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The Royal Society of New South Wales

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May 2015

Future Events

Wednesday 3 June 2015

1233rd Ordinary General Meeting

The Science of Spontaneity: Fred Astaire as Consummate Craftsman

Delivered by: **Dr. Kathleen Riley**

Writer, Classical Scholar and Theatre Historian
Union, University & Schools Club

25 Bent St, Sydney, 6.00 pm for 6:30 pm

Enjoy a welcome drink from 6:00 pm. (Book for dinner after the meeting: \$75 per person)

Please note dress code: jacket and tie

Thursday, 18 June 2015

Southern Highlands Branch Lecture

Ethics and Thinking Program for Schools

Delivered by: **Michael Parker**

Headmaster, Oxley College, Burradoo

The Performing Arts Centre, Chevalier College, Bowral, Starting Time 6:30 pm

Wednesday 1 July 2015

1234th Ordinary General Meeting

Science in Literature

Delivered by: **Dr. David Ley**

Editor, *Sydney Review of Books*

Union, University & Schools Club

25 Bent St, Sydney, 6.00 pm for 6:30 pm

Wednesday 5 August 2015

1235th Ordinary General Meeting

Complexity and Cultural Transitions 100,000
BP to the Present

Delivered by: **Dr Roland Fletcher**

Professor of Theoretical and World

Archaeology & Director - Greater Angkor

Project, University of Sydney

Union, University & Schools Club

25 Bent St, Sydney, 6.00 pm for 6:30 pm

See Page 5 for dates of other future events

Patron of The Royal Society of NSW

His Excellency General The Honourable

David Hurley AC DSC (Ret'd)

Governor of New South Wales



PUBLIC LECTURE – Wednesday, 3 June 2015

The Science of Spontaneity:

Fred Astaire as Consummate Craftsman

Dr. Kathleen Riley

Union, Universities & Schools Club, 25 Bent St., Sydney. 6:00 for 6:30 p.m. Please note dress code: jacket and tie

This talk will focus in detail on the science behind Fred Astaire's apparent effortless grace, his ability to make something that was technically complex and endlessly rehearsed to look easy and spontaneous. The lighter-than-air grace, the pluperfect precision and the sheer joyfulness of his dancing were the products of a dogged perfectionism, an astonishing musicianship, and an imagination at once whimsical and methodical. It will be seen how, in the more technical aspects of his artistry, Astaire was part of an ancient tradition (that of Roman pantomime) and, at the same time, revolutionary. (Continued on page 4.)



From the President

The Society's annual black-tie dinner took place on Tuesday 5 May and was a great success. We were delighted that the Hon Dame Marie Bashir DistFRSN was guest of honour and delivered the 2015 Distinguished Fellows Lecture. The topic of the lecture – on the contribution of Lachlan Macquarie, the fifth Governor of NSW – was most appropriate. Macquarie was a great thinker and innovator and had an enormous civilising influence on the newly-established colony.

We were also very pleased to make the inaugural award of the Society's newest award Royal Society of NSW History and Philosophy of Science Medal to Dr Ann Moyal, very accomplished historian and writer. And of course, presentation of the 2014 awards were made to Professor Bill Griffin (Clarke Medal 2013 (Geology)), Professor Robert Park

(Clarke Medal 2014 (Botany)), Professor Richard Payne (Edgeworth David Medal), Professor Martin Green (James Cook Medal) and Dame Marie Bashir (Royal Society of NSW Medal).

The first meeting of the 2015-16 Council took place in late April and is off to a very good start. During April, Professor Neil Foster volunteered to become Honorary Secretary (General) of the Society. We are most fortunate to have Neil join the Council, further strengthening it. Professor Ian Wilkinson has volunteered to chair the Programmes and Outreach Committee, Professor Ian Sloan will chair the Membership Committee. Professor Bryn Hibbert will continue to chair the Awards Committee. The Council has started work on implementing the strategic plan that is emerging from the Green Paper that was circulated to the membership during March and discussed just prior to the AGM.

During June, there will be two events in Sydney – the regular meeting on Wednesday 3 June and the Clarke Lecture that will be held in conjunction with Macquarie University later in the month (details are not yet finalised – they will be posted to the website soon as they are confirmed).

As always, I am easily contacted by email at president@royalsoc.all.au and would like to hear from you.

Donald Hector
May 2015

Editor: For photos from the Black Tie Dinner, go to page 3



Call for Volunteers

As one of the Society's initiatives for increasing its numbers and relevance to both its members and the wider public, Council is calling for volunteers to join the following committees:

The **Finance Committee** manages the Society's funds, including their raising, investment, and annual audit. The Treasurer and/or delegate review, approve, and authorise payments. Please contact Dr. Erik Aslaksen, erik.aslaksen@bigpond.com.

The **Membership Committee** manages the recruitment and election of new members, any issues arising with existing members, and awards. Please contact Prof. Ian Sloan, i.sloan@unsw.edu.au.

