

LINNEAN SOCIETY OF NEW SOUTH WALES

LINN S'O'C' NEWS

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NEW MEMBERS

We welcome our new members:

Mr CR Andrew-Kabilafkas ; Mr L Bailey ; Dr I Baird ; Mr R. Bicknell ; Ms J Bryant ; Mr GA Chapman ; Dr MR Donald ; Mr D Ellis ; Mrs J Judd ; Ms DE McGeeney ; Ms M Murray ; Dr AM Musser ; Mr M Nicholson ; Ms RL Palsson ; Mrs JF Hatherly ; Dr PJ Hatherly ; Mrs JA Medd ; Dr RW Medd ; Mr JR Whitehead.

IN THE NEWS

The Society's Newsletter Editor, Dr Helene Martin, has notified Council of her intention to step down and it is with regrets that her decision was accepted. Dr Helene Martin has been a driving force behind the quarterly newsletter as well as being a long-standing member of Council and serving on various scientific committees. Dr Martin was elected a member of the Society on 22 July 1970 and a Councillor on 19 June 1974 and President of the Linnean Society of NSW in 1981. A ceremony was held after the December 2018 meeting to confer on Helene the status of Honorary Membership in recognition of her years of services to the Society.

PROCEEDINGS OF THE LINNEAN SOCIETY OF NSW

All papers published in the *Proceedings* are available free of charge from <http://ojs-prod.library.usyd.edu.au/index.php/LIN>

NOTE: A CD is no longer distributed free on request.

Uploaded articles in volume 140:

Fulton, GR. *Notes on the mammals collected on the Chevert expedition to New Guinea in 1875.*

Maynard, GV, Lepschi, BJ, & Malfroy, SF. *Norfolk Island quarantine survey 2012-2014. A comprehensive assessment of an isolated subtropical island.*

Spate, A, Baker, A. & Coleborn, K. *Kart values of Kosciuszko National Park – a review of values and of recent research.*

Wright, GT, McDougall, KL & McCarthy, GJ. *Archiving the scientific legacy of Dr Alec Costin.*

Zhen, YY. *Conodonts, corals and stromatoporoids from Late Ordovician and latest Silurian allochthonous limestones in the Cuga Burga Volcanics of central western New South Wales.*

Check regularly the Society's home page for recently uploaded papers by going to "LinneanSocietyNSW" then click "Journal (Proceedings)".

2018 LINNEAN SOCIETY OF NSW NATURAL HISTORY SYMPOSIUM

The Society held a symposium in Coonabarabran on Tuesday 25 and Wednesday 26 September with a Field Trip on Thursday 27 to the Warrumbungles National Park. The symposium as well as the field trip was well attended and, as for the previous Linnean Society of NSW symposia, was very successful. Several attendees were inspired to join the Society.

APPLICATIONS FOR GRANTS FROM THE SCIENTIFIC RESEARCH FUNDS

Application forms for all Research Funds may be obtained from the Secretary or the Society's Home Page « <http://linneansociety.org.au> »

Intending applicants: Please read instructions carefully and submit your signed applications by email to « linnsoc@iinet.net.au »

The firm deadline for submission of applications for all funds is 1st March 2019.

WILLIAM MACLEAY MICROBIOLOGY RESEARCH FUND

Grants are available from the William Macleay Microbiology Research Fund to support original research in an Australian context within the field of Microbiology.

Applications will be accepted from postgraduate and Honours degree students at recognised Australian Universities who are undertaking full-time or part-time studies with a microbiological emphasis.

Applications are also encouraged from amateur or professional microbiologists, whether in employment as such or not, who can demonstrate a level of achievement in original research in Microbiology.

In awarding grants, the Council of the Society will assess:

The quality of the project

The applicant's ability to carry it out

A realistic costing and timetable

The likelihood that successful completion of the research will lead to publication.

A grant of up to \$2,300 is available to members of the Linnean Society of New South Wales and \$1,200 is available to non-members of the Society.

