

LINN S. C NEWS



Newsletter of the Linnean Society of NSW

ISSN 2653-827X

Issue No 189 June 2023

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New Member

We welcome Ms Emma Holvast

Proceedings of the Linnean Society of NSW

The first three papers for Volume 145 have been published. These can be accessed free from <https://openjournals.library.sydney.edu.au/index.php/LIN>

Electronic back issues from Volume 133 are available from <https://openjournals.library.sydney.edu.au/LIN/issue/archive>. Scanned back issues from Volume 1 are available free from <https://www.biodiversitylibrary.org/bibliography/6525>

Julian Tenison Woods in Japan: Two Journeys

Roderick O'Brien

Abstract

The Linnean Society of New South Wales includes among its members Fr Julian Edmund Tenison Woods, a distinguished nineteenth century Australian scientist. From 1883 to 1886, Woods conducted scientific research and travelled in Southeast and East Asia. This included two visits to Japan. This article gives some reconstruction of his travels in Japan, outlines his scientific work, and provides some of the later output which Woods generated as author, as collector, and as artist. The



article also touches on the secretive nature of his work in Japan, though without giving a definitive conclusion.

Evidence for Placoderms from the Mid-Palaeozoic Sandon Beds of North-western New South Wales, Australia

Russell D. C. Bicknell, Patrick D. Smith, Lachlan J. Hart, John A. Long, Kate M. Trinajstic

Abstract

Armoured jawed fishes known as placoderms are a well-documented group with a fossil record spanning the Silurian to end-Devonian. They have a global distribution and a marked diversity within Devonian deposits of Australia. Despite their notable Gondwanan fossil record, new material is occasionally identified and can present important stratigraphic information for otherwise under-explored deposits. A unique find from the so-called Sandon beds is presented here and expands the record of placoderms from New South Wales. This specimen presents insight into a previously unknown macrofossil record from the deposit and suggests a more Devonian age for the unit, rather than the previously suggested Carboniferous date. We also summarise the macrovertebrate record of Devonian placoderms from Australia, highlighting and discussing changes in their Gondwanan taxonomic diversity across the time period.



Diversity and Abundance of Club and Coral Fungi in the Upper Lane Cove Valley

V. J. McPherson, Max M. Gillings, Michael R. Gillings

Abstract

The Kingdom Fungi are central players in the ecology and biogeochemistry of terrestrial ecosystems. Despite this importance, the diversity, distribution and abundance of fungal species are poorly known. Here, we undertook an intensive survey of club and coral

Newsletter Editors: Bruce Welch (Secretary) Ian Percival (Treasurer)

PO Box 291, Manly, NSW 1655 AUSTRALIA
Web Site: <https://linneansocietynsw.org.au>

E-mail: Secretary@linneansocietynsw.org.au
Mobile: 0490 542 524

fungi in the Upper Lane Cove Valley, Sydney, Australia. Over a two-year period, we collected more than 1100 specimens, and identified these to genus using a combination of DNA barcoding and morphology. The majority of specimens did not match any sequences in GenBank at more than 95% similarity, meaning that many of these fungi are either poorly represented in DNA databases, or are potentially novel species. A number of hotspots for fungal diversity and abundance were identified, largely along creek lines draining southwest through coachwood dominated vegetation. Notably, these hotspots all lie outside the adjacent Lane Cove National Park.



Honorary Member Spotlight - Helene A. Martin

Helene Martin recently celebrated her 90th birthday.

Here follows a brief account of Helene's scientific contribution to palynology and palaeobotany, and to the Linnean Society of NSW over more than half a century.

This is definitely NOT an obituary but is simply to provide an update for some long-term members of the Linnean Society of New South Wales, to introduce Helene to other members, and to record Helene's contribution to the Society.

Helene was born on 26 March 1933 the oldest of three children of Johann Friedrich Edmund Martin and Ruth Martin (née Behrens). The history of the Martin family has been published as 'Descendants of the Martins from Gross Lessen, Silesia - Family History' by Maurice Martin 2002. The family arrived in 1854 and a year later settled in Hahndorf, South Australia. The Behrens family, also from Prussia, arrived in Victoria in 1859 and their history is recorded in 'William Behrens - Doncaster Farmer' by Alan Holman 1993.

