



THE BULLETIN 443

THE ROYAL SOCIETY OF NEW SOUTH WALES

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AUGUST 2020

For Your Diary

• 18 AUG

[*Science Week 2020: The
COVID Curve in Context*](#)

Em Prof Robert Clancy

• 19 AUG & 14 OCT

[*The Clancy Collection — an
Exhibition of Early Maps*](#)

• 20 AUG

[*Science Week 2020: The
Periodic Table*](#)

Em Prof Brynn Hibbert



Patron of The Royal Society of NSW

Her Excellency The Honourable
Margaret Beazley AC QC
Governor of New South Wales

1285TH OGM AND OPEN LECTURE

Growing Black Tall Poppies

Wednesday, 5 August 2020



Professor Peter Radoll

Pro Vice-Chancellor (Indigenous)
University of Canberra

Date/time: Wednesday 5 August 2020, 6:30 PM

Venue: [Zoom Webinar](#)

Entry: No charge

Enquiries: [via email](#)

All are welcome.

See [page 3](#) for more information

From the President

I hope you agree that your Royal Society is forward looking, as we all learn to use new technology to battle our way through the pandemic. But it also looks back: now that we are into the second half of 2020, the minds of your Council are turning very much to our bicentenary in 2021. If all goes well with containing the pandemic, we will be offering many exciting live events in 2021 to celebrate the bicentenary. This is not yet the time for a preview, but our planning for the bicentenary has led me to reflect on the early days of the Philosophical Society of Australasia, as it was known at the start.

I have been helped in this by coming across a fascinating article by Ragbir Bhathal, which appeared in *Astronomy and Geophysics*, April 2011 (a publication of the Royal Astronomical Society), and which traces the extraordinary story of the Parramatta Observatory, from its foundation in May 1822 to its closure in 1848.



Why did we have an Observatory at Parramatta? Because Thomas Brisbane — otherwise known as the sixth Governor of NSW — was an astronomer, who wanted the position of Governor of NSW so that he could carry out astronomical observations of the southern skies, not visible from Europe. And when he arrived in November 1821 Brisbane brought with him astronomical equipment and two astronomical assistants.

The Observatory was established within six months of Brisbane's arrival in the Colony; within a further month it made news around the world, when it was the first to sight the return of Encke's comet (the first returning comet discovered after Halley's more famous one).

You will have heard it said that in science Australia punches above its weight. One field in which this is certainly true is astronomy. Is it too much of a stretch to trace this astronomical excellence back to Governor Brisbane?

Thomas Brisbane was the first President of the Royal Society of New South Wales; Ragbir Bhathal FRSN, himself an astronomer, was a more recent President. If you want to learn more about the fascinating early history of the Royal Society of NSW, and of its contribution to astronomy in particular, watch out for information about the Royal Society's bicentennial events as 2021 comes closer. A visit to what's left of the Parramatta Observatory is one event to be anticipated.

Go well! Be safe!

Ian H Sloan AO FRSN FAA
President, Royal Society of NSW

1285th OGM and Open Lecture

Growing Black Tall Poppies

Professor Peter Radoll
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Date: Wednesday 5 August 2020, 6:30 PM

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How do the contradictions of success intersect with race, higher education and Indigenous cultural values?

We are at a time that doing the right thing now seems more important than considering the long-term future of our community. Governments are trying to meet Indigenous employment targets, by funnelling many of our potential best and brightest into government traineeships from year 11, taking them away from the opportunity pipeline of future university study. The competition to attract these students to universities results in letting them know that they do not have to obtain the best grades at school as there are other pathways designed just for them; a subtle message that you do not have to excel. This can become a demotivating factor for Indigenous students who ideally would be better suited to a degree that requires a top ATAR score, and one that they are capable of achieving.

Are these structures supporting our success, or stopping us from reaching our full potential?

As new terms, such as 'cyber feminism' enter our lexicon in the era of gender politics, within our universities, 75% of all professors are male, yet the majority of Indigenous university leaders are female. Female Indigenous university enrolments and completions out number Indigenous males two to one.

As we take on these challenges and complexities, we as Aboriginal and Torres Strait Islander people need to capitalise on our ipseity. As a Nation, by all of us embracing Indigenous culture, as the whole of our Australian history and story, we do not lose or give away something that we hold close. Instead, we all gain so much more knowledge and become richer for the embrace.

