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# The Royal Society of New South Wales Bulletin and Proceedings 351

## Future Events 2011

Lectures in Sydney are held on the first Wednesday of the month at 6.30pm.

### Commemorating Governor Sir Thomas Brisbane

**Thursday 1 December 2011 at 5:30pm**  
Annie Wyatt Room, The National Trust,  
Observatory Hill, Sydney  
**Saturday 3 December 2011 at 2pm**  
Parramatta Park, Parramatta.  
Booking essential. See separate flyer.

**Wednesday 7 December 2011  
at 6.30 pm**

### Royal Society of NSW Studentship Awards and Christmas Party

St Pauls College, University of Sydney.  
Booking essential. See separate flyer.

**Tuesday 13 December 2011  
at 5.30pm**

### Clarke Memorial Lecture Professor John Dewey

University College Oxford  
Ordovician arc-continent collision in  
the Appalachian/Caledonian Orogen  
Eastern Ave Auditorium, University of  
Sydney. See separate flyer.

**Thursday 24 November 2011  
at 6.30 pm**

### Ben Haneman Memorial Lecture

**Dr Peter Tyler**  
State Library of NSW, Macquarie  
Street Sydney. See separate flyer.

## Annual Dinner 2012

**Friday 24th February 2012.**  
St Paul's College, University of Sydney.

## The 1198th Ordinary General Meeting

### The Society's Studentship Award Presentations for 2011

**Wednesday 7 December 2011 at 6.30 pm, Rodgers Room, St Paul's  
College, University of Sydney**

Our final meeting for 2011 features research presentations from the winners of the Society's Scholarships. The winners were selected from a range of high quality submissions from PhD students at several different universities in NSW. They are listed below, together with the titles of their presentations. In addition, the winner of the Australian Institute of Physics (AIP) Royal Society of NSW Scholarship will give a presentation; this winner will be decided at the special AIP event to be held on Tuesday 22nd November. Congratulations to all the winners!



**Andre Kyme**, Brain & Mind  
Research Institute and School  
of Physics, University of Sydney.  
His project is "An investigation of  
animal motion tracking to facilitate  
preclinical imaging of conscious  
animals".



**Benjamin Parker**, Discipline of  
Pathology, University of Sydney.  
His project is "The use of mass  
spectrometry to identify protein  
modifications associated with  
ischemia / reperfusion injury in the  
brain and heart."



**Amelia Edington**, Discipline  
of Pharmacology, University of  
Sydney. Her project is "Identifying  
drug binding sites on glycine  
transporters to assist with the  
development of a novel class of  
analgesic compounds".

Booking is not necessary. All welcome. Entry is free to RSNSW members. There is a charge of \$5 for non-members.

## Patrons of The Royal Society of NSW

**Her Excellency Ms Quentin Bryce AC CVO**

**Governor-General of the Commonwealth of Australia**

**Her Excellency Professor Marie Bashir AC CVO**

**Governor of NSW**

## Grid-connected Energy Storage: the Key to Sustainable Energy?

**Professor Tony Vassallo**

Lecture delivered at the Society's 1197th Ordinary General Meeting  
Wednesday, 2 November 2011

Many countries in the world are committing large amounts of research resources to the development of sustainable energy generation technologies. One major disadvantage in using electricity as an energy source is that it is difficult to store. Renewable energy sources have the added problem that they are only available at certain times. For example, solar energy is only generated when there is strong sunlight.

At the meeting of the Society in Sydney on 2 November, Professor Tony Vassallo, the Delta Energy Professor of Sustainable Energy Development at the University of Sydney, gave a comprehensive coverage of the issues, challenges and potential advantages of having energy storage that can be directly connected to the electricity distribution grid.

There are important technical and economic reasons for wanting to store energy so it is quickly accessible to the consumer via the grid. Electricity demand varies quite substantially over the day, with this pattern also depending on the time of year. In summer, air-conditioning loads in the afternoon are high, while in winter loads peak in early evening and early morning. Most of Australia's electricity is generated in large, coal-fired power stations and these can take hours to react to changes in demand, so for

these to be able to respond without the risk of blackouts, a lot of energy is wasted. Currently, the only means of providing reasonably responsive energy to the grid is via the Snowy Mountains hydroelectric system.