Helene attended Brighton Public School in Adelaide receiving a so-called Progress Certificate at the end of 1945 to be 'eligible for entrance upon a Secondary Course', and another noting her satisfactory completion in the 'Course of Instruction in Cookery, Food Values, Laundry and Household Management'. Helene's secondary school education commenced at the Thebarton Girls Technical School where she took the maximum of seven subjects in her fourth year and was awarded credits in six of these gaining her Intermediate Certificate in 1949 and her Leaving Certificate the following year. She was also awarded the Junior Technical Exhibition. Not surprisingly, as a girl in a technical school, Helene received awards and certificates for a range of domestic subjects including dressmaking, and craftwork. Her work in practical embroidery and stencilling was exhibited

at the Adelaide Royal Show. She then transferred to Adelaide High School for a more traditional academic education. The school magazine for Thebarton Girls Technical School in 1949 notes that 'We look to Helene our future scientist to keep our flag flying in after years'.

Helene's tertiary studies commenced at the University of Adelaide and in 1954 she graduated with a BSc, having majored in Botany III, along with a composite subject of Agricultural Chemistry, Climatology, Palaeontology and Stratigraphy. This was followed by an Honours year in 1955, with a thesis, entitled 'A study of some Sclerophyll Communities in the Mount Lofty Ranges, South Australia'. In 1956, she was appointed as a Demonstrator in Botany at the University of Adelaide, a position she held until 1961, and during that period she undertook a Masters degree by research entitled 'Sclerophyll Communities at Inglewood District Mount Lofty Ranges - their Distribution in Relation to Microenvironment'.

In 1961 Helene was appointed as a Teaching and Research Assistant in the Department of Biology and Botany, University of British Columbia, Vancouver, Canada, where she gained research experience in palynology and palaeontology. One outcome of her time in Canada was publication of a paper (Helene A Martin and Glen E Rouse 1966 Palynology of late Tertiary Sediments from the Queen Charlotte Islands, British Columbia. Canadian Journal of Botany, 44. 171–208 + XII plates) which started her major contributions in the field of palynology.

Following her return to Adelaide from Canada at the end of 1963 Helene spent a year teaching at Plympton High School, an experience she has described as an 'eye-opener'. This was enough for her to recognise that this was not her desired career path. Helene's father held the view that as the older unmarried daughter she might be expected to remain at home and care for her ageing parents. This was another vision Helene did not hold for her future. Fortunately at that time she was offered a position in Sydney, which facilitated her 'escape'.

Professor Newton Barber had been appointed to the Chair in Botany at UNSW and was seeking to appoint a palaeontologist able to analyse cores taken for what was then the NSW Water Conservation and Irrigation Commission. At the time there were very few who could fulfil the role and Helene was recommended for the position, initially as a Teaching Fellow, a position she held until 1970. Following that, she spent just over a decade as a Research Fellow in the School of Botany, a position fully funded by the Water Commission. Having provided the services required, she was then able to use the material for academic studies on evolution, the history of vegetation and climate change.

In 1969, Helene was awarded her PhD from the University of New South Wales for a thesis entitled 'The Palynology of some Tertiary and Late Deposits in

New South Wales'. She undertook this research under the nominal supervision of Professor Donald Walker (ANU). Her examiners noted the novelty of the work, and the renowned botanist and Quaternary researcher Professor Harry Godwin (Cambridge University) wrote that not only did the thesis contain important new facts, but it was convincingly argued. As such examiners' reports often note there was a need for further research. Helene had opened the door to what became her life work in which she established herself as a leading researcher in the field.

From 1982 to 2020 Helene held Honorary positions (variously titled Visiting Fellow, Research Fellow, Honorary Visiting Fellow) in the University of New South Wales. She provided palynological services to industry and undertook academic research, including supervision of students. In 1982 she was awarded the Archibald D. Ollé Prize for meritorious publications by the Royal Society of New South Wales.

During her lengthy period at UNSW Helene managed to survive with external grants and consultancies to support her position. The University made it clear in its various appointment letters that the conferral of the title Honorary comes without remuneration. One consultancy which might have been regarded as trivial, though not to the client, was Helene's analysis of the pollen spectrum present in honey samples, to determine the truth of claims made concerning the botanical origin of the commercial product.

Soon after her arrival in Sydney Helene became a member of the Society and joined the Council: she was elected President in 1981. Her major contributions have included Chair of the Research Committee for many years with responsibility for the disposition of research grants from among others the Joyce Vickery scheme. She also took responsibility for many years of our lecture series and for excursion and field trips, exemplified by that to Little Bay in 1989, for which she wrote a comprehensive introduction to the natural history and significance for conservation. Among her extensive publications are many research papers in the Proceedings of the Linnean Society of NSW.