(continued overleaf)

1285th OGM and Open Lecture (continued)

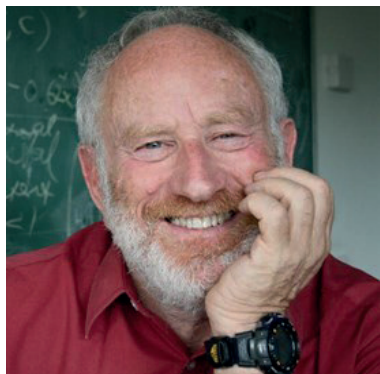
Professor Peter Radoll is a descendant of the Anaiwan people from the New England ranges area of Northern New South Wales. He is currently Professor of Information Technology and Pro-Vice Chancellor Indigenous at the University of Canberra. Peter is also Director of the Ngunnawal Centre at the University which provides support, training and study facilities for Aboriginal and Torres Strait Islander students — a role dear to his heart.

Starting out his working life as a motor mechanic, Peter has gone on to well over ten years as a senior academic and leader in the higher education sector at the Australian National University, The University of Newcastle and the University of Canberra. Peter's passion and commitment to Indigenous Higher Education is also evident in the roles he has outside the University. He is a Director on the Board of the Smith Family, the Australian Indigenous Leadership Centre (AILC), and a Member of the Advisory Group for the CSIRO Indigenous Girls' STEM Academy.

Society Fellow awarded the Royal Medal

The Royal Society of NSW is delighted to learn of the announcement in London by the Royal Society that one of its Fellows, Emeritus Professor Herbert Huppert FRS FRSN, has just been awarded the 2020 Royal Medal for Physical Sciences. The Royal Medals are awarded on behalf of the Queen each year, and have been issued annually since 1825. The RSNW Council extends its warmest congratulations to Professor Huppert on this recognition of his outstanding career achievements.

The citation for Professor Huppert reads: "He has been at the forefront of research in fluid mechanics. As an applied mathematician he has consistently developed highly original analysis of key natural and industrial processes. Further to his research, he has chaired policy work on how science can help defend against terrorism, and Carbon Capture and Storage in Europe."



Professor Huppert is an Australian-born geophysicist who lives in the United Kingdom. He has been the Professor of Theoretical Geophysics and Foundation Director, Institute of Theoretical Geophysics, at the University of Cambridge, since 1989 and a Fellow of King's College, Cambridge, since 1970. He has published widely using fluid-mechanical principles in applications to the Earth sciences: in meteorology, oceanography and geology. In 1987, he was elected as a Fellow of the Royal Society (FRS) and was awarded the Society's Bakerian Medal in 2011. He was awarded the Murchison Medal of the Geological Society of London in 2007 and

is the only non-American recipient of a prize from the United States National Academy of Sciences, being awarded the Arthur L. Day Prize and Lectureship for contributions to the Earth sciences in 2005. Professor Huppert is also a Fellow of the American Geophysical Union, the American Physical Society and the Academia Europæa. He is currently an Emeritus Professor at Cambridge and holds visiting professorial appointments at Bristol University and UNSW Sydney.

Letter confirming Royal Assent located

by John Hardie

To our great joy, the NSW State Archives has located the document which authenticates the Society's use of the term 'Royal' in its name. We are grateful to NSW State Archives for this find.

The letter is signed by the 4th Earl of Carnarvon (1831–1890), the Secretary of State for the Colonies in Britain under the Prime Ministership of Benjamin Disraeli. Lord Carnarvon was later elected a Fellow of the Royal Society of London and was the father of George Herbert, 5th



Sir John Young

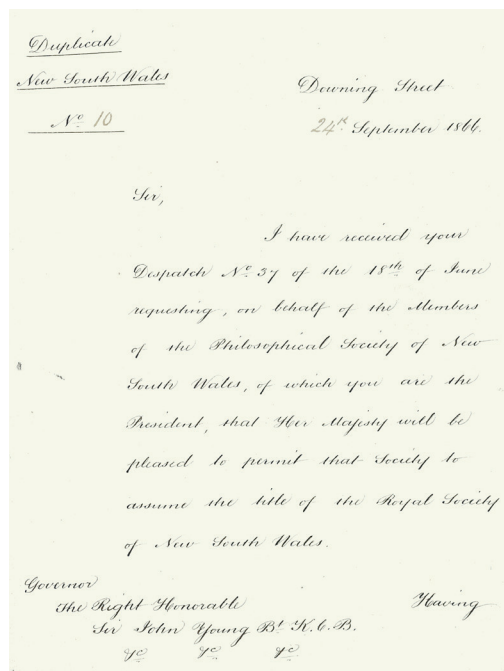
Earl of Carnarvon (1866–1923), the financial backer of the expedition which excavated the tomb of Tutankhamun in Egypt. His family home was Highclere House — the modern venue for the TV series 'Downton Abbey'.



