.

## Australian Mining History Association News

The AMHA Conference, planned for 9-14 November 2020, was cancelled after consultation with the Organising and the Advisory Committees in consideration of the health of AMHA members, conference registrants and the community. While it is hoped that the emergency will have died down by November, because of the uncertainty, and noting that the recovery from the disruption to normal schedules may prevent people from attending in November, this decision was made reluctantly.

It has been agreed in discussion between the Bathurst and Burra organizing committees that, as planned, the 2021 AMHA Conference will take place at Burra, South Australia, and the 2022 Conference at Bathurst.

Before COVID-19 came the bushfires, and inevitably some mining heritage was damaged. Ken McQueen reported that important mining heritage buildings in the historic goldfields of Kiandra in Kosciuszko National Park, southern NSW, were destroyed in the January bushfires. The Dunns Road fire gutted the historic Kiandra Courthouse and in the surrounding area, the Wolgal Lodge, Pattinsons Hut and Sawyers Hill Rest House were burnt to the ground. Some infrastructure for the Kiandra heritage track was also destroyed. The small stone courthouse included a police quarters and a courtroom. In the 1950s and 60s the building was modified and extended to be used as a chalet and later, depot for the NSW Department of Main Roads snow clearing operations. Kiandra Courthouse was listed on the New South Wales State Heritage Register in 1999.

## Book Review

**A history of structural geology and tectonics: a personal account and guide to the literature.** Mike Rickard (ANU Emeritus Faculty) published for the author by Gilgandra Newspapers Pty Ltd 2017, 80 pp. Available for \$10 including postage from the author: MJ Rickard, Unit 145/1 Monty Place, Ngunnawal, ACT 2913.

This relatively small book is printed in A4 format. It contains 21 pages on aspects of structural geology and 19 pages on tectonics and 27 pages of references. There are 10 figures.

As geologists who started their careers in the 60s and early 70s, it is interesting when reading the first part of this book to look back and realise how much of what we take for granted in describing and analysing deformed rocks (ideas on cleavage development, overprinting and using mesoscopic fabrics to understand regional structure) was actually cutting edge back then. So much so, that these were not covered in undergraduate structural geology courses at many universities, including ours.

Many of these concepts are regarded as basic knowledge today, and even seem self-evident to younger structural geologists, who may not really care how the concepts and terminology developed. Nevertheless, for students of Earth Science History it is interesting to go back and discover (or re-discover) the development of a discipline. The book and particularly the references supplied will provide a starting point in this endeavour, although specialist structural geologists will find the coverage a bit brief and superficial in areas of their own personal interest. They would probably like to see some controversial topics covered in more detail such as the interpretation of microstructures including the ongoing debate on the non-rotation or otherwise of porphyroblasts, which was briefly mentioned. Therefore, the book will have more appeal to generalists.

Although the book is quite wide-ranging, it does not always trace the sequence of the development of new ideas as a history should, and this is particularly the case in the section on tectonics. As a result, it fails to give a sense of the excitement that sometimes gripped the geological community, for example during the decade of the 1960s when the theories of sea floor spreading and plate tectonics were proposed and almost universally accepted (but not initially accepted so readily in most Australian universities, a point on which Rickard could perhaps have made some interesting comments). Rickard himself refers to the acceptance of drift or continental drift rather than the acceptance of plate tectonics, possibly reflecting his training in Britain where palaeomagnetism proved continental drift in the 1950s. This was not widely acknowledged because palaeomagnetism itself was viewed with suspicion at this time, and because of the implacable opposition of Sir Harold Jeffreys. However, plate tectonics based on spherical trigonometry is the more fundamental process and has directed tectonic studies for the last 50 years.

There are some notable gaps in the coverage (Rickard calls it a "limited selection") that should appear in any history. Examples are the mechanism of sea floor spreading as outlined by Hess and Dietz (similar to the 1929 model of sea floor stretching proposed by Arthur Holmes), the importance of reversals of the magnetic field in explaining magnetic stripes in oceans and the age of the ocean floor, and the use of spherical trigonometry by Morgan and McKenzie to describe the motion of rigid lithospheric plates. Extensional tectonics is hardly covered at all, except for the brief section on metamorphism and core complexes.

Therefore, despite its title, the book is more correctly an annotated bibliography rather than a history of structural geology and tectonics, although with a few exceptions, the bibliography mainly ends in the 1990s. As the author states, it is a selection based on his own experience of teaching and research, and the subtitle "*A personal account and guide to the literature*" is a better summary of the contents of this short book than the main title. In this respect, the book will still fill a useful purpose, especially considering the reasonable price.

The book also could have benefited from more diagrams or photographs to illustrate the concepts, but this may have extended the number of pages and increased the cost. If so, some of the relatively few diagrams seem to be rather odd choices, such as George Gibson's cartoon showing the Celtic Solution to suspect terranes taking up a whole page.

Another and perhaps more positive review of the book by Colin Winsor was published in the December 2019 edition of *The Australian Geologist*.

Reviewed by Cec Murray and Ian Withnall

## Contributions for the ESHG Newsletter

Articles for future editions are welcome and can be submitted to the Newsletter Editor, Mr John Draper at [jdraper@hn.ozemail.com.au](mailto:jdraper@hn.ozemail.com.au).

### ESHG Committee:

Chair — Ian Withnall

Secretary — John Jell

Treasurer — Paul Blake

Newsletter Editor — John Draper

Assistant Editor — Cec Murray

NSW representative — David Branagan

Victorian representative — Roger Pierson

Tasmanian representative — Carol Bacon

SA representative — Jim Jago

Email address [eshg.gsa@gmail.com](mailto:eshg.gsa@gmail.com)