

ANNUAL REPORT



Royal Society of Western Australia

2022 Annual Report

The Royal Society of Western Australia acknowledges the Traditional Owners of country throughout Western Australia and recognises their continuing connection to land, waters and community. We pay our respects to them and their cultures; and to elders both past and present.

[P1]

President's Letter

Dear Members,

I am pleased to present the Royal Society of Western Australia's Annual Report for the financial year 1 July 2021 to 30 June 2022 including reports of event that occurred before the 2022 AGM.

This year marked an important milestone for the Society, with the implementation of the **John Glover Bequest** to support emerging scientists in Western Australia. Following the vote of Members at the 2021 AGM, arrangements were made with the Hackett Foundation in accordance with the Members' resolution. To ensure early progress, the inaugural **John Glover Research Support Grants** were awarded prior to the formal transfer of funds, providing \$10,000 for research support and \$5,000 as a living allowance for postgraduate students at Western Australian universities. These awards represent a lasting investment in the next generation of scientists and in the advancement of the natural and physical sciences across our state.

The Society also continued its strong tradition of scientific engagement through the annual symposium, *Environmental Pollution: The Present and the Future in Western Australia*, and the **Second John Glover Symposium**, *Agriculture in Western Australia: Past, Present and Future*. Both events were well attended and fostered collaboration across disciplines and institutions.

I extend my sincere thanks to all members, Council, and volunteers for their ongoing dedication. Together, we continue to strengthen the Society's role in promoting excellence in science and supporting Western Australia's scientific community.

Hans Lambers
President

.

[P2]

About the Royal Society of Western Australia

As the premier society of scientists in Western Australia, the Royal Society of Western Australia (RSWA) proudly fosters exchange among natural and physical scientists and promotes the natural sciences in all their aspects through publications, meetings, symposia, and special events.

Our peer-reviewed *Journal of the Royal Society of Western Australia* features original scientific research with an emphasis on local science. Broad in scope, it covers the natural and physical sciences, as well as anthropology and archaeology.

We also organise symposia and excursions on topics of current importance or interest, foster science in the community through special events and education, and maintain a publicly available library at the Western Australian Museum.

The Society was established in 1914 and is inspired by the Royal Society of London, the world's oldest scientific academy.

The Patron of the Royal Society of Western Australia in 2022 was Her Majesty Queen Elizabeth II, until her passing in September 2022. From that time, the Patron became His Majesty King Charles III.

[P3]

The year in review

During the financial year 2021-22, the RSWA continued its work in promoting and supporting the advancement of the natural and physical sciences in Western Australia. Highlights during the 2021-22 year — including some which occurred after the end of the financial year, but before our 2022 Annual General Meeting — are detailed below.

John Glover Bequest

In 2020, following the passing of John Glover, the RSWA received a very generous bequest of over \$4 million. Following rigorous discussion and debate, it was unanimously decided at the 2021 Annual General Meeting to use the John Glover Bequest for four key purposes:

- Grants for relevant postgraduate students at all Western Australian universities, including \$10,000 for research support and \$5,000 towards living allowance
- An annual John Glover symposium, including 10 poster prizes worth \$1,000 each
- Support for science at high schools
- Support for the Society's journal

These purposes align with both the wishes of the doner, John Glover, and the long-term interests of the RSWA.

RSWA Symposium - Environmental pollution: the present and the future in Western Australia

Held on Saturday on 11 June 2022 in the Hill Lecture Theatre at Murdoch University, this year's annual RSWA symposium explored the issue of pollution in Western Australia.