Without doubt her greatest contribution was initiating the Society Newsletter, Issue #1 in July 1976. She held the position of editor for decades. Some members at UNSW will remember being dragooned into folding Newsletters and stuffing them into envelopes, often rewarded by home-baked and healthy fruit cake.

Helene was awarded Life Membership of the Linnean Society of NSW in December 2018.

Helene has a new address and phone number. As a consequence of mobility issues, she is now residing at Montefiore Residential Care, 36 Dangar Street, Randwick NSW 2031. Her direct phone number is: 0490 833 228.

Robert J King June 2023

Award to David Keith

David Keith, member of Council of the Linnean Society of NSW, has been made a Fellow of the Australian Academy of Science.

Professor Jagadish, President of the Academy said. "Fellows of the Australian Academy of Science are among the nation's most distinguished scientists, elected by their peers for ground-breaking research and contributions that have had clear impact.



There is no greater professional honour than being recognised by your own peers and the leaders within your own field of research for your achievements".

Fellows are elected by their peers for ground-breaking research and contributions that have had clear impact.

Professor David Keith FAA is an Ecologist and Conservation Biologist at UNSW Sydney. David was also awarded the prestigious Luc Hoffmann Award by the International Union for the Conservation of Nature (IUCN) for Excellence in Ecosystem Management in 2021.

New Honorary Member

The Council of the Linnean Society of NSW has awarded Dr Mike Augee Honorary Membership. Mike has been editor of the Proceedings of the Linnean Society of NSW since Volume 115 (1995) and has maintained a very high standard of refereeing and editing.

I first met Mike when I was working at Southwood Press; this company had been printing the Proceedings for a number of years and would continue until the society chose to publish digitally using the Sydney University Open Journal System. Electronic publishing saved the society a considerable sum of money and this resulted in the lowering of membership fees.



That Mike has done not only the editorship but has done the typesetting and layout has kept our costs down and at the current time our Proceedings are produced at no cost to members is, I think, nothing short of the incredible dedication that Mike has made to the Society and to scientific publishing. Thank you Mike.

Bruce Welch, June 2023

Linnean Society Charity Status

Our immediate past president and treasurer, Ian Percival, has worked tirelessly to ensure that the society retained our tax-deductible charity status for the Joyce W. Vickery Scientific Research Fund and the Betty Mayne Scientific Research Fund for Earth Sciences.

This required a complete redraft of our Rules and By-Laws, the holding of a special general meeting to approve these, and then a further special general meeting to approve the minutes of the previous meeting. We now have formal confirmation from Australian Charities and Not-for-profits Commission.



Congratulations Jean-Claude Herremans

The retirement from the position of secretary of the Linnean Society of NSW by Jean-Claude Herremans (affectionately known as J-C) at the March AGM ended almost 21 years in this position. He was first appointed in May 2002. His time as Secretary slightly exceeds the tenure (1977-1997) of Barbara Stoddard and thus J-C has been the second-longest serving secretary in the history of the Society. Many thanks J-C for your commitment.

Our new secretary is Bruce Welch who has also been assistant editor and webmaster for a number of years. Bruce would like to thank J-C for his work as secretary in the past and for helping to ensure a smooth transfer of duties.

Bruce can be contacted via the details on page 1 of this newsletter.

Grant recipient in the news

Earlier this year Dr Diana Fusco (Flinders University) was awarded a Betty Mayne Fund for Scientific Research in Earth Sciences grant. Title of her project was *Using the fossil record to understand how Australian mammal assemblages respond to environmental change*. Diana and her team have recently appeared on the ABC news web site where their research has been outlined in some detail. We wish her well in her research and look forward to receiving her grant report.



The ABC web site links are: <https://www.abc.net.au/news/2023-05-04/palaeontologists-uncover-marsupial-lion-bones-wellington-caves/102291726> and <https://www.abc.net.au/news/2023-06-14/giant-skink-dubbed-mega-chonk-discovered/102476962>



Long Reef Excursion 2 May 2023

On a day of glorious weather with a low swell and calm seas, Dr Peter Mitchell OAM led a detailed inspection of the Long Reef Headland. The excursion began after 10.00 a.m. at the Heritage Fisherman's Hut along the north side of the headland, about 20 members and visitors attended. Peter narrated the history of this site and then subsequently detailed 13 further stops of



scientific significance in a southward journey around this location. Final rock shelf investigations finished at 12.50 p.m. and were followed by a climb to the peak of the headland whereupon participants headed back to the car park adjacent the golf club at their own pace and then departed.