Many technologies are currently being developed to provide energy storage capacity. These include thermal storage using molten salt (for example, in Spain), hydroelectric storage, compressed air, superconducting magnets, ultra-capacitors, high-energy/high-efficiency flywheels and a range of battery technologies.

One promising technology avenue is integrating battery technology with renewables. For example, used in conjunction with wind energy generation, battery storage can reduce short-term fluctuations and allows dispatch when the load is high. It also allows a higher proportion of the total wind generation capacity to be included in the calculation of base-load capacity and lowers the capital cost of transmission equipment because the variability in load is reduced. The question Professor Vassallo addressed was: is battery technology feasible?

Currently large battery banks have been installed in pilot installations in other parts of the world, for example a 34 MW battery bank in a 50 MW

wind-farm in Japan. But it may not be necessary to install such large battery banks that have high capital cost. For example, batteries can be distributed throughout the grid to zone substations and local substations. Another innovative concept is to use the batteries in electric cars to provide storage – during the times when demand is high and cars are not being used (for example early afternoon on a hot day), car batteries connected to the grid could provide localised storage capacity. Commercial models of these concepts are currently under development.

Professor Vassallo's own research programme relates to developing advanced battery and super capacitor technologies, such as graphene/nanotube capacitors, the use of regenerative fuel cells and the role of distributed storage in electricity networks.

Donald Hector

### New Professional Members

Council recently approved applications by the following members to upgrade their membership to Professional status in accordance with the new provisions announced recently. This allows them to have their professional qualifications and attainments recognised by the Society and to use the postnominal MRSN. Congratulations to:

Mr Antony Bailey  
Mr John Marchant  
Dr Michael Steer  
Dr Eva Papp  
Dr Christopher McErlean  
Prof Gisela Kaplan  
Prof Lesley Rogers  
Assoc Prof Charles George  
Dr William Kneprath



*Professor Tony Vassallo (left) receives a Speaker's Medal from the President*



## Commemorating Governor Sir Thomas Brisbane

The Royal Society of NSW, The National Trust of Australia (NSW) and Parramatta Park Trust have joined forces to celebrate the 190th anniversary of the commencement of the incumbency of Governor Sir Thomas Brisbane on 1 December 1821, and of his presidency of the Philosophical Society of Australasia, the initial precursor to the Royal Society of NSW.

As previously flagged, the commemoration will comprise two events. The first will take place at 5.30 for 6.00 pm on Thursday 1 December 2011 in the Annie Wyatt Room, The National Trust, Observatory Hill, Sydney. Our Historian, Dr Peter Tyler, a former President, Dr Ragbir Bhathal, and Associate Professor Carol Liston from the University of Western Sydney, will give their own interpretations of the impact of Governor Brisbane on the intellectual life of Australia.

The second event will take place at Old Government House in Parramatta Park two days later on Saturday 3 December starting at 2.00 pm. Anne Bickford, Director, Archaeology and Heritage Pty Ltd will give a talk and conduct a guided tour of Brisbane's Observatory remains. This will be followed by a tour of Old Government House conducted by its Manager, David Hoffman. For further details and booking information please refer to the separate flyer.



Governor Brisbane

## Governor invests new Fellows

The Society was very pleased to have the remaining two Fellows of the Society for 2010 invested with their Awards by our Patron, Her Excellency Professor Marie Bashir, Governor of NSW, at a private function at Government House on 9 November. Professor Kurt Lambeck and Professor Elizabeth Blackburn were overseas when Her Excellency presented our Awards at our Annual Dinner on 18 February so she very kindly agreed to bestow these Awards on them at this time. Lord May was also unable to be

present in February and Her Excellency was able to perform his investiture on 29 April during his visit to Australia.

At this most recent event Professor Blackburn was represented by Professor Roger Reddel, Lorimer Dods Professor and Director, Children's Medical Research Institute Westmead, who indicated that he was able to pass the Award to Professor Blackburn the following week. Our congratulations go out to our new Fellows.

John Hardie



Professors Roger Reddel (left, on behalf of Professor Elizabeth Blackburn) and Kurt Lambeck with the Governor and the President after receiving Fellow Awards at Government House, Sydney

## Clarke Memorial Lecture for 2011

We are pleased to announce that this year's Clarke Memorial Lecture is presented in conjunction with the School of Geosciences, University of Sydney, the Australian Academy of Science and the Geological Society of Australia (NSW Division).