Speakers and topics included:

- Mobility of contaminants in global supply chains: how the AgriFood industry can limit industry damage in outbreak events. Cameron Scadding, Managing Director, Source Certain Intl. Ltd.
- Seagrass in Cockburn Sound, Loss and Restoration: A Case Study of Marine Pollution in WA. Marion Cambridge (UWA) & Jennifer Verduin (Murdoch University)
- Heavy metals in foraminiferal skeletons. Dr. Netramani Sagar (UWA)
- The tragedy of the rivers: freshwater pollution in Western Australia. Alan Lymbery (Murdoch University)
- Assessing and managing the fate of reclaimed wastewater in Perth's deep aquifers. Henning Prommer (UWA)
- Pollution implications from fire impacted, organic-rich wetlands on the Swan coastal plain, south-western Australia. David Blake (???)
- PFAS: Beyond Defence – A burning issue. Nanthi Bolan (UWA)
- Livestock production and its impact on climate change. Mandy Curnow (DPIRD)
- Air pollution, climate change and birth outcomes in Western Australia: Gavin Pereira (Curtin University)
- Epidemiological evidence, challenges, and prospects. Sylvester Nyadanu (??)
- Plastics in the South Coast of Western Australia. Harriet Paterson (UWA)
- Micro- & nano-plastics in the animal kingdom. A status of the knowledge and the presentation of a research project. Edda Guareschi (Murdoch University)

The event was organised by Edda Guareschi and Eckart Håkansson and attracted attendees from a broad range of scientific disciplines. It was a huge success, generating interesting discussion and debate, and providing valuable networking opportunities for attendees.

2nd John Glover Symposium

This year marked the second annual two-day symposium named in the late John Glover's honour, following his very generous bequest in 2020.

Held on Friday, 7 October and Saturday, 8 October 2022 at the University Club at UWA, the John Glover Symposium explored the past, present and future of agriculture in Western Australia.

Over the two-day event the following speakers presented

- Hon Alannah MacTiernan MLC, Minister for Regional Development; Agriculture and Food; Hydrogen Industry
- Matthew Tonts, Chair EPA: The wheatbelt, its history and geography
- Hugh Chevis, UWA: Human agents and endemic grassy ecosystems in south-Western Australia
- Roy Jones, Curtin University: Changing ideals and realities: a longitudinal view of rural Western Australia
- Andrea Gaynor, UWA: A million acres a year
- Keith Bradby, Gondwana link: Building more liveable landscapes, the Gondwana Link experience'
- Ella Maesepp, Katanning Landcare: Saline bush foods
- Nicole Chalmer, Esperance: Ecoagriculture for a Sustainable Food Future
- Lachy Norman, Plantation and Landcare Services: Revegetation and rehabilitation of marginalised farmland, mine site and actively work with the carbon credit system
- Jatin Kala, Murdoch Univ.: The climate in WA: past, present, and future
- John Simons, DPIRD, and Peter Caccetta, CSIRO: Is dryland salinity still an issue to worry about, or has climate change made it go away?
- Rajeev Varshney, Murdoch Univ.: Breeding of climate change proofed chickpeas
- Michael Robertson, CSIRO: Adaptation of agriculture to a changing climate
- Tony Hughes-D'Aeth, UWA: The history of the wheatbelt
- Kadambot Siddique, UWA: Can WA be a food bowl for SE Asia?
- Jens Berger, CSIRO: The use of crop wild relatives in breeding to increase crop adaptation to marginal environments.
- Terry Hill, DPIRD: How government affects agriculture and regional development in WA: an insider's view
- Blair Parsons, Greening Australia: Biodiverse carbon: nature-based solutions for agriculture
- Bede Mickan, UWA: Nutrient recovery from sewage: opportunities and challenges for human derived sustainable fertilisers
- Adam Cross, Curtin Univ.: A paradigm shift toward a restorative culture
- Andrew Fletcher, CSIRO: Potential intercropping systems for future cropping. Prospects and pitfalls
- Geoff Woodall, Native plant agronomist: South-western flora in novel and profitable agriculture
- Ross Kingwell, Australian Export Grains Innovation Centre WA: Making agriculture of south-western Australia carbon neutral amid a changing climate

Organised by Hans Lambers, this truly multidisciplinary event was well attended and led to several new members joining the Society — many of them tertiary students. At the event, we also announced seven successful research grant recipients arising from the John Glover bequest (set out below) and awarded 10 student poster prizes.

Journal of the RSWA

With an emphasis on local science, our annual journal publishes research papers, review articles, short notes and letters of relevance to Western Australian scientists (although the research does not always occur in WA). This year's publication was overseen by Editor-in-Chief Arthur Mory, supported by Associate Editors David Haig, Adam Cross, Eckart Håkansson, Penny Wallace-Bell, and Jen McComb.