The Society envisages that grants would normally be used for items such as travel within Australia, equipment, photographic and other expenses, but not for subsistence, travel to conferences, or thesis preparation.

Applications are not restricted to members, but other things being equal, members of the Society will be given preference.

As a rule, the deadline for applications will be 1st March in any year; however, in exceptional circumstances, applications for emergency support will be received at any time.

Grantees will be required to make a report at the end of the project and no later than 12 months after the receipt of the grant, and to justify their expenditure.

Any publication arising from work supported by the William Macleay Microbiology Scientific Research Fund should include an acknowledgement to that effect.

Any type material generated by studies supported by these grants should be lodged in the collections of an appropriate scientific institution.

Closing date is 1 March 2019. Submit your signed application by email to linnsoc@iinet.net.au

BETTY MAYNE SCIENTIFIC RESEARCH FUND FOR EARTH SCIENCES

The Betty Mayne Scientific Research Fund for Earth Sciences provides financial assistance to support short term original research projects in all aspects of the earth sciences.

Applications will be accepted from postgraduate and honours students, amateur or professional geologists who can demonstrate a level of achievement in original research in Earth Sciences.

Projects proposed for support do not have to be restricted to Australian locations or specimens, but, given the Society's interests in the natural history of Australia, they must demonstrate a strong Australian context.

In awarding grants, the Council of the Society will assess: the quality of the project; the applicant's ability to carry it out; a realistic costing and timetable; and the likelihood that the successful completion of the research will lead to publication.

Applicants need not be members of the Society, although all other things being equal, members will be given preference.

Individual grants will not normally exceed the level of equivalent awards from the Joyce W. Vickery Scientific Research Fund, i.e. \$2,500 for Members and \$1,500 for non-members. Money awarded must be used for research purposes, and field work or travel within Australasia. Requests for subsistence, travel to conferences, or thesis preparation expenses, will not be supported.

The Council will take into account other sources of research funds currently held or applied for by the applicant. While financial support from other sources will not ordinarily exclude award of a grant from the Betty Mayne Scientific Research Fund for Earth Sciences, a grant from this Fund cannot be held concurrently with one from the Joyce W. Vickery Scientific Research Fund.

Applications must be made on the form specific to the Betty Mayne Scientific Research Fund for Earth Sciences. Intending applicants are strongly urged to seek assistance from their supervisor or an appropriate colleague with experience in writing research proposals, and further, to have their application reviewed before submission.

Successful applicants are required to make a written report to the Society no later than 12 months from receipt of their grant, detailing progress of the project, briefly outlining research results, and justifying expenditure of the award money.

Any publication arising from studies supported by the Betty Mayne Scientific Research Fund for Earth Sciences must acknowledge that support. Type material, representative sample

collections, relevant analytical data, and figured or mentioned thin sections, must be lodged in a state or national museum or university collection.

The Council's decision in regard to the award or non-award of grants from the Betty Mayne Scientific Research Fund for Earth Sciences is final, and no correspondence will be entered into.

Closing date is 1 March, 2019. Submit your signed application by email to linnsoc@iinet.net.au

JOYCE W VICKERY SCIENTIFIC RESEARCH FUND

Grants from the Joyce W. Vickery Scientific Research Fund are intended to support worthy research in those fields of the Biological Sciences that fall within the range of interests of the Society, especially natural history research within Australia.

Applications will be accepted from postgraduate and Honours degree students at recognised Australian Universities who are undertaking full-time or part-time studies with a biological emphasis.

Applications are also encouraged from amateur or professional biologists, whether in employment as such or not, who can demonstrate a level of achievement in original research in Biological Sciences.

In awarding grants, the Council of the Society will assess:

- Realistic costing and timetable
- The quality of the project
- The applicant's ability to carry it out
- The likelihood that successful completion of the research will lead to publication.

Individual grants will not normally exceed \$2,500 for Members of the Linnean Society of New South Wales and \$1,500 for non-members.

The Society envisages that grants would normally be used for items such as travel within Australia, equipment, photographic and other expenses, but not for subsistence, travel to conferences, or thesis preparation.