This is a very special occasion for geology in NSW as the Clarke Lecturer is the eminent British/US academic Professor John F Dewey, Senior Research Fellow at University College, Oxford and Professor of Geology at the University of California, Davis. His Lecture is entitled 'Ordovician arc-continent collision in the Caledonian-Appalachian Orogen'. It will be held in the Eastern Avenue Auditorium at the University of Sydney at 5.30 pm on Tuesday 13 December 2011. All members are encouraged to attend but need to book with the university (see separate flyer).

The lecture will be followed by a cocktail reception for Professor Dewey hosted by the Head of School of Geosciences and holder of the Edgeworth David Chair at the University of Sydney, Professor Jonathan Aitchison, to which all members and their guests are invited (booking essential).



Professor John Dewey

## Lecture Delivered at the Society's 1196th Ordinary General Meeting

### Sex in the Sea: research in fish reproductive ecology and its application in marine conservation

Professor Bill Gladstone

5th October 2011

Compared to mammals, fish reproductive strategies are remarkably diverse. The rules for mammals are both simple and binding: (i) gender is genetically determined and is fixed for life; (ii) males compete while females choose; (iii) if males are markedly bigger than females the species is almost certainly polygamous, if sizes are equal the species is probably essentially monogamous; and (iv) females provide most of the direct parental care. However, as Professor Bill Gladstone explained at the 1196th OGM, fish break all the rules and even closely related species can have wildly different strategies.

An extreme example is the angler fish that lives in the lightless zone at depths of over 3,000 m. (The fish are so named because the females angle for other fish with a lighted lure on the end of a fleshy line.) Mature females release an odour that attracts males. When a male tracks her down, he eats a hole in her soft side and becomes permanently attached, drinking her blood. Over time the male's body withers away and he becomes just a parasitic worm with gonads, releasing sperm at her command. Some female angler fish even have a harem of these sexual parasites, permanently attached so that she can fertilize her eggs whenever she chooses. As Bill explained, the reason for this bizarre behaviour is the fish's environment. Food is very scarce at these depths so angler fish are few and far between and most males probably never even manage to find a female. So it makes sense for them to become permanently attached to the one they do chance upon (this gives a whole new meaning to the phrase "pair bonding"). The females have to be big to provide enough energy for spawning, while the males only contribute a tiny bit of sperm which means that they can be small.

Evolution has ruthlessly carried the argument to its logical conclusion. The female angler fish can weigh up to several thousand times as much as a male, which, at a mere 7.9 mm length, is the world's smallest known vertebrate.



*Female angler fish with her attached male sexual parasite*

Another area where fish differ greatly from mammals is gender. For mammals gender is always irreversibly determined at conception, but things are much more complex with fish. Many species are born male and mature to become females (with fish, females are generally larger than males or at least not smaller). A few species are all born female and grow up to become males. And some species can even change sex back and forth in a few minutes, quickly taking advantage of a local shortage of either sex.

Bill's main research interest is how fish reproductive ecology impacts upon marine conservation. At his Terrigal research site 10,000 males arrive almost simultaneously, swarm into a tiny area measuring only 150 m x 20 m and do the usual male thing of selecting territories amongst the rocks, preparing an egg laying area by carefully cleaning a chosen part of a boulder, and fighting off male competitors. The females arrive a few days later and cruise around, looking for males with the best territories. They then deposit their eggs on the

rocks and race off, literally leaving the males holding the babies. The males fertilise the eggs and stay with them until they hatch. They work without eating, constantly circulating the water around their eggs and chasing away predators. After a few days, the eggs hatch almost simultaneously and a cloud of 100,000,000 larvae is rapidly swept by the current past swarms of waiting predators into the safety of the deep sea.



*Professor Bill Gladstone (left) receives his Speaker's Medal from Professor Heinrich Hora.*

Bill has spent several years researching why the fish select that particular area and what the implications are for marine conservation. Many hundreds of hours of underwater measurements have shown that the fish have selected sites with the maximum shelter, with a strong preference for the underside of an overhang. This offers good protection but poor natural circulation, hence the need for the males to manually circulate the water. The larvae are extremely vulnerable immediately after birth (they can't even swim for the first 24 hours) so the fish have selected an area where the current rapidly sweeps the larvae off the reef and into the relative safety of deep water. By understanding how the fish reproduce and why they make the choices they do, Bill is able to design conservation areas and conservation strategies that help preserve these remarkable creatures.