Starting Point: Fisherman’s Hut

Historically in the 1920s some 20 people were living in the area of Fisherman’s beach squatting on Crown land. By 1970 only four huts remained and in 2023 only one hut survives.

Peter detailed how the sand to the near north of Long Reef Headland has an orange colour in contrast to the white sand colour of Dee Why beach.

Black sand occurs at times with some around the boat ramp and the biggest concentration on the north side of the headland.



View to the immediate north West along Collaroy Beach revealing the orange sand colour



View along north face of Long Reef Headland featuring Bald Hill Claystone and Bald Hill Claystone debris cones

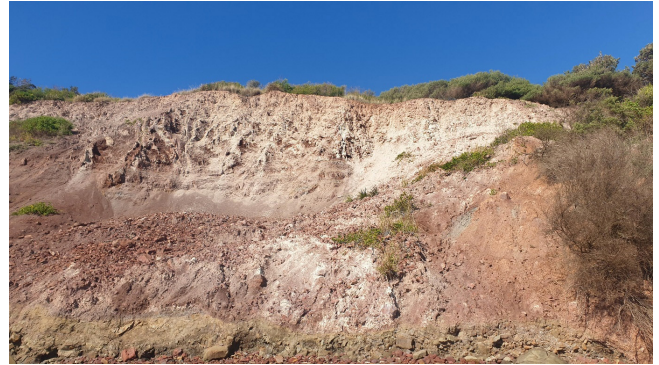
Stops



Bald Hill Claystone rock platform featuring alternate layers of sandstones and siltstones with micro fossils

1. Bald Hill Claystone rock platform featuring alternate layers of sandstones and siltstones with micro fossils. Due to the rock platform remaining largely wet the Bald Hill Claystone does not crumble whereas it will with cyclic periods of wetting and drying.

2. Continuous Slip Zone: This slip has been occurring since 2016. Note: White Kaolin rolls into balls; very small anticline present.



3. Burrow fills featuring small protrusion due to the crustacean ‘Turimettichnus’ (see below).



4. Syncline; Triassic rock layers - Newport Formation above; Bald Hill Claystone below appearing as a purple red brown mudstone which disappears southwards from this location and is not seen again until it appears along the coast of the southern parts of the Royal National Park and distinguishes itself near Otford and at Bald Hill; Spring in the bottom of synclinal faults. Iron oxides precipitated due to bacterial secretion.



5. Black sand beach and sand dune climbing over the headland.

6. Jurassic dyke Dolerite exposed on the point.

7. False laterite formed in situ at the top of the sequence (this region of the Sydney Basin did not form in a tropical climate, hence ‘false laterite’).



Large laterite Boulder

8. Cobble beach with imbricated rock formation with cobbles uniformly tilted due to wave action.



Cobble beach with imbricated rock formation

9. We viewed the remains of an Aboriginal midden and came to realise how quickly the sea is eroding the Long Reef headland.

10. Rock platform dykes with contact metamorphism edges. The dyke has intruding along the joint plane. The dykes are related to separation of Australia from the Lord Howe Island Rise. The Tasman Sea opened over approximately 32 million years, commencing in the late Cretaceous and ending in the early Eocene. The separation of Antarctica from Australia arrested the dyke formation and material. Basalt weathering to clay.



Dyke intrusion following joint plane

11. Reputed and disputed ‘Bulgo Sandstone’ outcrop on eastmost segment of Long Reef rock platform. The dispute is due to the fact that the Bulgo

Sandstone layer lies 40m below this point covered by the descending Bald Hill Claystone. The headland is more of a channel fill from very shallow water sediment.

12. Copper mine prospecting adit was sunk approximately halfway along south side of headland between peat and laterite outcrops from which George Cayley, the botanist, sent a sample back to Joseph Banks in England.



Copper ore Malachite appearing as green beads in lower centre of photograph

13. Alleged fossil soils at the top of the Bald Hill Claystone.



View eastwards as Linnean Society members ascend the climb from Long Reef Headland

The geology of Long Reef was covered in some detail in a paper in our Proceedings (<https://openjournals.library.sydney.edu.au/LIN/article/view/17009>) titled *The Natural and Cultural History of the Ku-ring-gai GeoRegion, New South Wales*. We have included a short excerpt below. Pittwater Pathways has an excellent video about the geology of Long Reef, see *Long Reef: special by any measure* (<https://www.youtube.com/watch?v=w7PsLBkxWVs>).