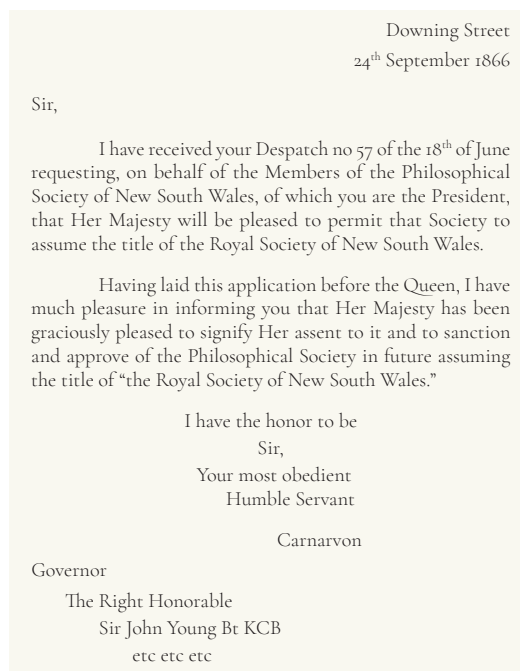
Lord Carnarvon

The recipient, Sir John Young (1807–76), was Governor of NSW from 1861–67 and President of the Royal Society of NSW during the same period. He became Governor-General of Canada in 1869.

We are now seeking the original of the letter of request to the Secretary of State from Sir John in order to complete the picture.



Enhanced scan of the letter (page 1)



Text of the Royal Assent letter

The Royal Society and Science Week 2020

This year, following on from the excellent tradition of previous years, your Society will be offering two talks for [National Science Week 2020](#), which runs from 15–23 August this year.



In the first talk on 18 August, Emeritus Professor Robert Clancy AM FRSN will look very topically at the [COVID-19 curve in context](#). He will discuss the pattern of health in Australia, how COVID-19 fits this pattern, and what we can learn from past pandemics in Australia. In addition, he will explore why old people die and young people “don’t turn a hair”. The talk will also consider why we don’t have a useful vaccine, and what we need to do, and can do, in the future to learn to live with COVID-19.

On 20 August, Emeritus Professor Brynn Hibbert AM FRSN will take a ramble through [the Periodic Table](#). 2019 was declared the International Year of the Periodic Table of Chemical Elements, as it was the 150th anniversary of the discovery of the modern periodic table by Dmitri Mendeleev. This talk addresses the NSW Chemistry Stage 6 Syllabus Module 1: Periodicity with inquiry question “Are there patterns in the properties of elements?”.



Both talks will be delivered via Zoom webinar and commence at 6:00 PM on each date. Login details are on the Society’s website.

JProcRSNSW, Vol. 153, Part 1, June 2020

The [June 2020 issue of the Journal & Proceedings](#) is now on-line, and will soon be dispatched to subscribers.

The principal content of the issue is the 2019 RSNSW and Four Academies Forum: Making SPACE for Australia, with 17 contributions from experts in the field. This is particularly relevant after the recent splash-down (first since 1975) of the private SpaceX vehicle returning NASA astronauts from the International Space Station.

The issue also includes the text of Distinguished Fellow Brian Schmidt’s address at the 2020 Annual Dinner, a timely piece by Graham Bell FRSN on a home test of smell acuity to alert for possible COVID-19 infection, FRSN David Hush’s Partita for Solo Violin (with links to YouTube to hear it performed), an invited paper by Steve Pyne, doyen of writers of the history of wildfires around the world, on last summer’s fires and what they mean for the future, and an obituary by Len Fisher FRSN on the late Lord May of Oxford OM AC Kt FRS DistFRSN CorrFAA FTSE HonFAIB.