Jim Franklin



# Southern Highlands Branch

## Report of November 2011 Meeting:

### An update on the impact of the human genome project

Professor John Shine, Executive Director, Garvan Institute of Medical Research & Professor of Medicine & Professor of Molecular Biology, UNSW



Professor John Shine was welcomed by an audience of 45 at the last meeting of 2011 for the Southern Highlands Branch. He became Executive Director of the Garvan Institute in 1990, when gene cloning was starting to have a big impact in medical research; now, 21 years later, he is about to move on to another position. His name is known to most undergraduate biology students for his role in defining the Shine-Dalgarno gene sequence, which is responsible for the initiation and termination of protein synthesis.

Shine has held numerous scientific advisory roles, including Chair of the National Health and Medical Research Council (NHMRC) from 2003-2006 and Vice President (Biological Sciences) Australian Academy of Science from 2002-2007. In 2010 he received the Prime Minister's Prize for Science, the nation's most highly respected award for scientific achievement.

Professor Shine focused his lecture on "big" science and health care impacts, covering the areas of genomics, epigenomics, proteomics, metabolomics and bioinformatics. In introducing his human genome project to the audience, he quoted from the United Nations' Universal Declaration on the Human Genome and Human Rights, "The human genome underlies the fundamental unity of all members of the human family, as well as the recognition of their inherent dignity and diversity. In a symbolic sense, it is the heritage of humanity."

The human genome project has made remarkable advances. It is known that the human genome sequence contains 3.2 billion bases. In 2000, the process of determining the sequence for an individual was estimated to take 15 years and cost approximately \$3b. By

2011, the time frame had been reduced to 2 months and the cost to about \$20k. It is now clear that by 2014, the process should take 1 week, and cost in the order of \$500. It should not be long after that the determination of a person's genome sequence becomes a routine test.

This paradigm shift in medical research has resulted in a switch from "hypothesis" based approaches to "discovery" based science, with resulting tailoring of medical care to the individual. Traditionally, the medical practitioner would examine the family history, behavior, environment and social circumstances of a patient to determine the most appropriate treatment. Tomorrow, molecular profiling, genetic testing, proteomic profiling and metabolomic analyses will inform the medical practitioner in a much more comprehensive manner, ensuring personalized medicine.

John Shine believes that beyond 2011, all human genes will be able to be cloned and sequenced, with the resulting production of extensive genome, proteome and metabolome data bases. Understanding of the matrix of genes involved in multifactorial disorders will follow, as will a wide range of new therapies developed from gene cloning and stem cell biology. The emphasis overall will be on preventative strategies and "individualization" of both prevention and treatment.

All of this will not come without complications in social issues however. There will be reproductive decisions to be made (embryo selection), and questions raised about conceptual and philosophical implications (e.g. human responsibility vs genetic determination). Other problems arising from the rapid generation of information on the genome of individuals will be the increasing gap between what we know how to diagnose and what we know how to treat.

Professor Shine added that there will also be an increasing gap between what we think we know and what we really know!

Anne Wood

## A History of the Royal Society of New South Wales

### 'A Distinctive and Valuable Spirit'

Update from our Historian, Dr Peter Tyler



Since May 2008 when the Council of the Royal Society of NSW appointed me as its Historian, "to research and write a comprehensive, contextual history of the Society from its inception in 1821 to the present", I have continued researching the origins of the organisation. This work was greatly assisted when I was awarded the inaugural Merewether Scholarship by the Library Council of NSW. In addition to a stipend, that Scholarship provided me with a research office within the Mitchell Library in order to make use of the extensive collection of manuscripts and other original documents held by the Library, including the unprocessed archives of the Royal Society itself.