Applications are not restricted to members, but other things being equal, members of the Society will be given preference.

As a rule, the deadline for applications will be 1st March in any year; however, in exceptional circumstances, applications for emergency support will be received at any time.

Grantees will be required to make a report at the end of the project, and no later than 12 months after the receipt of the grant, and to justify their expenditure.

Any publication arising from work supported by the Joyce W. Vickery Scientific Research Fund should include an acknowledgement to that effect.

Any type material generated by studies supported by these grants should be lodged in the collections of an appropriate scientific institution.

An application form may be obtained from the website linnsoc@iinet.net.au or from the Secretary of the Society.

The Council's decision in regard to the award or non-award of grants from the Joyce W Vickery Scientific Research Fund is final, and no correspondence will be entered into.

Closing date is 1 March, 2019. Submit your signed application by email to linnsoc@iinet.net.au



SNIPPETS FROM THE PAST

22 September 1882. A fire completely destroyed the Garden Palace located in the Royal Botanic Gardens, Sydney, and the Society lost all its possessions and all official records of its first eight years of existence (early in 1881 the Society had moved to rooms in the Garden Palace from a room in Hunter Street, Sydney).

31 October 1885. The opening of the new Hall by Hon. William Macleay who presented the new Hall to the Society thus: “*The necessity for more room, and I may add less noise, has induced me to build the edifice we are now assembled in, which I beg to present, such as it is, to the society for the period of 89 years, the unexpired term of my original lease of the ground for 99 years*” and the move to the new Linnean Hall, Elizabeth Bay, took place on 2 January 1886.

BOOK REVIEW

Rocks and Trees by John Martyn (published by STEP Inc., Turramurra NSW 2074, July 2018). Hardback, 311pp. ISBN 978-0-9578390-4-5

Such a simple title for such a comprehensive book – the subtitle “*A photographic journey through the rich and varied geology, scenery and flora of the Sydney region*” elaborates on the topic of this lavishly illustrated volume. More precisely, the work focuses on the Triassic sedimentary rocks of the Sydney Basin and younger volcanic and sedimentary deposits (including Jurassic diatremes and intrusions, Paleogene and Neogene basalt flows, and Cenozoic unconsolidated sediments) and the diverse flora these lithologies support.

Not since the compilation by Herbert & Helby (1980) – now out of print – has such a useful guide to the rocks of the entire Sydney Basin been published. The two publications are entirely complementary, with only the stratigraphic nomenclature for the Triassic succession and the geology of the younger rocks being common to both.

In wanting to keep his book to a manageable size, *Rocks and Trees* barely touches on the underlying Sydney Basin Permian rocks that are covered in detail by Herbert & Helby (1980), whereas the geobotanical aspects explored in *Rocks and Trees* were never considered in the earlier publication. A further obvious distinguishing feature is the prolific use of colour throughout *Rocks and Trees*, in which almost every page carries at least one colour image, be it of rocks, trees, flowers or even a butterfly.

All photographs bear informative captions relating the landforms to the stratigraphy or intrusive unit, or the flora to the lithology. With the floral communities and the rocks they grow on being so extensively depicted in photographs taken by the author over 14 years, *Rocks and Trees* has definite appeal to anyone interested in geology or botany, or just keen on bushwalking.

John Martyn is a trained geologist, with 40 years fieldwork experience around the world. His observation of the wildflowers in Western Australia in full bloom sharpened his initial interest in the relationship between botany and geology, and after moving to Sydney his love of bushwalking developed an appreciation of the differences in distribution of flora depending on their geological substrates.

There is clearly a need for such a book; as the author points out in the Introduction (p.7), botanists (particularly those investigating the Greater Blue Mountains World Heritage Area, which was nominated for World Heritage status on the basis of its botany, not – surprisingly – its geology and geomorphology) have identified and formally named floral communities such as Blue Mountains Shale Cap Forest and Shale Sandstone Transition Forest, recognising their links to the geological substrate (but not the precise geological formation). John also mentions the unfortunate misuse (not only by botanists) of informal terms such as “Wianamatta Shale” that has crept into the literature in some popular guidebooks.

