



EARTH SCIENCES HISTORY GROUP

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

Email Bulletin No. 54

30 April 2018

Welcome to the new members who have joined the Earth Science History Group since the last Email Bulletin. Sadly the memberships of a few others have lapsed, and seven members are still to pay their GSA subscriptions for 2018. If you one of those and have simply forgotten, please pay without delay to ensure that you receive the next edition of our formal newsletter, which will contain detailed accounts of the war service and careers of eight geologists who answered the call of King and Country in 1914-18. It will be posted out within the next few months

David Branagan's elevation to Member of the Order of Australia (AM).

I am sure all members of the Earth Science History Group will be pleased to hear of David Branagan's award in the 2018 Australia day Honours List

"MEMBER (AM) IN THE GENERAL DIVISION OF THE ORDER OF AUSTRALIA

Dr David Francis BRANAGAN, Willoughby NSW 2068

For significant service to the geological sciences as an academic, researcher and author, to professional groups, and to the community. Service includes: President, International Commission for the History of Geological Sciences, 1996-2000. Past Committee Member, Australian Academy of Science. Member, History of Earth Sciences Society. Member, Australian Mining History Association. Geologist, Geological Survey of New South Wales, 1950-1954. Fellow, Geological Society of London. Geological Society of Australia: Honorary Life Member, since 1992. Founding Member. Founding Editor, 'The Australian Geologist'. Has authored/co-authored over 250 publications. University of Sydney: Honorary Research Associate, School of Geophysics, 1975-1989, and currently. Coal Research Fellow, 1958-1960. Lecturer, 1960-1965. Senior Lecturer, 1965-1975. New South Wales Higher School Certificate Board of Studies for Science: Chair, 1970's. Chief Examiner in Geology and Chair of the Geology Syllabus Committee. Community service includes: President, Royal Society of New South Wales, 1995 and Fellow. Former voluntary Rugby and Athletics Coach, St Aloysius College. Director/Conductor, St Gregory Chorale, 1962-1992. Editor, 'Hosanna' (Journal of church music and history), 1962-1972. Organist, St Philip Neri Parish, 1960's-1970's. Member, Scientific Committee, Jenolan Caves Trust, circa 1989-2015. Awards and recognition includes: Recipient, Sue Tyler Friedman Medal, Geological Society of London, 2015. Recipient, Mellon Fellowship, University of Oklahoma, 2003. Recipient, National Library of Australia Award, 1999. Recipient, Harold White Fellowship and New South Wales Medal, 1998. Recipient, Australia-New Zealand Foundation Grant, 1978. Recipient, Award for Excellence in Coal Geology, Coalfield Council of New South Wales, 2003. Recipient, Tom Vallance Medal Earth Sciences History Group, 2014."

Dorothy Hill Online Exhibition

In September 2017, the University of Queensland launched an online exhibition called *Flirting with Fossils - Dorothy Hill: Australia's first female professor* about the life and legacy of Dorothy Hill.

As the first female Professor at an Australian university and the first Australian woman to become President of the Australian Academy of Science, Dorothy Hill paved the way for women to reach positions of prominence in science. As a teacher, Dorothy Hill mentored a generation of students at the University to pursue the earth sciences. As a researcher, Hill received a number of international and Australian honours for her research into Australian fossil corals. Inspired by her experience at the University of Cambridge, Hill was also a passionate advocate for the University of Queensland library.

The online exhibition is ongoing and can be accessed at

<https://uqlibraryonlineexhibitions.omeka.net/exhibits/show/dorothy-hill-online-exhibition>

Call for nominations for the Tom Vallance Medal

The Tom Vallance Medal was introduced in 2011 to recognise those 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 has been awarded biennially, and presented at the biennial Convention of the Geological Society of Australia (or similar event). This year the medal will be presented at the Australian Geoscience Council Convention in Adelaide in October.

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

- **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.

Because the Australian Geoscience Council Convention is being held later than the normal Australian Geological Convention, the deadline for nominations for the 2018 award has been extended to close on **Monday 2 July 2018**. 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

The committee is still holding two additional nominations that were submitted in 2016, and these will also be considered for the award along with any new nominations.

INHIGEO News

The Annual Conference was held in Yerevan (Armenia) **13-15 September** 2017 when the 50th anniversary of INHIGEO was celebrated. The opening ceremony included the launching of the anniversary book — **History of Geoscience: Celebrating 50 Years of INHIGEO**; edited by W. Mayer, R.M. Clary, L.F. Azuela, T.S. Mota and S. Wolkowicz (*Geological Society London Special Publications, Series*, London, 2017).

