



The Royal Society of New South Wales Bulletin and Proceedings 311

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Future Events 2008

*Thursday 28 February at the
Darlington Centre: The Four Societies meeting.*

*Early March (date to be confirmed) the Annual
Dinner of the Society.*

*Wednesday 2 April our Annual General Meeting in
the Darlington Centre*

From our Christmas party at St Paul's College ...

Our host, Councillor Jim Franklin



*Above L to R, Councillor Dr Mike Lake with Office
Manager Val Gregory and her husband, Max.*

*Below L to R, Vice President Professor Jak Kelly with
President John Hardie and Dr Peter Tyler*



*Above L to R, Hon Treasurer, Marian Haire with
Councillor, Prof Tony Baker and Gayle Webb.*

Review of the Clarke Memorial Lecture – 5 December 2007

The Architect and the Statesman

Archibald Liversidge, Edgeworth David, and the Spirit of Science in Sydney, 1874 – 1934

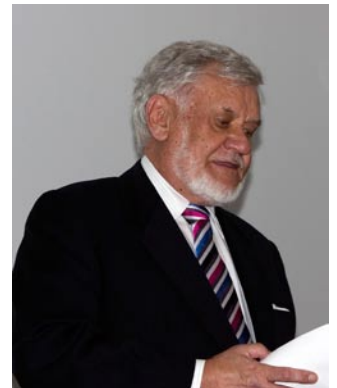
The 2007 Clarke Lecture was delivered on the 5th of December at the Darlington Centre, University of Sydney. An audience of some 50 people were drawn from the Royal Society of New South Wales and the Geological Society of Australia, NSW Branch as a joint meeting. The lecture was unusual in that it was presented by two distinguished scholars: Professor Roy MacLeod and Dr David Branagan. Their subjects were scientists who were extremely influential in scientific Sydney around the turn of the 20th century – Archibald Liversidge and Edgeworth David, respectively.

The two scientists featured in the lecture were both significant contributors to the Royal Society of New South Wales. They were both influential in establishing science in Australia, building on the growing interest in science following the endeavours of the initial generation of scientists. Both Liversidge and Edgeworth David were instrumental in establishing some permanent institutions to support research and education in science. Liversidge arrived in Australia in 1872 and David arrived here in 1882, though his university appointment dates from 1891.

Certainly both David and Liversidge were characters of national importance, holding considerable status in society. Both were born in Britain but in somewhat different circumstances. David was the son of a clergyman and studied at Oxford, whilst Liversidge was born to the East end of London, the son of a wheelwright. Liversidge's education was less straightforward than David's involving study at the Royal College of Chemistry and the Royal School of Mines. Talent was recognised and he did study at Cambridge on a scholarship at Christ's College, though he didn't complete his BA (his Cambridge MA honoris causa was awarded in 1887).

The untimely death of Alexander Morrison Thomson (1841-1871) made it possible for Liversidge to be appointed Reader in Geology at the University of Sydney in 1872. In his tenure Liversidge rejuvenated the Royal Society of New South Wales, formed the organisation that would become ANZAAS, campaigned for a national academy of science (not realised until the 1950s) and tried to found an Australian equivalent of Nature. It is interesting that he founded a Sydney section of the Society of Chemical Industry and, though very supportive of local scientific organisations, did not see the need for an Australian chemical society (the push for a local chemical society came from Masson, professor at the University of Melbourne).

Liversidge made a great contribution to chemical education in that he built the student numbers from about 10 to over 300 in his time in Sydney (1872-1907). He also campaigned within the University of Sydney for the establishment of a Faculty of Science and served as Dean from 1879-1907. He was a foundation member of the Board of Technical Education, the body that oversaw the foundation of the Sydney Technical College.



*The vote of thanks for the Clarke
lecturers was given by historian, Dr
Peter Tyler.*

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Patrons

**His Excellency, Major General Michael Jeffery AC CVO MC (ret'd),
Governor General of the Commonwealth of Australia**

Her Excellency, Professor Marie Bashir AC CVO Governor of NSW

Meet Val Gregory

RSNSW Office Manager for 2008



I have always been interested in science. My childhood years, living near the bush, provided many sensory and practical experiences on which to build an understanding of

the natural world, leading eventually to a BSc from Sydney University, majoring in biology.

Armed with binoculars, camera, geological pick and various field guides, Max and I began our married life following a travel itinerary provided by **Branagan and Packham's Field Guide to Geology**.