### Lectures

As a result of this Scholarship, I have been invited to give a number of public lectures based on aspects of my research. This opportunity has enabled me to promote the activities of the Royal Society of NSW amongst a broader audience beyond the science community. Several other lectures are scheduled over the coming six months, including:

• 24 November 2011, 5.30 for 6.00pm  
- I have been invited to present the 2011 biennial Ben Haneman Memorial Lecture at Mitchell Library. This is a joint venture with State Library of NSW and the Australian and New Zealand Society of the History of Medicine. It is a privilege to be invited, as this lecture is usually given by a distinguished scholar from overseas.

My topic will be "European Scientists in Colonial Australia", drawing attention to the fact that most Australian historians have a strong Anglo-centric bias, and tend to ignore or disparage the contributions from (the usually better-trained) scientists from continental Europe who were working in Australia during the nineteenth century. Many of these men were members of the Royal Society of NSW; they were often given a hard time by the Colonial Establishment.

• 1 December 2011, 5.30 for 6.00pm  
- At the National Trust, Observatory Hill. A symposium has been organised by former Royal Society President, Dr Ragbir Bhathal, to commemorate the 190th anniversary of Governor Sir Thomas Brisbane taking office in 1821. Brisbane became the first President of the Philosophical Society of Australasia, which is the distant ancestor of the Royal Society of NSW. My presentation will be on the theme "Sir Thomas Brisbane – Patron of Colonial Science". On Saturday 3 December there will be a guided tour of Brisbane's observatory site at Old Government House, Parramatta, with archaeologist Anne Bickford, followed by an inspection of Government House, where Brisbane and his family lived during their period in New South Wales.

This event is a joint venture between the Royal Society, the National Trust, and Parramatta Park Trust.

• 15 February 2012, 6.00pm – This will be another talk at Mitchell Library, for the Library Friends, in their "Hail, Fellows – Well Met" program,

in which former Library Fellows or Scholars describe their research, both during the period as a Fellow and subsequently. Obviously I will be talking about the Royal Society. The lecture will be recorded on video for the Library archives.

• 3 April 2012, 11.00am – Once again at Mitchell Library, this time as part of the monthly "Scholarly Musings" program in which a researcher is invited to discuss their current project and exchange ideas with other scholars. I will talk about the archives of the Royal Society – both the insights and the frustrations encountered.

### Other activities

My 3,000 word article on the Royal Society of New South Wales has now been published in the online *Dictionary of Sydney*; see [www.dictionaryofsydney.com.au](http://www.dictionaryofsydney.com.au). The Dictionary of Sydney is a joint venture of the University of Sydney, the City of Sydney, the State Library of NSW, State Records NSW, and University of Technology Sydney, funded by the Australian Research Council.

At the beginning of 2011 I was elected to the governing committee of the History Council NSW for a two-year term as representative of independent historians. The History Council is the peak advisory body for history in New South Wales, and reports direct to the Premier.

Associate Professor Carol Liston from the History Department at the University of Western Sydney and I have discussed the possibility of a biography of Alexander Berry, surgeon, merchant, ship-owner, pastoralist and politician. Berry is the only person to have been a member of each of the four incarnations of the Royal Society of NSW, and was a leading figure in nineteenth-century colonial affairs. Originally we conceived this project as a jointly-written book, but we are now inclined towards editing a series of chapters written by recognised specialists in different aspects of Berry's career.

We hope that this biography may be published in due course by the Royal Society of NSW and University of Sydney Press as part of the series begun with Roy Macleod's book on Archibald Liversidge.