Wolf Mayer was honoured as honorary senior member of INHIGEO on this occasion for his contributions to INHIGEO as well as his patient efforts as editor of its annual record and of our anniversary publication.

INHIGEO SYMPOSIA 2018-2021

INHIGEO Annual Conferences for this period are scheduled as follows.

- ☐ 2018 – 43rd INHIGEO Symposium, 12-22 November, Mexico City
- ☐ 2019 – 44th INHIGEO Symposium Como/Varese, Italy
- ☐ 2020 – 45th INHIGEO Symposium New Delhi, India (in association with the 36th International Geological Congress) . It will be held early in the year as the Congress is scheduled for 2-8 March 2020.
- ☐ 2021 – 46th INHIGEO Symposium, Poland

INHIGEO News Circulars

The ESHG receives copies of the News Circulars of the International Commission on the History of Geological Sciences (INHIGEO) of which the ESHG is an affiliate. Recent INHIGEO circulars will be attached to the email with this edition of the Email Bulletin.

Australian Geoscience Council Convention

The Australian Geoscience Council Convention in 2018 is **the inaugural forum for bringing together Geoscience professionals from all Member Societies of the AGC** to showcase their part in Geoscience for the 21st Century. It replaces the usual Australian geological Convention, which would normally have been held in mid-2018.



The convention website is <https://www.agcc.org.au/> and the second circular is now available for download

The themes for the convention are:

- Theme 1: Understanding the Earth - Professor Dietmar Müller
- Theme 2: Life on Earth – origins and diversity - Professor Simon George
- Theme 3: Resources – discovery, development, use and sustainability - Dr Kevin Cassidy
- Theme 4: Applied Geosciences in the 21st Century – innovation, technology and the future - Chris Woodfull
- Theme 5: Beyond the rocks – Geoscience in our society: current application and future trends – Dr Anna Littleboy

Please take note of the following deadlines:

16 June 2018 Abstract submissions close

7 July 2018 Early bird registrations close

28 July 2018 Formal notification to authors of acceptance or otherwise of Abstract

18 August 2018 Registration and payment deadline for presenters of papers (oral and poster)

1 September 2018 Final program released (including submitted papers)

6 October 2018 Standard registrations close. A higher registration fee will apply to all registrations received after this date and no online registration will be accepted. A higher onsite registration fee will apply to all registrations received onsite.

Full Delegate Registration Fees (All costs are in Australian Dollars and include 10% GST.)

Early Bird (Member)	AU\$1,000 (+ AU\$25 extra discount per society)
Early Bird (Non Member)	AU\$1,200
Standard (Member)	AU\$1,200 (+ AU\$25 extra discount per society)
Standard (Non Member)	AU\$1,400
Late (Member)	AU\$1,400 (+ AU\$25 extra discount per society)
Late (Non Member)	AU\$1,600
Student (Member)	AU\$250
Student (Non Member)	AU\$500

A concession rate is available to retired and unemployed geoscientists. Status of employment at time of registration will be assessed by the relevant Member Organisations.

Concession - Early Bird (Member) AU\$600

Concession - Standard (Member) AU\$800

Concession - Late (Member) AU\$1,000

ESHG at the AGCC

The Earth Science History Group has not applied for a dedicated session, but kindred groups, the Geotourism and Geological Heritage Standing Committees are convening a combined session **Geology in Society: geotourism and geoheritage** under Theme 5 and members are invited to consider how papers on a historical subject might fit into these any of the other themes of the Convention..

An application has been made to schedule an ESHG Business Meeting during the AGCC. Details will be circulated when known.

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AMHA 24th Annual Conference,
Cromwell, New Zealand, 7-12 October 2018
Go to <http://www.mininghistory.asn.au> for details.
Abstracts of papers should be sent to:
mel.davies@uwa.edu.au by 30 July 2018 using the
abstract template that can be found on the webpage.
Registration forms will be emailed, and will be placed
on the webpage when the registration and tour
costings have been finalised

Contributions for the ESHG Newsletter

Papers presented during the session on Australian Geologists in World War 1 at the AESC in 2016 and 3 other papers on other geologists who served have now been received, and the editor is working to finalise the publication.

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

Lest We Forget – geologists who served in the Great War.

By Ian Withnall

This year is the 100th anniversary of the end of World War 1 and it is interesting to speculate how many geologists were amongst those who answered the call of King and Country. The following is a brief account of the geological careers and war service of those of which I am aware. The Earth Science History Group is publishing more detailed accounts of some of these in its forthcoming formal newsletter.