Living in the bush in a steel and glass shed for many years provided our children, Stefan and Anna, with their own first-hand experience of scientific and mathematical concepts as they helped build and maintain the simple technology we used to make electricity, heat and pump water, and build a house. The concept of continuous probability distributions was visibly obvious when they had to sort 600 slate tiles into piles according to thickness. We thought we were answering their questions patiently and with appropriate detail until they begged for yes or no answers.

A significant proportion of my working life was spent teaching and promoting science and applied science to adults in TAFE. This included encouraging women into technology, inspired by my association with WISENET (Women in Science and Technology).

Then followed postgraduate studies in online publishing, which led to designing and building websites and working with the Intel Young Scientist Awards Scheme.

Currently I am still working in science related areas as a tutor at Sydney University and as a casual educator at the Australian Museum, where I have also volunteered for many years.

My current interests include how language shapes mind, human evolution, drawing, the poetry of R.D. Fitzgerald, and coding websites to assist people with disabilities.

Welcome Val – and our thanks to Irene for her extraordinary contribution over the years. Irene will be helping Val next year.

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Review of the Clarke Memorial Lecture...continued from p1

He was also an active ambassador for NSW science as a member of the state delegation to several international exhibitions. It can be argued that due to his relative isolation he did not embrace overseas developments in chemistry and the work that he was doing into the 20th century was decidedly old-fashioned. Nevertheless he made great contributions to the development of the mineral resources of NSW through his research, including his well-known *Minerals of New South Wales*.

Interestingly, Liversidge had a hand in the appointment of David to the position of assistant geological surveyor in NSW. Much of David's work was on coal and his discovery of a seam of coal at Deep Creek in the Maitland district was based on careful geological mapping. This work brought him to public attention. He was appointed Professor of Geology in 1891, with the local committee holding sway over the London committee who recommended another candidate. His initial resources as Professor were modest in the extreme. He came to international prominence because of his work on Funafuti where he supervised the boring of a deep section (eventually 340 m deep). The results supported Darwin's idea that coral atolls had grown on slowly sinking platforms. For this work he was awarded the Bigsby Medal of the Geological Society, London and elected to the Royal Society, London.

In 1907, David, along with two former students Mawson and Cotton, joined Shackleton's expedition to Antarctica. He was granted leave by the university but overstayed his leave



President John Hardie, right, presenting the Society's medals to Clarke Lecturers, Professor Roy MacLeod, centre, and Dr David Branagan, left.

considerably. He turned 50 within sight of Mount Erebus and was the leader of the group which first reached the summit. David returned to Sydney in March 1909 to a hero's welcome and the issue of the unauthorised leave simply disappeared. Some animosity arose with other polar explorers because David managed

to be the first home and gain the lion's share of the glory.

David served in WW I providing advice on trenches and tunnels, making a significant contribution to military geology. He was promoted to lieutenant colonel, was mentioned in despatches three times and was awarded the DSO. He was appointed KBE in 1920. He had long intended to write a comprehensive account of the geology of Australia and he devoted much of the 1920s to this task. His health was failing but he managed to publish a large-scale *Geological Map of the Commonwealth of Australia* and associated explanatory notes in 1932.

Both these scientists were practical men who pursued natural knowledge as part of a practical quest to understand the world and its resources. They were both specialists, in an increasingly specialised world, but were generalists in their ability to communicate science and assist with its spread. They were both confirmed "Empire men", displaying an imperial ethos – taking traditional British values to build a new commonwealth of science. They contributed through building both the prestige and professionalism of Australian science.

Professor Tony Baker

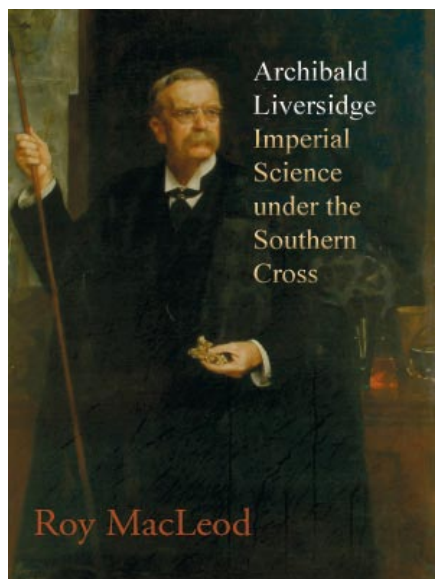
Final AIP Bulletin for 2007

distributed by Dr Cathy Foley

What's happening in physics around the country?