Journal and Proceedings

of the

**Royal Society
of
New South Wales**

“...for the encouragement of studies and investigations in Science, Art, Literature and Philosophy.”

2020 Annual RSNSW + Four Academies Forum

05 November 2020, Government House Sydney

A stellar line up of speakers will address the theme “After COVID-19: Creating the Best of Times from the Worst of Times”.



More than 100 years after the 1918 Spanish flu claimed more than 50 million lives, pandemics remain on the list of major global risks. They are difficult to predict and invariably alter the course of history in ways we cannot foresee. This year's COVID-19 pandemic quickly spread well beyond the people it infected, disrupting society as a whole and smashing the economy.

Globally, even though government intervention is heading towards \$10 trillion, hundreds of millions

of people will be unemployed. The pandemic has exposed the social and economic vulnerabilities of today's highly leveraged and interconnected world, including the fragility of global supply chains. It has compounded other existential risks for Australia, including the impact of climate change, a decade of household income stagnation, and an erosion of critically important political institutions that underpin national prosperity and our free, open, democratic society.

The Royal Society of NSW and Four Academies Forum 2020 will examine how the COVID-19 pandemic has become a wake-up call for all of us to drive a wide-ranging, national program that will create a more resilient, self-sufficient and prosperous Australia. Transformations achieved already during the pandemic include in telemedicine, automation and digital commerce and communications, to name but a few. These show us what is possible when the wrecking-ball of a virus exacts its human and economic toll and stirs us into action to build the society we envisage for the future.

At this stage the Forum will go ahead as planned with a full audience in Government House, Sydney. It will be live-streamed simultaneously to a broader national audience. Plans are in place to deliver the Program virtually in case the pandemic forces the event to be held online.

Dr Susan M Pond AM, FRSN FTSE
Chair, Forum Program Committee
Vice-President, Royal Society of NSW

Report: Southern Highlands Branch

As has been our practice here at the Southern Highlands Branch since earlier in the year when the advent of COVID-19 caused us to cease all physical lectures, the description which follows informed our audiences by email what our scheduled speaker, Dr Brad Tucker intended to discuss at our July forum. The readers were guided by this notice to areas of particular interest to them, and then encouraged to research these matters more closely on the sites recommended to them and approved by Dr Tucker.

Brad Tucker is an Astrophysicist/Cosmologist, and currently a Research Fellow at the Research School of Astronomy and Astrophysics, Mt. Stromlo Observatory at the Australian National University.

Brad received Bachelor's degrees in Physics, Philosophy, and Theology from the University of Notre Dame. He then undertook a PhD at Mt. Stromlo Observatory at the Australian National University, working with Nobel Laureate Brian Schmidt. He is currently working on projects trying to discover the true nature of dark energy, the mysterious substance causing the accelerating expansion of the



Brad Tucker

Universe, which makes up 70% of the Universe. He is the lead of the Kepler Extra-Galactic Survey, a program to understand why and how stars blow up. He is also leading a project to build a network of ultra-violet telescopes in the upper atmosphere, which are being built at Mt. Stromlo, a search for Planet 9, a proposed new planet in our Solar System, and also leading a group designing an Asteroid Mining Mission.

In addition to his research, Brad frequently gives talks to school groups and the general public about astronomy and has regular segments on various radio and TV stations talking about astronomy news and events. Among other things, Brad has also developed a series of astronomy coins in conjunction with the Royal Australian Mint and has consulted on science fiction movies such as *Alien: Covenant*.

Anne Wood FRSN

Hon.Sec. Southern Highlands Branch

Report: Southern Highlands Branch (continued)