Dr Martyn opens his account of the geology of the Sydney Basin by firstly considering the geomorphology in a chapter on Landscapes and panoramas. Several panoramic images are annotated with the names of prominent geographic features to help orientate the reader, and the location and viewing direction of many of these scenes are plotted on a simplified geological map of the Sydney Basin (p.27).

Then follows a Geological Overview, including a brief discourse on the tectonic and structural history of the basin, before the main section (amounting to roughly half of the book) which progresses up-section through the Narrabeen Group, Hawkesbury Sandstone and Wianamatta Group.

The chapter on Jurassic igneous intrusions and diatremes follows, covering dykes, sills, laccoliths and various alkaline intrusions such as Mt Gibraltar, before documenting several of the better known diatremes. New distribution maps, adapted from the Sydney Basin 1:500,000 Geological Map compiled and published by the Geological Survey of NSW more than 50 years ago, accompany each of these chapters. Cenozoic volcanic activity at Mt Tomah and Mt Banks, Mt Wilson and Mt Hay, Nullo Mountain and Robertson Nature Reserve is dealt with in the subsequent chapter. The next section focuses on the Lapstone Structural Complex and its geomorphological expression, and illustrates how the monoclinical warping and associated faulting has caused the development of lakes and swamps that support their own distinctive vegetation.

Then follows a chapter (covering 40 pages) looking in some detail at Cenozoic sands, clays, gravels and laterites in the area of the Cumberland Plain (bounded by the Hawkesbury-Nepean catchment to the west and north) and extending to coastal dunes on the central coast, laterites at Long Reef and the Royal National Park south of Sydney. And if by this stage the reader craves still more examples of the close bonds between rocks and plants, the illustrated part of the book concludes with a chapter on Rock-loving plants, featuring some exquisite rock orchids. A Glossary of geological terms, listing of References and an Index provide the finishing touches.

I can thoroughly recommend this book. The text is engaging to those well-versed in geology and botany, but will also be readily understood by readers with only a rudimentary knowledge of rocks and trees. Though I have lived in the Sydney Basin for most of my life, and thought that I was reasonably well acquainted with the geology of the region, I was definitely impressed by the amount of new information that I gained in reading this volume, especially from the many photos of outcrops in places that I have not visited. Identifications of the trees, native shrubs and their flowers are an added bonus. Although the A4 page size of the volume and its weight means that it is not the sort of book that can be readily carried around in a backpack or pocket, it can certainly be taken in the car to the field.

Rocks and Trees is not a coffee table showpiece but rather a practical guide to understanding the relationship of flora to geology. It should certainly occupy a place on the bookshelf of any geologist (or botanist for that matter) living in the Sydney Basin or who visits the area regularly or occasionally.

John Martyn is an accomplished photographer and experienced author, having self-published several books previously (including Sydney's Natural World, Field Guide to the Bushland of the Lane Cove Valley, and Understanding the Weather) through STEP Inc., a local community-based group concerned with (amongst other things) environmental education and the preservation of the natural habitat of Sydney's upper North Shore. All his books are meticulously edited (by fellow members of STEP) and beautifully produced on high quality paper, and *Rocks and Trees* is no exception.

The price is another pleasant surprise: \$60 plus postage. STEP members save 30%, reducing the cost to just \$42. Order from step.org.au [Declaration: I am a member of STEP]. I understand the print run is not very large (certainly not in normal commercial quantities) so it would be worthwhile investing in this book now before it sells out.

Reference

Herbert, C. & Helby, R. (eds) 1980. *A Guide to the Sydney Basin*. Geological Survey of New South Wales Bulletin 26, 603pp.

Reviewed by Dr Ian Percival



ANNOUNCEMENTS

1. - Thanks to our webmaster and Councillor Bruce Welch, who did an excellent job of scanning the complete set of the Society's Newsletter *Linn S'O'C' News* (1 to 169), the set is now available from our webpage: www.linneansocietynsw.org.au ; click on Newsletter ; then go down the page.