“Long Reef Point is different from other headlands through to Barrenjoey because it is formed on the Bald Hill Claystone and possibly Garie Formation. Geological mapping needs revision as rock unit boundaries have not been clearly identified and several recent papers have erroneously included Bulgo Sandstone in the cliffs and the shore platform. Cliffs range from 5 to ~30 m high and stand at about 60°. Norman (1986) noted that joints at Long Reef

were both more variable and less extensive than those recorded elsewhere but the same two dominant sets (NNE and NW) seen along the coast were present. Several small faults with limited vertical displacement and some movement parallel to the bedding are also present.

The weathered nature of the claystone and its tendency to fret during dry conditions and to develop rills during rain means that few of the cliff failures are identifiable as discrete events and debris accumulates until it is removed from the beaches or shore platform by higher waves. This means that failures identified today will be quite difficult to monitor over time as the rate of change is rapid. The total volume of failed rock visible at the time of the survey was estimated at 280 m³ and the largest single failure was the remains of a planar slump in white plastic clays 120 m east of the Fishermen's huts on the north side of the headland. This slump was first observed after storms in 2016 and is reactivated every time the toe is eroded by high waves. Earlier slumps close to this location have been observed but not recorded over the past 30 years. The cliff face angle in this area is only about 40° and the long-term rate of recession is probably rapid."

Conclusion

This event was not to be missed. The brilliant weather provided a golden backdrop to the provision of good scientific information concerning this key coastal feature of the northern beaches. The stops were frequent and each with its own novel features. The information provided was detailed and covered the geology of the location and was much appreciated by all attendees. In summary this excursion provided the Linnean Society of NSW members with their own boutique inspection of Long Reef headland and a good day was had by all.

Ian Hill & Bruce Welch, June 2023

Royal Zoological Society of NSW

The RZS lists its upcoming events on their facebook page (<https://www.facebook.com/rzsnsw>).

They hold regular "Wildlife at the Watering Hole" talks at the Rose of Australia hotel in Erskineville.



Early bird registration is now open for the 2023 RZS NSW Annual Forum! At this important event, attendees will hear from the "next generation" who will highlight new strategies, new thinking and bold visions that show what our common zoological future may look like. Register now: <https://www.rzsnsw.org.au/events/event/Forum2023>

Linnean Society of NSW Upcoming Event

Later this year we will be holding an excursion to the Sydney University Chau Chak Wing Museum. This museum is a free public museum of art, science, history and ancient cultures.

Our excursion will be a "behind the scenes" tour of the museum and numbers will be restricted. Just like the Long Reef excursion, participation will be on the basis that members will be offered first chance to apply, then it will be open to non-members after that.



Linnean Society of NSW Symposium 2024

The Linnean Society of NSW plans to hold our next symposium in the South Coast/Batemans Bay area. A call for papers will be issued shortly.

Whilst a date has not been set yet we anticipate that it would be held mostly during the week, not in the school holidays and probably in November.

As usual it will combine one or two days of lectures and a one-day field trip. Our planning committee tell us that there is lots to see and that they are close to securing a suitable venue for the lectures.



View of the Clyde River at Shallow Crossing

Long Reef wreck - *Euroka*

During our recent excursion to Long Reef our guide, Peter Mitchell, mentioned that a ship had been wrecked on the reef. This generated considerable interest so we have included some more information here.

In 1913, the *Euroka*, a small 170 ton iron paddle steamer, loaded coal at Belmont and then ran aground at Pelican Island – a small island in Lake Macquarie – and had to be unloaded to continue. The ship grounded again near the pilot station anchorage near Swansea but was not taking water.

She continued her voyage out to sea on 19 October 1913 but started taking water. She was coping until south of Broken Bay, where her engine stopped due to the condenser being clogged with sand. She was abandoned off the northern beaches of Sydney, and she washed up on the northern side of Long Reef before she could be salvaged. Her crew of nine arrived in Sydney five hours later. The remains lie some 5 metres deep.