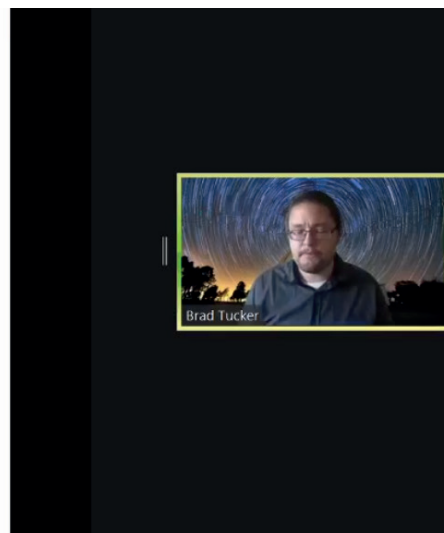
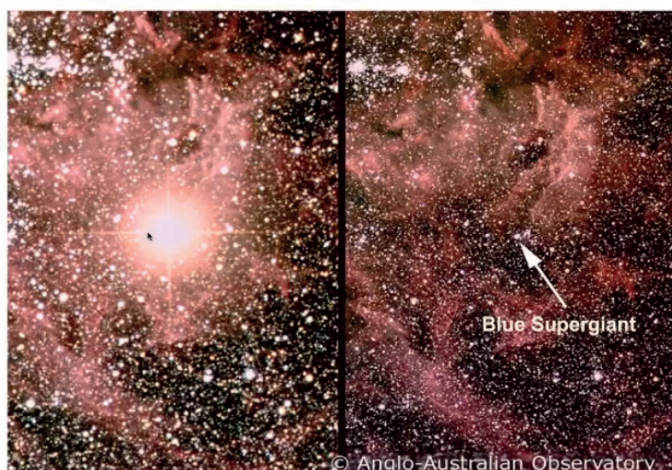
Topic: Exploding Stars, Dark Energy, and the end of the Universe

From Dr Tucker: We began with a bang 13.72 billion years ago and are surrounded by hundreds of billions of galaxies. Our knowledge of space-time has expanded greatly over the past century. Technology has allowed us to discover, explore and theorize about the mysteries of our universe at the very small and very large scale. Compounds, atoms and subatomic particles have been discovered. The mysteries of dark matter and dark energy are perplexing us today.

Brad will take us through the brilliant explosions known as supernova and our understanding of the life of stars and what the Universe is made of and how it is growing and accelerating due to dark energy. The Universe is growing away from us leaving us with our own Milky Way and our own black hole leading us to the question “Is this the end of our Universe?”

Most stars end their lives in brilliant explosions known as supernova. These massive bursts briefly outshine all the light from the galaxy wherein they occur. The past 15 years has been a “boom” period for supernovae with vast amounts of time and effort being invested in these objects. Not only are they important for understanding the life of stars, but they can be used as cosmological probes to study what the Universe is made of and how it is growing. This use has shown that the Universe is accelerating in its expansion, the subject of the 2011 Nobel Prize, and is being caused by dark energy which will cause the end of the Universe. I will show how our understanding of these objects has been revolutionized using new techniques including the Kepler Space Telescope and what this means for the Universe.

Finding Supernova Progenitors - SN 1987A



<https://www.facebook.com/MtStromlo/videos/580921985868639/>

Report: Events Committee

The Events Committee was reconstituted under a new Chair, Christina Slade. Elizabeth Deane was appointed secretary, with the former chair Robert Clancy and Judith Wheeldon together with Lindsay Botten and Stuart Midgley appointed as members. The President and Honorary Secretary are members *ex officio*.

Since the lockdown, the Society has moved to meet on Zoom. We are grateful to the work of Lindsay Botten, Stuart Midgley and Judith Wheeldon in leading the change. The Society now has a growing collection of recorded events including the Royal Society and Four Academies Forum from last November, the recording of Speaking of Music by David Hush, and all events (lectures associated with Ordinary General Meetings, Ideas@theHouse, and the Annual Dinner) conducted virtually since COVID lockdown took hold in March. This material is available on [our YouTube channel](#) and is also accessible through [the Presentations page of the website](#).

The Events Committee is looking forward to the resumption of face to face meetings, but agreed that August and September meetings will be online.

There were two July events:

- **July 8:** The [1284th OGM](#) ([OGM minutes available](#)) was followed by Elizabeth Ann Macgregor OBE FRSN, Director, Museum of Contemporary Art on “Why Art Matters in Times of Crisis”, where she explained how widely the Museum and artists are engaged in community work in Sydney
- **July 29:** Professor Pia Ednie-Brown (University of Newcastle) on “[Architecture and the Cultivation of Vitality](#)”

August will be a busy month:

- **August 5:** Professor Peter Radoll, Pro Vice-Chancellor (Indigenous), University of Canberra on “[Growing Black Tall Poppies](#)”
- **August 18:** [Science Week event] Emeritus Professor Robert Clancy AM FRSN on “[The COVID Curve in Context: or Back to the Future — something old and something new](#)”
- **August 19:** a guided tour by Emeritus Professor Robert Clancy AM FRSN of [the Clancy Collection of maps at the Manly Art Gallery and Museum](#). This event will be limited in numbers but we hope to repeat the visit on October 14th.
- **August 20:** [Science Week event] Emeritus Professor Brynn Hibbert AM FRSN on “[The Periodic Table: ‘... a medley of haphazard facts falling into line and order’ \(C. P. Snow\)](#)”

Events for the remainder of 2020 can be seen at <https://royalsoc.org.au/blog/calendar-of-meetings-in-2020>.