The **Events Committee** plans, organises, and markets the Society's activities. When appropriate, the committee liaises with organisations involved in joint events. It manages the website, social media, and the Bulletin. Please contact Prof. Ian Wilkinson, ian.wilkinson@sydney.edu.au.

The **Administration Committee** manages the Society's secretarial services, library, records/archives, assets, legal affairs, and governance. Please contact Prof. Neil Foster, n.foster@unsw.edu.au.

Publications produces the Proceedings and Journal. Please contact Prof. Michael Burton, editor@royalsoc.org.au.

Award Recipients at Annual Black Tie Dinner



The award recipients and Society officers (L to R): Prof. Bill Griffin (Clarke Medal 2013 – Geology), Prof. Richard Payne (Clarke Medal 2013 – Geology), Prof. Robert Park (Clarke Medal 2014 – Botany), Dr. Ann Moyal AM (Inaugural Royal Society of NSW History and Philosophy of Science Medal), Dame Marie Bashir AD CVO (Royal Society of NSW Medal), Ms Judith Wheeldon AM (Vice President), Prof Brynn Hibbert (Vice President), Donald Hector (President)

(Continued from page 1)

The Science of Spontaneity: Fred Astaire as Consummate Craftsman.

The first half of the talk will concentrate on Astaire the eloquent dance stylist and specifically his *symmetria*, the perfect ‘commensurability’ of all parts of his body to one another and to the whole, and his *eurythmia*, his interpretive games with the shape and logic of music, his inventive use of the off-beat and experiments with broken rhythm, and his syncopated language which impressed Bertolt Brecht as the sound of the modern environment.

The second half will consider Astaire the cinematic craftsman, his instinctive understanding of how best to present dance on film, his pioneering use of special effects

(e.g., slow motion and split screens), and his role in improving sound synchronization. (Film clips will be shown.)

Kathleen Riley is a former British Academy Postdoctoral Fellow in Classics at Corpus Christi College, Oxford and now a freelance writer, theatre historian and critic. She is the author of “Nigel Hawthorne on Stage” (University of Hertfordshire Press, 2004); “The Reception and Performance of Euripides’ Herakles: Reasoning Madness” (Oxford University Press, 2008); and “The Astaires: Fred and Adele” (Oxford University Press, US, 2012). The last was included in the Wall Street Journal’s Best Non-Fiction 2012 and described by legendary singer Tony Bennett as ‘a magnificent book about the trials and tribulations of show business’.

In 2008, she convened at Oriel College, Oxford the first international conference on the art and legacy of Fred Astaire. She was Script Consultant on the critically acclaimed stage production “My Perfect Mind” which had its London premiere at the Young Vic in 2013. Her current projects include a monograph exploring the ancient Greek concept of *Nostos* (homecoming) and an edited volume of essays on Oscar Wilde and Classical Antiquity. She continues to have an association with the Archive of Performances of Greek and Roman Drama (APGRD) in Oxford.



Report of 21 May 2015 Meeting of the Royal Society Southern Highlands Branch

Speaker: Robert Pritchard Topic: The Energy Gods Must Be Crazy



Robert Pritchard

This was an unusual lecture for the Southern Highlands Branch of the Royal Society, in that the 60 person audience was addressed by a lawyer rather than by a prominent scientist. Robert Pritchard's address provided a different viewpoint on the energy situation in Australia from those heard over recent years in our energy lectures. It was clear from the animated questioning and long applause at the end of the lecture that Pritchard's views had struck a nerve with many of those attending.

Robert Pritchard is Executive Director of the Energy Policy Institute. He is also Managing Director of Resources Law International, a Sydney-based consultancy in the energy and natural resources industries. He specializes in international energy policy and strategy. He was the founding Chairman of the Section on Energy and resources Law of the International Bar Association and served for nine years on the Finance Committee of the World Energy Council. He is the author of many publications in the field of energy and natural resources. With this fine background, he was well suited to present his viewpoint of the energy situation in Australia.

Pritchard's Energy Policy Institute of Australia is an independent, apolitical, energy policy body with three main goals. The first is to promote an investment climate in

Australia in which capital may be safely invested and which will ensure that Australian industry remains internationally competitive. The second is to support free market choices within a sound national and global policy framework, while the third seeks to align all government policies to underpin the sustainability of energy supply.

With these goals clearly enunciated, the Energy Policy Institute was a natural participant in the commentary process for the Energy White Paper (EWP) released by the Australian government in 2015. His view was that although the final document is replete with a wide range of policy principles and recommendations, it is also replete with an unacceptably high level of unresolved issues.

Pritchard believes that energy policy in Australia has been rendered irrelevant to investors, because it is no longer either reliable or predictable. He says that the principal explanation is an excessive level of politicisation of energy issues which has created policy uncertainty for investors. This is a matter of serious political, economic and social concern. Another explanation, unique to Australia, is that too many Parliaments are involved and there are limits to what can be achieved by 'cooperative federalism'. Pritchard believes that energy policy in Australia will remain irrelevant until it can be lifted

to 'investment grade', involving a long-term Australian energy vision. This long-term vision he believes must embody four key elements: 1) a resilient energy system 2) export growth 3) a low-carbon society and 4) innovation in energy production and supply.