2. - How do you feel about insects and spiders in your house and garden? With summer just around the corner you may start noticing more insects and spiders around your house and garden. Everybody feels differently about these creepy crawly house guests; they may not bother you or you might hate the sight of them! A team of researchers from Macquarie University and the University of Sydney want to know which insects and spiders are living in and around your home, and which products (if any) you use to control them. By taking part in their survey, you will help them develop guidelines for people to effectively and safely manage insects and spiders around their homes. You will also have the chance to win one of five \$100 Coles Myer group gift vouchers!

If you are curious about the insects and spiders living around your house, you will also have the opportunity to volunteer your household for a biodiversity survey conducted by researchers from Macquarie University.

For more information and to complete the survey please follow this link https://www.surveymonkey.com/r/insects_in_houses or contact the research leader Dr Lizzy Lowe lizzy.lowe@mq.edu.au

3. - Foundation for National Parks & Wildlife Community Conservation Grants are now open for applications. If you are working to preserve a piece of Australian cultural heritage, helping to restore a patch of habitat, connecting more people with our national parks or doing research on a threatened Australian species, you can apply for a Community Conservation Grant from the Foundation for National Parks & Wildlife. The small grants round will be open for applications from December 1, 2018 until January 31, 2019.

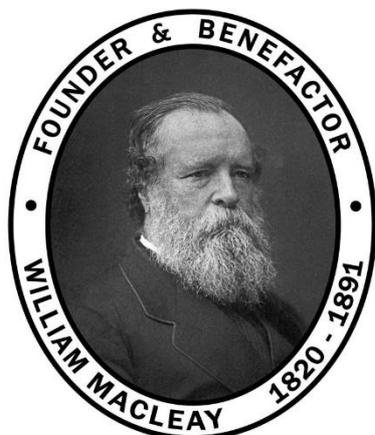
Key areas of focus for this year's grants are:

- Land and Water - Protection, restoration, rehabilitation and revegetation of degraded habitats to ensure their ability to sustain native species.
- Threatened Species - Scientific research with tangible conservation outcomes and on-ground works to conserve Australia's threatened species.
- Cultural Heritage - Conserving and celebrating Australia's cultural heritage as part of the gift we leave to future generations.
- Parks for People - Improving National Park facilities for the enjoyment of all, to foster and encourage the appreciation of nature.

Applications for the Community Conservation Grants are now online and individuals, NGOs or government departments working in these areas are all eligible to apply for funding for projects commencing in 2019.

For further information and to apply for a grant visit <https://www.fnpw.org.au/grants> or contact the Foundation for National Parks & Wildlife on grantsmanager@fnpw.org.au

For more info: Projects & Education Manager (National), Kylie Piper at: kpiper@fnpw.org.au
Ph: 1800 898 626



THE LINNEAN SOCIETY OF NEW SOUTH WALES

2019 Annual General Meeting

The 144th Annual General Meeting of the Linnean Society of NSW will be held at 18:00 on 20 March 2019 in the Charles Moore Room in Anderson Building, Royal Botanic Gardens, Mrs Macquaries Road, Sydney.

Members and guests are invited to join the Council of the Society for wine and light refreshments from 17:30.

Three members of Council are due to retire at this AGM:

Daniel Bickel, Robert King and Bruce Welch

and offer themselves for re-election.

Council recommends the election of John Barkas as President of the Society for 2019.

Council recommends the reappointment of the current Auditors, Phil Williams Carbonara.

Further nominations are invited for vacancies on Council (6), the office of President, and Auditor. Nominees must be financial Ordinary Members (a category which includes Life Members) of the Society. The nominations must be signed by at least two financial Ordinary Members of the Society and countersigned by the nominee in token of their willingness to accept such office.

Nominations must be received by the Secretary at PO Box 291 Manly NSW 1655 by 31 January 2019.