Exhibition of early maps of Sydney

You are invited to view a unique collection of maps of Sydney from the collection of one of the Society's Fellows, Emeritus Professor Robert Clancy AM FRSN. Professor Clancy will be on hand to guide you through the collection on Wednesday, 19 August 2020, from 4.00 to 5.30 PM. The exhibition is being held at the Manly Art Gallery and Museum, West Esplanade Reserve, Manly. The title of the exhibition is "[Charting a Course: a 500-year story of discovery and the development of Sydney](#)". This event will be repeated on 14 October at the same time. There is a \$10 charge to cover refreshments payable at the door. Details are on the Society's website.

Nominate a colleague for a Society Award

Now is your chance to nominate a colleague or friend who you believe is eligible for a Royal Society of NSW Award. Nominations for the Royal Society of NSW Medal and the Royal Society of NSW Citations are now being sought from Society Members and Fellows. These Awards are for exceptional service to the Society, with the Medal being for meritorious contributions to the Society's administration, organisation, and endeavours.

You also have the opportunity to nominate a high achiever for the Society's other Awards. These prestigious prizes for excellence in science, technology, engineering, maths, agriculture, history, philosophy and the betterment of human society, are awarded regularly by your Society, Australia's oldest learned society. One, the Clarke Medal and Lectureship, has been awarded continuously since the time of Charles Darwin. They recognise outstanding achievement by Australians in their chosen field. Nominations for these Awards are also being sought from all universities in Australia, as well as from major research institutions.

In 2020, nominations are sought for the:

[Archibald Ollé Prize](#), [Clarke Medal](#), [Edgeworth David Medal](#), [History and Philosophy of Science Medal](#), [James Cook Medal](#), [Poggendorff Lectureship](#), [Royal Society of NSW Scholarships](#), and [Warren Prize](#).

Nominations are also sought for the [Royal Society of NSW Medal](#) and the [Royal Society of NSW Citations](#), each of which recognise substantive contributions, by a Member or Fellow, to the work of the Society.

Information about all the Awards, and instructions for making nominations can be found in the ['Awards' section of the Society's website](#). Click on the Award name in the drop-down list under the 'Awards' menu to find details of each.

Nominations close on 30 September 2020 and should be sent to:
awards-nominations@royalsoc.org.au

For all Awards other than the Royal Society of NSW Medal and the Royal Society of NSW Citations, neither nominator nor nominee needs to be a Member or Fellow of the Society.

Council and Office-Bearers 2020/2021

The current Council and office-bearers of the Society are:

Patron	Her Excellency The Honourable Margaret Beazley AC QC, Governor of New South Wales
President	Emeritus Professor Ian Sloan AO FRSN
Vice-Presidents	Emeritus Professor Brynn Hibbert AM FRSN (immediate past President) Dr Susan Pond AM FRSN Ms Judith Wheeldon AM FRSN
Hon. General Secretary	Mr Bruce Ramage MRSN
Hon. Editorial Secretary	Emeritus Professor Robert Marks FRSN
Hon. Treasurer	Mr Richard Wilmott MRSN
Hon. Librarian	Mr John Hardie FRSN
Hon. Webmaster	Emeritus Professor Lindsay Botten FRSN
Councillors	Mr Ian Bryce MRSN Emeritus Professor Robert Clancy AM FRSN The Hon. Virginia Judge FRSN Mr Stuart Midgley MRSN Emeritus Professor Bruce Milthorpe FRSN Ms Nyrie Palmer MRSN Emerita Professor Christina Slade FRSN Adjunct Professor Robert Whittaker AM FRSN
Hon. Secretary, Hunter Branch	Emerita Professor Eugenie Lumbers AM DistFRSN
Hon. Secretary, Southern Highlands Branch	Ms Anne Wood FRSN

Editor: [Jason Antony](#)