This month, Bill Phillips, Nobel Laureate from 1997 is speaking on time and Einstein in Brisbane; Alain Aspect from the Universite de Paris-Sud is speaking on the applications of quantum physics at the Shine Dome in Canberra; Tanya Monro, our "Women in Physics" lecturer, is talking on molding the flow of light in Adelaide; and in Melbourne, Avi Loeb from Harvard University is talking on the future of the milky way. For more information on physics events visit <http://www.aip.org.au> and click on 'physics events' or on your state branch.

For those who wish to learn more about Liversidge



The Royal Society of NSW and the Sydney University Press are working with Professor Roy MacLeod on the publication of his book, *Archibald Liversidge: Imperial Science under the Southern Cross*. This is a very appropriate project for the Society; Liversidge was for many years on its Council as honorary secretary from 1874 to 1884 and 1886 to 1888 and as president in 1885, 1889 and 1900. For many years he was the editor of the Society's Journal and Proceedings. He also had a great influence on science education within the University of Sydney. In 1873 Liversidge became 'Reader in Geology and Assistant in the Laboratory' and in 1874, professor of chemistry and mineralogy. In 1876 he published *The Minerals of New South Wales*.

The book is due for release early in April 2008

Pre-publication offer

Members of the Royal Society, the Geological Society of Australia and other affiliated societies are invited to take advantage of the pre-publication price of \$39.95 for a limited number of copies. It is anticipated that the recommended retail price will be in the order of \$65. To reserve your copy, contact The Royal Society of NSW (see p4)

From the President

December 2007

Next year is building to be quite a year for the Society. Already we have the makings of a lively and informative series of lectures for our Monthly Meetings in Sydney, and I hear there are some exciting things in the pipeline for the Southern Highlands Branch too. Our Sydney lectures will cover topics as diverse as tsunamis, the Milky Way and where we are with rabbits in Australia. And we are reviving our Studentship awards which will mean we can all hear the winners present aspects of their research at a special meeting towards the end of the year. Our complete program will be finalised shortly and made available on the web and in our usual fold-out brochure.

The Four Societies Meeting, traditionally held at the end of February each year, will most likely be on energy issues this time, just as we digest the outcomes of the recent Bali conference on climate change.

March will see our Annual Dinner when we will be able to mingle with our prestigious Awards recipients. This heralds the end of one Society year and the start of a new one – on 2 April when we have our AGM and Presidential Address – let's see what that might hold!

At that time of year we expect to launch the first major publication the Society has been involved with for some time – a splendid account of the life and times of Professor Archibald Liversidge, referred to elsewhere in this Bulletin. We're pleased to be associated with Sydney University Press in this endeavour.

Finally, there are several challenges we face as we enter the new year:

- Planning for an increased focus on science in the community
- Fulfilling the recommendations set down in the latest Community Heritage Grant report on our holdings
- Securing our future through increased membership, a recognisable profile, a solid donation and bequest platform, and more secure accommodation
- Streamlining some of our office operations
- Making greater use of the Internet for communication, promotion and the Journal.

I think we can meet all of them and look forward to working with all of you to do so.

Best wishes for 2008.

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Membership matters

–and more

The Royal Society of NSW is on the move. This year we have seen a significant increase in membership: 32 new members in 2007, five of whom were complimentary – a courtesy extended to our speakers.



Dr Paul Willis, ABC Science personality, recently joined the Royal Society – welcome Paul.

It has been a year of many changes.

The website has been revamped and it is being updated. The Bulletin and Proceedings has been redesigned

and is now available in colour by email as a pdf or via the website.

We had another year of excellent monthly lectures ending on the high note of the Clarke Memorial Lecture (see the review of this on p1). Again we successfully completed a second project funded through the Australian National Library's Community Heritage Grant.

Calling volunteers

Val and Irene are asking for some volunteer help in the office. Now that all our hard work is being rewarded by increased membership and various new activities, the office workload has increased beyond the capabilities of the funding for a two-day staff week. Already the office manager puts in considerably more time than this. There are many routine tasks that need to be done and so we are calling for some volunteer help. The University is an exciting place to work. Why not contribute a day or two of your time?