In the 2021-22 financial year, 11 contributions (of which five were full papers, five were short Research Notes and an obituary for Alex Bevan (WA Museum) were published in volume 104 and six articles were published in volume 105. As usual, they can be found on the [RSWA website](#).

On the RSWA website, there is a Guide for authors who are encouraged to submit articles for the Journal dealing with research in all aspects of the natural and physical sciences relevant to Western Australia. To assist with this process, since February 2018 the Society has subscribed to and been using Scholastica, an online journal management system.

John Glover Bequest

As mentioned above, at the 2021 AGM, RSWA resolved how to deal with the very generous bequest from the late John Glover. Since then, Council has actioned this resolution and established a gift to the Hackett Foundation to administer the research grants for relevant postgraduate students at all Western Australian universities, including \$10,000 for research support and \$5,000 towards living allowance. The applicants successful in 2022 receive their funding in 2023.

In 2022, the inaugural recipients of these research grants were as follows:

- Marie Windstein (Murdoch) - Spatial ecology of sharks and rays in the nearshore environment of a newly created Sea Country Indigenous Protected Area, Kimberley, Western Australia (ecology)
- Ursula Rodrigues (UWA) - Caring for Country and people with Noongar fire: A two-way investigation of fire management in southwestern Australia (fire ecology)
- Madison Williams-Hoffman (ECU) - Radioactive Legacy from Nuclear Weapons Testing at the Montebello Islands, Western Australia (biodiversity/radiation)
- Natasha Harrison (UWA) Robust measures of anti-predator behaviour in Western Australia's critical weight range mammals (wildlife)
- Patrick Morrison (UWA) - Voyaging in Murujuga: a study of maritime culture and climate (anthropology/climate)
- Samantha Norman (UWA) - Investigating the Molecular Evolution of *C₄* photosynthesis in the Genus *Neurachne*
- Shannon Duffy (UWA) – Genomic mechanisms of thermal resilience in reef building coral: insights from World Heritage Ningaloo Reef

We look forward to being able to report on recipients of these grants and progress in our future reports.



Inaugural recipients: Ursula Rodrigues (UWA), Natasha Harrison (UWA), Shannon Duffy (UWA), Samantha Norman (UWA), Patrick Morrison (UWA), Madison Williams-Hoffman (ECU), absent Marie Windstein (Murdoch)

Donors Wall – Hackett Foundation

The gift to the Hackett foundation for the ongoing support of the John Glover Research Support scheme for HDR students in perpetuity was recognised at a donors' event at UWA.



RSWA Councillors present at the event: Prof Hans Lambers (President), Prof Treena Burgess (General Secretary), Mr Andrew Lynn (Treasurer)

Councillors

Since the last AGM, members who have served on Council have been:

•President:	Prof. Hans Lambers
•Vice President:	Mr. Michael Tucak
•General Secretary:	Prof. Treena Burgess
•Membership Secretary:	Ms. Penny Wallace-Bell / Dr. Irene Suarez-Martinez (Acting)
•Treasurer:	Dr. Peter Baillie
•Editor-in Chief:	Dr. Arthur Mory
•Librarian:	Ms Bobbie Bruce
•Councillor:	Dr. Hugo Bekle
•Councillor:	Dr. Giada Bufarale
•Councillor:	Dr. Eckart Hakansson
•Councillor:	Dr. Justin Parker
•Councillor:	Mr Andrew Lynn
•Councillor:	Dr Leon Harris

Acknowledgements

We thank the Board of the Botanic Gardens and Parks Authority for allowing the Society to hold meetings on the Kings Park premises under their jurisdiction and for providing support for Society activities. The Society is very thankful to our Librarian Bobbie Bruce and the Western Australian Museum who manage and house the Society's library, for storing a sizeable stock of additional copies of the Journal, for assisting the Museum of Victoria to digitise the Journals, for attending to enquiries, and for occasional mailing of publications when required. We continue to be very appreciative of the voluntary services of Dr Peter Williamson who very capably and promptly manages the Society's website. All members of Council are thanked for their voluntary contributions during the year, with particular thanks to the retiring members.