BOOK REVIEW

THE NATURALIST

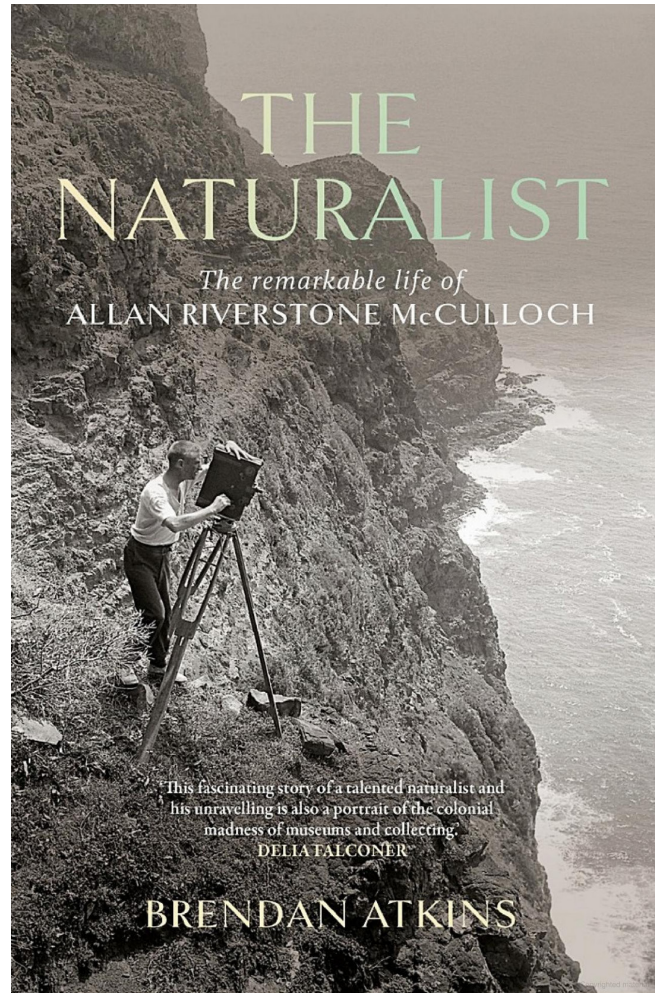
The remarkable life of Alan Riverstone McCulloch

Brendan Atkins

NewSouth Publishing, 2022, 190 pp

This book is a good read. A well written account of an interesting life. Alan McCulloch does appear from the narrative to have been a troubled man, ending with his suicide in Hawaii at the age of 40. Ellis Troughton took his ashes to his beloved Lord Howe Island, and a monument to McCulloch stands there on Flagstaff Hill today. The book includes a lot of information about the island as well as details of the Australian Museum in its early days.

For many older Australian naturalists, scientists and museum workers there are also interesting glimpses of people whose work we are familiar with or whom we actually knew. Many of these people were associated with the Linnean Society of NSW or the Royal Zoological Society. McCulloch was on the board of both societies. The first meeting of the Australian Mammal Society that I attended as a young graduate student was perhaps the last attended by the great mammologist and



associate of McCulloch's – Ellis Troughton. I had the privilege of driving him to his lodging after the annual dinner. Troughtie, as he was universally known, spoke of how different the Australian Museum had been in his early days compared to today. Much of this is due to the change from gentlemen naturalists, such as Alan McCulloch, to university trained scientists. This divide is an important part of the narrative followed by the author in this biography.

While there is no doubt from the material presented in this narrative that McCulloch was a talented illustrator, collector and creator of species, the question is raised at the start whether his contribution to a lasting taxonomy was significant. Atkins quotes Ron Strahan (past director of the Museum) as saying McCulloch was a species-splitter who muddled rather than clarified fish taxonomy. McCulloch's training was at a time when training was to serve an apprenticeship. The problem with that system is that procedures and errors used by the mentor and those before him are simply passed on. It was acceptable, even laudable, to name a new species based on an individual of a different colour with a longer tail. The university trained scientist has been trained in wider fields that have biological significance – for example genetics and statistics.

Searching for new specimens to give them names is often unkindly termed "stamp collecting". More of a hobby than a science. The result is a host of species

whose unclear relationships cloud their ancestry, their ecology and most other aspects of the biology. One good test is how many of the species created by a taxonomist have stood the test of time and are still recognized and useful today. If, as the author asserts, later historians have scorned McCulloch perhaps his taxonomic work has not stood the test of time. I wish Ron Strahan was still around to comment further.

Another controversy that arises in the life of Alan McCulloch is in connection with his involvement with others in the collection of native artefacts from the Pacific region. With the benefit of hind sight, the motives and techniques of such collections are questionable, but I will leave it to the reader to make what you can from the narrative presented by Brendan Atkins.