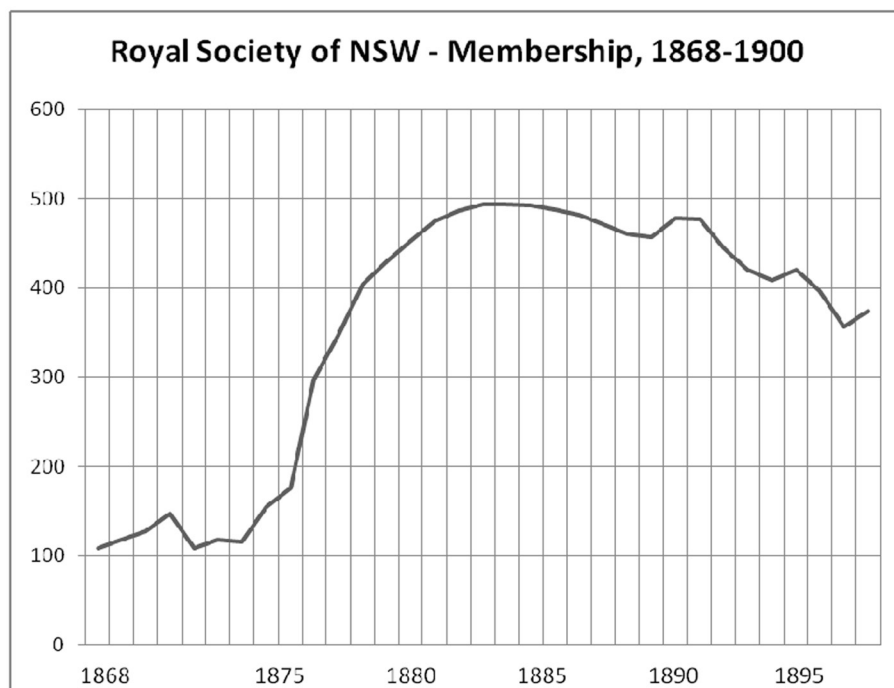
Over the past twelve months, Royal Society history projects have been constrained because of my engagement to write the history of the official archives of New South Wales to commemorate the fiftieth anniversary of the first archives legislation in Australia. My book *State Records NSW, 1788-2011* was published in June by the Desert Pea Press imprint of Federation Press. I was pleased to see that Royal Society President John Hardie attended the launch at Parliament House.

### Current research

Former Royal Society President Dr Alan Day and his wife Judy made an extensive search of the Society's membership records over the period of its several incarnations between 1821 and 1866, when the Royal Society of NSW in its present form came into existence. From the lists compiled laboriously BC ("Before Computers") Alan and Judy then spent many months of diligent research into the occupational and educational background of these people. This gave us a very good picture of the demographics of the Society during those foundation years. Their 'Biographical Register' was published in the *Journal and Proceedings of the Royal Society of NSW* in 1984 (Part I – Vol.117), and 1996 (Part II – Vol.129). A total of 322 names formed this register, which is an invaluable historical resource.

As can be seen from the following chart, rapid growth of the Society only began after 1875, that is, later than the period researched by Alan and Judy Day during which membership had been relatively stable. In terms of the history of the Society, this rapid expansion needs to be explained.

My initial hypothesis is that this



growth is related to the decision to create specialist disciplinary "Sections" of the Society, which began to be formed in 1876. It is clear from the graph that membership expansion coincides with that event.

To further test this proposition, I have compiled a membership database of the Society for the whole of the nineteenth century. Extending the work of Alan and Judy Day, I have added the names of members in the Society at the decennial intervals of 1870, 1880, 1890, 1900. This has given me a total membership roll of 1,147 names. Given that at its peak membership was just under 500, there appears to have been a substantial turnover of membership. In fact the total will be somewhat greater than this, because an undetermined number of members will have joined, then died or resigned in the inter-censal period and so their names will not be recorded at the end of a decade. It may perhaps be worthwhile to carry out analysis at five-year intervals in order to give a finer picture. A list of members is given in most annual volumes of the Journal and Proceedings.

I am now engaged in extracting additional biographical details of the total membership roll, as far as this is

readily available from other sources. One observation that has struck me immediately is the high proportion of medical practitioners joining during the 1880s. The Medical Section of the Society (Section H) functioned from 1876-1900. The NSW Branch of the British Medical Association formed in 1880, but it appears that in the early years many doctors preferred the Royal Society as an outlet for their professional interests. Two doctors were elected President of the Society between 1888 and 1893 – Sir Alfred Roberts and (Sir) Peter Anderson Stuart.

Similarly, the 1890s show a high proportion of engineers joining the Royal Society. The Civil and Mechanical Engineering Section (Section K) started in 1891. The Institution of Engineers Australia was not founded until 1919. Two engineers were elected President of the Society between 1892 and 1897 – Professor W.H. Warren and Henry Deane.

Because it is apparent that many of the same people were involved concurrently with other cultural and social activities in Sydney, I am also compiling a database showing the office-bearers of many of these other institutions, ranging from the Royal Agricultural Society, through the

Australian Museum to the Australian Club. The overlap is remarkable, particularly until the mid 1880s.