Most of you will be aware of the contribution to the war effort of **Professor TW Edgeworth David** as the driving force in the organisation and recruitment of the Australian Mining Corps later to become the Australian Tunnelling Companies. In spite of his age, David also served on the Western Front providing geological advice to the allies and rising to the rank Lieutenant Colonel as Chief Geologist to the entire British Expeditionary Force. His war service and geological career is well documented by David Branagan's book *TW Edgeworth David: a life* (National Library of Australia, 2005).

The establishment of the mining corps required qualified men as officers, and these were drawn from mining engineers and surveyors with underground experience, as well as geologists. There were at least six geologists who served in the tunnelling companies, but three of them, Nye, Honman and Hunter, had qualified as a mining engineers, so that others whose occupation was given on enlistment as mining engineer or some other mining profession may also have worked as geologists in civilian life, the lines between the professions being somewhat blurred in the early 1900s. Only Edgeworth David, Loftus Hills and Honman were called on to specifically apply their geological training in the war, while Hunter was enlisted for his drilling expertise.

Lieutenant Clive Loftus-Hills was an assistant government geologist with the Geological Survey of Tasmania at the time of his enlistment in the Australian Mining Corps, and worked closely with Edgeworth David on the Western Front supervising drilling operations collecting information needed for the construction of dugouts and tunnels. He was awarded an MBE for these services. After the war he was government geologist and director of the Geological Survey in Tasmania until 1923. Loftus-Hills was a thorough and imaginative geologist who advanced knowledge of the mineral deposits of Tasmania, but suffered at times for his integrity, and was seemingly over-ambitious and intolerant of others. He clashed with his minister and drew criticism from other staff of the Department. As a result, the post of Director of the Geological Survey was abolished, and Hills resigned. Thereafter he worked mainly as a consultant geologist. In 1938-46 he was chemist with the Commonwealth Department of Supply and worked on munitions production during World War II. He returned to Tasmania after that war and worked again as a geological consultant and mining entrepreneur. He was a Foundation Member of the Geological Society of Australia and stood successfully for the Hobart City Council in 1950. He died in 1967 in Melbourne.

Captain Stanley Burrell Hunter was a geologist and mining engineer with the Victorian Department of Mines and in 1905 designed a Boring Machine with a combined percussion and rotary boring mechanism that was to prove invaluable in the tunnelling activities on the Western Front. Although he was over 50, his mining and drilling experience resulted in his acceptance into the Australian Mining Corps and he served in the Australian Electrical and Mechanical Mining and Boring Company (AEMMBC), known as the 'Alphabetical Company'. He returned to the Mines Department of Victoria until March, 1928 when he took an engagement with Builders Ltd on a survey of the Roma oil-field in Queensland. He died in 1942 aged almost 80.

Lieutenant Leonard Wrathall was a petroleum geologist who studied at the Royal School of Mines in London and accepted an appointment with the Australian Government in 1913 to survey for oil in New Guinea. After the outbreak of war he joined the Australian army, gaining the rank of Lieutenant in the Australian Tunnelling Corps, and involved in the tunnelling operations which led to the blowing up of Hill 60 on the Messines Ridge. He was awarded a Military Cross for actions in October 1918. After the war, he joined the Anglo-Persian Oil Company. In 1928 at the age of 36, he died of blackwater fever, a complication of malarial infection, while supervising drilling on Timor as chief geologist for the Timor Petroleum Company, an Australian Syndicate.

2nd Lieutenant Carl Sidney Honman was born in Victoria and became a geologist with the Geological Survey of Western Australia, although he had a degree in mining engineering from Melbourne University, and was initially employed as a topographical surveyor. He worked mainly in the Eastern Goldfields producing 19 reports between 1911 and 1917. He enlisted in late 1916, and was assigned to a group of reinforcements for the tunnelling companies, and after training in Australia and England, reported to the 3rd Australian Tunnelling Company in

March, 1918. Later in the year, he was assigned to Edgeworth David's staff to aid in the preparation of geological maps required for the army's advance into new territory. After the war, he returned to Victoria where he was active in the Victorian Institute of Surveyors. He was working as a high school teacher and part-time geologist in Queensland, when in 1935 he was taken on as a Senior Geologist with the Aerial Geological and Geophysical Survey of Northern Australia (AGGSNA) based in Cloncurry. He was in charge of the Queensland geological parties and was author of nine AGGSNA reports on deposits in north-west Queensland, including Dugald River, Mount Oxide and the Hampden–Elliot area. He died at Geelong, Victoria in 1968 aged 82.