Please contact Val Gregory on 02 9036 5282 or by email: valg@zeta.org.au

Members

You are invited to contribute articles and notices to the Bulletin. Do you have comments to make? Are there events coming up that we should all know about? Please send in your contributions by the end of the first week of the month to the Society's office (contact details p4).

Donations please

Another product of our increasing activity is the need for extra funding. The Liversidge book is going to require up-front funding which needs the support of our members. We are also hoping to do more work on our collection and once we have the space, there will be the need for the extensive work of a professional conservator.

Do we have members who might be interested in fund raising for the Society? If you know someone who would be interested in supporting the preservation of our library please ask them to support this excellent work by providing financial support. Remember donations of \$2 or more to our Library Fund are tax deductible. Cheques should be made out to the Society. See contact details below.

Why not join the Council?

Calling for nominations to Council for 2008/2009. If you want to help steer the direction of the Society at this exciting time in its history, now is your chance to become involved.

The Society's Rules and By-Laws stipulate that the positions of President, Vice-Presidents (4), Honorary Secretaries (2), Honorary Treasurer, Honorary Librarian and Councillors (8) be elected at the Society's Annual General Meeting in April of each year.

Nominations for these positions in 2008/9 must be received by the Honorary Secretary before 1st March 2008. They should be endorsed by two financial members and accompanied by the signature of the nominee.

Please complete form included with this Bulletin and return it to the Hon. Secretary before 1st March 2008 using the address below.

Report on the Community Heritage Project

Peter Tyler's CHG report to the Australian National Library is now available to those interested as a pdf document. It is in two parts: the report itself and an appendix. At this stage there is only one copy held at the Society's office so members without a connection to the internet might wish to arrange a time with the office manager to peruse the report.

Scientists hit the popular press

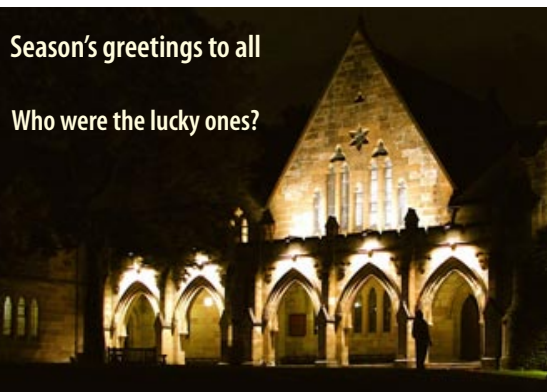
Is this a sign of a much needed turn-around for science? Perhaps science is at last receiving recognition in some of the more popular magazines. Issue 57 of Sydney Morning Herald's *the (sydney) magazine* is devoted to *the (top100)*: Sydney's most influential people. These people are distributed across four major categories and one, Innovation, Science and Technology features **Dr Cathy Foley** as 'the physicist'. Cathy, who is the research program leader for CSIRO Materials Science and Engineering, has done wonders publicising physics education throughout the community.

Professor Mike Archer is recognised as 'the explorer' for his work on the World Heritage Riversleigh fossil fields. Mike is Dean of Science at the University of NSW. Others who are mentioned in this section are **Nick Rowley**, director of Kinesis, a consultancy that helps governments and business understand climate change; **Professor Michelle Simmons** (University of NSW) who is director of the Atomic Fabrication Facility, and **Professor Benjamin Eggleton** from the University of Sydney who is director of ARC Centre for Ultrahigh Bandwidth Devices for Optical Systems

Scientists also get a mention in the Community section under the headings, environment, health and medicine and education.

Not to be outdone, *The Weekend Australian Magazine* (December 15-16) features *The A-List*, the people who mattered most in 2007. **Professor Jean Joss** from Macquarie University is recognised for her work on Queensland lung-fish, a remarkable living fossil and **Professor Frank Fenner**, a virologist and microbiologist, is thinking of retiring at the age of 93 from the Australian National University's John Curtin School of Medical Research.

No doubt we could argue that these are but few of the scientists who make major contributions to science and the Australian community, but at least there is some recognition for science.



Season's greetings to all

Who were the lucky ones?

We were the lucky ones – we were the group of 50 or so guests at the Royal Society's Christmas party.

A beautiful evening in the exquisite setting of The Cloisters of St Paul's College (pictured). Wonderful catering with the professional staff providing delicious food, washed down with excellent wines.

Thank you Jim Franklin.

Contact your office bearers

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