### Funding

I have continued to explore possible external funding sources for the research and publication of the Royal Society history. There are indications that some support may be available for publication, but decisions cannot be reached until a draft manuscript is submitted.

I must place on record my appreciation for the interest and support for this project shown by Mr John Hardie as President of the Royal Society of NSW, and by Ms Robyn Stutchbury who has continued to serve as mentor. I look forward to my continued involvement with the Royal Society of New South Wales as official historian.

**D**r Peter J. Tyler



### Society's Christmas Party

**A**ll members are encouraged to come along with friends, colleagues and family to our 2011 Christmas Party which will follow the Studentship presentations at St Paul's College at 8 pm. As in past years this is a great way to cap off an exciting Society year and catch up on what everyone is doing in the exalted surroundings of the St Paul's cloisters. The cost is \$30, the same as last year, and we ask you to book with your payment by 30 November. See separate flyer.

### Stop Press

Professor **Michelle Simmons** a Fellow of the Society, has been named NSW Scientist of the Year for 2011.

Congratulations Michelle!



## From the President



We are coming up to a very busy period for the Society. In fact we are ending the year with a flurry of activity. On 1 and 3 December we are commemorating the leading role Governor Brisbane played in establishing the forerunner of our Society, the Philosophical Society of Australasia. On 7 December we are holding our Student Awards night and our Christmas Party at St Paul's College, and on 13 December we are having the Clarke Memorial Lecture at the University of Sydney, in conjunction with three other organisations.

We should also not forget a related event which is being held by the State Library of NSW in conjunction with the Australian and New Zealand Society of the History of Medicine. Our historian, Dr Peter Tyler, will be presenting the 2011 Ben Haneman Memorial Lecture at the Library on 24 November. This is the first time an Australian has been invited to present this lecture so we are

indeed honoured, and we congratulate Peter on his achievement. He will be exploring the impact of scientists from continental Europe on the cultural life of Australia in the 19th century. I encourage you to attend.

I was pleased to be able to represent the Society at the Young Tall Poppies Science Awards at the Powerhouse Museum on 3 November. These awards are run by the Australian Institute of Policy and Science (AIPS), a national group interested in promoting science and scientists and engaging the community in what science is all about. It was particularly pleasing to see how articulate each of the winners was as they explained what their research was about in two minutes flat. They demonstrated the importance of good science communication. It was also pleasing to see engineering included in the list of research areas covered by the recipients. The winner of the top award was an astrophysicist, Dr George Hobbs, from CSIRO.

A highlight of the past month's activities has been the investiture of two of our 2010 Fellows by Her Excellency the Governor of NSW and one of our Patrons, Professor Marie Bashir, at Government House on 9 November. Professor Bashir was delighted to be able to present the awards to Professor Kurt Lambeck and Professor Elizabeth Blackburn (accepted by Professor Roger Reddel, Lorimer Dods Professor and Director, Children's Medical Research Institute, Westmead), who were unable to accept the award at our Annual Dinner in February due to overseas commitments. The ceremony was witnessed by a small group of

eminent supporters of the Society.

We have recently received the news that our Office Manager for the past year, Brittany Cooper, has decided to move on to other adventures. I am sorry to see her go and thank her for all the effort she has put into making the Society function as it should. She has been diligent and hard-working throughout her time with us and I thank her for all the support she has given me personally. I am pleased that we have been able to advertise quickly so that a suitable replacement could be found in short order. I am very pleased that we have been able to conduct a thorough recruitment process and have very recently been able to make an offer which has been accepted. Emma Dallas will be starting with us before the end of November and I would invite all members to make contact with her after she has started with us and make her welcome. I have asked Liz de Rome to help in the office during the transition period. I expect that the office opening hours might change once Emma has started so please keep your eyes on our website for any changes to this information.

As this is the last Bulletin for the year I would like to take this opportunity to wish you all the compliments of the season and invite you to our Christmas Party on 7 December, which once again is being held in the cloisters of St. Paul's College at Sydney University following our Studentship Awards presentations. Refer to the separate flyer for details and to book.

John Hardie

### Contact your office bearers

John R Hardie President	02 9363 9360	Prof Heinrich Hora Vice President	02 4627 7769
Clive Wilmot Vice President (SHB Rep)	02 4886 4199	Prof D. Brynn Hibbert Vice President	02 9398 9134
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