Lieutenant Percival Bartlett Nye was born in Victoria and graduated as a mining engineer from the University of Melbourne. He worked as an assayer for Hampden–Cloncurry Mines Ltd at Kuridala on the Cloncurry mineral field, until he enlisted in 1916 and was assigned to 1st Tunnelling Company. He was wounded in action and was recommended for a Military Cross for mine-clearing operations at the end of the war. After discharge, he joined the Geological Survey of Tasmania as an Assistant Government Geologist in 1920 under Loftus Hills. He remained with the Geological Survey until 1934 when he took leave to work with AGGSNA as its Executive Officer, based in Cloncurry. He returned briefly to the Geological Survey of Tasmania in 1941, but in 1942 he became Assistant Director of the Commonwealth Mineral Resources Survey, which became part of the newly formed Bureau of Mineral Resources in 1946, with Nye as deputy Director. Nye served as Director between 1951 and his retirement in 1958. Nye authored over twenty-five scientific publications and was appointed an Officer of the Order of the British Empire (OBE) in 1955 for his services to the field of geology. He died in 1985.

Lieutenant Walter Heywood Bryan was born in Queensland and was among the first students enrolling in Science in the first year of the University of Queensland (UQ) in 1911. Following completion of his B.Sc., he became the first Honours' graduate in Geology and Mineralogy at the end of 1914 when he joined the Geological Survey of Queensland as a Temporary Field Assistant. His main task, the petrographic study of a large collection of samples from the Gympie mapping project, went unfinished, because he resigned to enlist in the Australian Infantry Force in June 1915 being first deployed to Gallipoli and then the Western Front until the end of the war. He served in the 2nd Australian Medium Trench Mortar Battery, and was awarded the Military Cross in May 1918.

After demobilisation, WH Bryan undertook post-graduate study at Cambridge, and then returned to Brisbane to become Lecturer in Geology at UQ. In 1926, he became UQ's first Doctor of Science, and from 1948 was Professor of Geology and Mineralogy until he retired in 1959. His academic career was broad in its approach and impact. His Honours research on the Enoggera Granite established igneous petrology and volcanology as areas of research throughout his career, including several papers on spherulitic devitrification. His pioneering work on the Brisbane Tuff led to it being included as the only Australian example in the seminal USGS Professional Paper on Ash Flow Tuffs by Smith and Ross (1961). More broadly, he made significant contributions to the stratigraphy and geological evolution of Queensland. He pioneered earthquake monitoring in Queensland, establishing the first seismological research station at UQ. He was a Foundation Member of the Geological Society of Australia and also served on numerous committees including being Deputy Chairman of the Great Barrier Reef Committee and President of the Royal Society of Queensland. He died aged 75 in 1968.

Captain Leslie Russell Blake joined the Geological Survey of Queensland as a cadet at the age of 17 in 1908, and worked as an assistant to Benjamin Dunstan mapping the Gympie Goldfield. His talents as a topographic surveyor and geologist, in spite of his youth and lack of formal training, were soon recognised. In 1911, he joined Douglas Mawson's Australasian Antarctic Expedition and was a member of the five-man team that spent two years on Macquarie Island. The topographic map that he produced was remarkably detailed and remained the standard until modern remote sensing techniques enabled the island to be mapped in better detail. After returning to GSQ, he enlisted in the Australian Imperial Forces in 1915 and joined the artillery. He was awarded a Military Cross for a survey of the front line during the Battle of the Somme. His death by a stray shell, 5 weeks before the end of the war, meant that a potentially productive geological career never eventuated. Sadly, the fact that his geological work on Macquarie Island was not published until 1943, and then only under Mawson's name, means that he has been largely forgotten.

Captain Cecil Morton graduated as a mining engineer at the Charters Towers School of Mines in 1911, then Queensland's only Tertiary institution, and joined GSQ in 1914. He enlisted in the artillery with Blake and they trained together, eventually serving in the same howitzer battery on the Western Front. Morton was awarded a Military Cross in late September, 1918. A few days later, he was with Leslie Blake when the latter was mortally wounded.