Robert Pritchard had a lot to say about the damaging effects of competing domestic policies on the energy picture in Australia, where for example, consensus among the state and federal governments has been well nigh unattainable. He despaired at the huge chasm between the requirement for energy investment to be of a very long-term nature to ensure that the massive capital outlays involved are well invested, and the nature of the short-term lives of successive governments and parliaments. His views of the effects of short-term government policies acting completely contrary to the needs of high capital projects being implemented over 20-40 years were clearly reflected in his closing comments when he invoked the words of American theologian Reinhold Niebuhr's Serenity Prayer:

*God, grant me the serenity to accept the things I cannot change,
The courage to change the things I can,
And the wisdom to know the difference.*

Anne Wood

Sir Tannatt William Edgeworth David, KBE, CMG, DSO, FRS, DSc, LLB

The Edgeworth David Medal – recently awarded to Professor Richard Payne, University of Sydney – commemorates the many achievements of Sir Tannatt William Edgeworth David, KBE, CMG, DSO, FRS, DSc, LLB (1858-1934). According to available biographies, his life as a geologist far exceeded that of the fictional archaeologist Indiana Jones.

He was born in Cardiff and educated at Oxford. After graduating with a BA in 1880, he conducted field studies of glacial action in Wales and read his first paper in 1881. The next year, he was appointed Assistant Geological Surveyor for New South Wales.

Upon arrival, David mapped tin deposits in New England and discovered coal seams in the Hunter Valley. In 1891 he was appointed Professor of Geology at the University of Sydney, a post he occupied until 1924. From there, he and his students ranged more widely. In 1897, he directed drilling at Funafuti Atoll and obtained evidence for Darwin's theory of the formation of coral atolls.

In 1907, David, with former students Douglas Mawson and Leo Cotton, joined Ernest Shackleton's Antarctic expedition. While there, David, with Mawson in company, led the first successful ascent of Mt. Erebus. Subsequently, David, Mawson and Forbes McKay made the first journey to the South Magnetic Pole. Over four months, the trio covered a distance of 2028 km, which stood as the longest unsupported sled journey until the mid-1980s. David received his first knighthood in 1910.

In August 1915, after reading reports about mining operations during the Gallipoli Campaign, David and a colleague from Melbourne proposed the establishment of the Australian Mining Corps. He was appointed as a major at the age of 57. From May 1916, he served in France as the chief geological advisor to the British armies concerning construction of trenches and siting of drinking wells, along with tunneling operations. These operations culminated in the mining of German positions in the Battle of Messines. David was awarded the Distinguished Service Order, mentioned in dispatches four times, and promoted to lieutenant colonel.

Returning to Australia, David began writing a definitive book, *The Geology of the Commonwealth of Australia*. In 1931, he published the *Geological Map of the Commonwealth and the accompanying Explanatory Notes*, designed to be part of the larger work. He continued to work on the book until his death and state funeral in 1934. The book was completed in 1950 by his chosen collaborator, Associate Professor William R. Browne.

For more information, see:

<http://adb.anu.edu.au/biography/david-sir-tannatt-william-edgeworth-5894>

http://sydney.edu.au/science/about_us/fame_david.shtml

http://en.wikipedia.org/wiki/Edgeworth_David



Stamp issued 1968



Mackay, David and Mawson at the Magnetic South Pole, 16 January 1909



Major Edgeworth David

Sydney Science Festival 13–23 August 2015

Led by the Museum of Applied Arts and Sciences, this city-wide festival will provide serious science fun for adults, families, school groups, for young and old and in-between, for geeks, non-geeks, for everyone with curiosity.

There will be talks by researchers, hands-on workshops, opportunities to chat with scientists, children's activities and panel discussions where you can have your say alongside celebrity science speakers. The full program will be available in late June.

The Society's Events Committee has submitted an expression of interest in presenting a series of lunchtime talks by the Society's Fellows as its contribution to the Festival. Fellows who wish to offer a talk, please contact the Committee Chair, Prof. Ian Wilkinson, ian.wilkinson@sydney.edu.au. Unfortunately, the deadline is short: 31 May.

Dates for Your Diary

16 July – Southern Highlands Branch (SHB) Lecture

27 August – SHB Lecture

2 September - 1236th OGM

15 September - Royal Society Forum on the Future of Work

24 September – SHB Lecture

7 October - 1237th OGM

15 October – SHB Lecture

4 November - 1238th OGM

17 November –AIP Postgraduate Awards Day and Jak Kelly Award judging

19 November – SHB Lecture

2 December -1239th OGM (Jak Kelly Award, Christmas Party)

Contact Your Officer Bearers and Council Members

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