Michael Augee, 12 January 2023

BOOK REVIEW

The Peter Crossing Collection: An Illustrated Catalogue

David J Mabberley

Published by Peter Crossing 2022

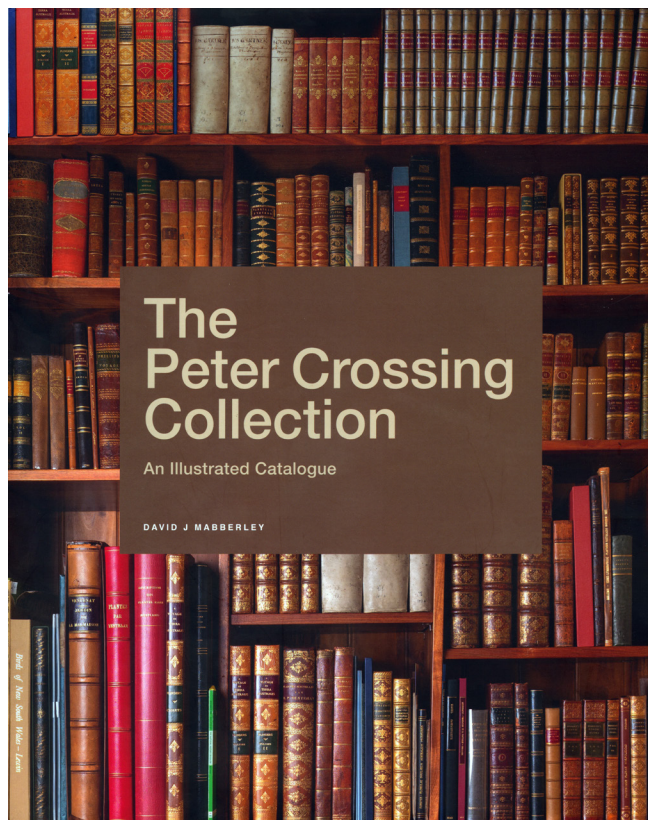
What a book! To introduce this book review, I feel I have to quote from Peter Crossing's foreword. "Arriving at European ports between the 1770s and the 1820s was a unique and extraordinary mix of plants, animals and fungi. These consignments came, after a hazardous journey by ship, from what is now called Australia – mostly sourced from the British colony of Port Jackson/Botany Bay.

Their arrival provoked a Europe-wide rush, a rivalry, to be the first to gather, own, analyse, name and portray these wonders. They were wanted for prized collections, gardens and hothouses on the great estates, for herbaria, plant nurseries, flower shows, botanic gardens, zoos and museums.

The natural history literature of that time includes many beautiful books and paintings that portray Australian plants, animals and fungi. It formed part of the general flowering of art and science as the European Enlightenment progressed."

When I saw this book at a meeting of the Linnean Society of NSW Council, I immediately recognised it as the companion volume to *Botanical Revelation* which I had purchased at its launch at the NSW State Library. What amazed me was that while those around me all knew David Mabberley, a long-time member of the Society, they were not aware of the Peter Crossing Collection, nor of Peter Crossing. That David and Peter have produced this book is a significant contribution to bringing the wonders of Australia to the public of Australia and the world. To explain the Peter Crossing Collection I can do no better than quote verbatim the notes on the dust jacket.

"*The Peter Crossing Collection: An Illustrated Catalogue* documents one of the natural-history world's



most desirable private libraries. A collection of books, original drawings, manuscripts, published plates and ephemera, it offers a rare insight into early European understanding and appreciation of Australia's unique flora and fauna. It also includes important modern watercolours of Australian plants. The *Catalogue* is a companion volume to *Botanical Revelation* (2019) by botanist and writer David Mabberley, whose original research presented here again brings out new absorbing stories revealing connections and rivalries between adventurers, authors, artists and engravers, besides their patrons across Europe, before the reign of Queen Victoria. This *Catalogue* is for lovers of natural history who can now enjoy this enthusiasm for things Australian, revealed in rare and beautiful books and paintings."

The Peter Crossing Collection is a private library of books, drawings, manuscripts and ephemera focused on the topic of the early European investigation and understanding of Australia's flora. There is some coverage of fauna and maps, however the bulk of the text and illustrations concentrate on the unique flora of Australia. Some of the text has been derived from Mabberley's previous book on the Crossing Collection titled *Botanical Revelation* (Newsouth 2019)

The *Catalogue* has been set out in strictly chronological order which suits the subject matter well. The first entry is John Ray's account of the first four of William Dampier's plants, the first being what is now *Swansonia formosa* published in 1693-1704.