Morton returned to GSQ, and worked as an economic geologist on a large range of commodities throughout Queensland becoming District Geologist at Charters Towers in 1935. He became Chief Government Geologist in 1946 and served in that role until his death in 1955. His far-sighted decision, which resulted in GSQ fully embracing the involvement of the newly formed Bureau of Mineral Resources in regional mapping, brought about the leveraging of considerable Commonwealth funds over next 30 years, underpinning a great expansion in exploration and discovery of mineral and energy resources. Also during his tenure, diamond drilling was instigated in 1950 in the West Moreton and other coalfields, and a Coal Section established to manage the work. This program, which continued for the next 40 years, resulted in the discovery and proving-up by GSQ of the coal resources of the Bowen Basin, on which the Queensland economy remains dependant. Morton was a Foundation Member of the Geological Society of Australia

Private Harold Guy Walker Keid was born in Queensland and was studying geology at UQ when he enlisted in 1914, joining the 3rd Field Ambulance as a bearer. He was with the first landing at Gallipoli, and subsequently saw service in France, being assigned to the rear aid post of the 49th Battalion during the Battle of the Somme. He was youngest of six brothers, who all enlisted, one being killed at Gallipoli and two more during the Battle of the Somme, affecting Guy deeply. He was not a perfect soldier and his record shows that he was subject to disciplinary charges on various occasions. Like the fictional 'Private Ryan', he was repatriated to Australia and discharged in March 1917 for 'family reasons'. A fourth brother was killed in Flanders later in 1917.

Keid returned to UQ, and after graduation, joined the Geological Survey of Tasmania in 1920. He was involved in a survey of State's coal deposits, but did not come up to Loftus-Hills' exacting standards, and reportedly had an attitude problem (perhaps reflecting his war experience). He was dismissed in 1922 when his position was abolished. Thereafter, he worked in the Malay States, East Indies and Indo-China, before having a connection with the development of the Cracow goldfield in Queensland in the early 1930s. In 1937–38, he worked as a temporary geologist with the Geological Survey of Queensland at its Charters Towers office. He joined AGGSNA in 1938 and worked mainly in the Hodgkinson gold field and Chillagoe and Herberton areas under the supervision of HI Jensen. In 1942, Keid returned to the Tasmanian Department of Mines as a Field Geologist and made routine geological examinations of tin and ground water prospects before being appointed Chief Geologist in 1946. He retired in 1960 and died in 1969 aged 74.

The story of Leslie Blake in particular highlights the waste of war. Blake's talents as a topographic and geological surveyor were remarkable in someone so young, and one can only imagine what he might have gone on to achieve if his life had not been cut short, only 5 weeks before the end of the war. His death would of course have been tragic for his fiancée and family, but as always, there were other consequences too. The head of the Geological Survey of Queensland (GSQ), Benjamin Dunstan had been battling for 10 years to build up the GSQ and was finally making progress in 1914. The war was a setback to his plans. Five out of his staff of 10 (including geologists and field assistants) enlisted. Only two of these returned to GSQ after the war, with two including Blake being killed, and one pursuing an academic career. The untimely death of Blake, whom Dunstan had mentored and looked on almost as a son, sapped what enthusiasm he retained, and he had not the heart to set to work to rebuild the Survey after the war. His retirement in 1930 was followed by the Great Depression and then World War 2. It was only during the tenure of Cecil Morton as Chief Government Geologist in 1946–55 that the GSQ finally started to develop into the organisation that Dunstan envisaged.

Blake's story is unusual in that, even though he was only in his early 20s when he enlisted, he had already made a mark as an Antarctic explorer and is remembered for that and not so much as a geologist. Edgeworth David is also exceptional for the opposite reason, being in his 50s and at the height of his career when he served. It is only because the other listed here survived and had a career after the war that we can tell their story. One can only wonder how many other young men who died would also have made a contribution to geology. Even if they had qualifications, most would have been at the early stages of their careers and not have had time to make a mark.

Identifying those who were geologists amongst the enlistment records is difficult because the lines between the professions were somewhat blurred in the early 1900s. Morton, Honman and Nye trained as mining engineers, and in fact Nye was working as an assayer. Many of those, who like Morton, enlisted as mining engineers, or as surveyors or other mining-related professions, may also have worked as geologists in their civilian life.

Although the centennial remembrances of World War 1 will soon be passed, those who served should not be forgotten. Readers and members who know of other noteworthy geologists who served in World War 1, or indeed World War 2, are welcome to submit their stories for future newsletters.

ESHG Committee:

Chair — Ian Withnall

Secretary — John Jell

Treasurer — Paul Blake

Newsletter Editor — John Draper

Assistant Editor — Cec Murray

WA representative — John Blockley

NSW representative — David Branagan

Victorian representative — Roger Pierson

Tasmanian representative — Carol Bacon

SA representative — Jim Jago