Interesting comments by Peter Crossing appear in red, this helps to give additional context to the excellent illustrations and text by Mabberley.



David has deliberately avoided writing in a style which is overly technical, resulting in a book which can be dipped into at random, or read from cover to cover. The illustrations are so well presented that it is easy to be distracted from the text. The excellent digitization and photography of the items could not be better, something rarely seen in other publications.

All illustrations, unless indicated otherwise, are from the Peter Crossing Collection. Where relevant, Maberley has included reference to *Taxonomic Literature II (TL-2) A selective guide to botanical publications and collections with dates, commentaries and types*.

The book includes brief footnotes, bibliography, index and Prolegomenon: Timeline [literally “that which is said beforehand” and in this case a section to introduce and interpret an extended work]. Maberley explains it thus: “... rather than a glossary is offered a ‘vade-mecum, a chronology with germane events and terms relating to the production of books and illustrations.”

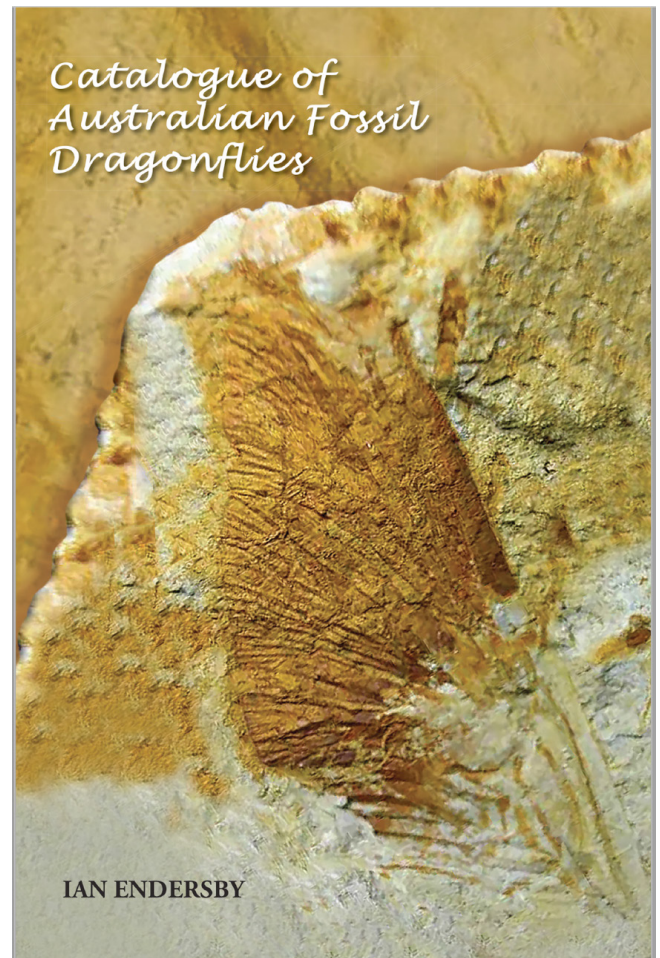
My past employment in the printing and book production industry allows me to admire and appreciate this wonderful book. The combination of excellent design and layout, beautiful paper, clean crisp printing and sturdy case (hard cover) binding, all produced in Sydney, is a credit to both David Maberley and Peter Crossing. The sturdy dust jacket surprises with the inside showing the Plan des Jardines de Courset in France which shows (in part) the greenhouses that contained the Australian plants.

I must finish with some details about Peter Crossing and David Maberley. Peter Crossing AM is a former investment banker with interest in history, nature and travel. With his late wife, Sally Crossing AM he established the Belalberi Foundation in 2004. This has supported acclaimed botanical publications and exhibitions, among other philanthropic activities. David Maberley AM, DSc is a British-born Australian botanist, educator and writer. He is the author of some 25 books.

346pp, 169 individual items. The book is available from Peter Crossing PO Box 5016 Greenwich NSW 2065
Bruce Welch, June 2023

Catalogue of Australian Fossil Dragonflies

Ian Endersby, a longstanding member of the Linnean Society of NSW and an authority on living Australian dragonflies, has recently published a book on their fossil ancestors. The PDF is readily available from Ian <ian.endersby@bigpond.com> or as a free download from his page on Researchgate (for those who have access).



The book, comprising 116 pages, lists all known specimens of Australian dragonflies ranging in age from Late Permian through the Mesozoic to the Miocene, that have been discovered in Queensland, NSW and Victoria. Many are illustrated and full repository details are provided.