



Royal Society of South Africa Newsletter

April 2025

PROMOTING SCIENCE - RECOGNIZING EXCELLENCE IN RESEARCH AND SCHOLARSHIP

News from Fellows and Members of the RSSAf: Meet a new Councillor



Professor Rushdi Hendricks FRSSAf, is a maxillofacial and oral surgeon with over 40 years of experience in clinical practice, research, and academia. He is an Adjunct Professor of plastic, reconstructive, and maxillofacial surgery at the University of Cape Town (UCT) and has earned recognition for his contributions to the field. His expertise includes maxillofacial reconstruction, obstructive sleep apnoea (OSA) treatment, head and neck oncology, and innovative surgical techniques.

Prof. Hendricks graduated in 1979 with a dental degree from the University of Western Cape and received his Masters of Maxillofacial and Oral Surgery in 1987 from the same institution. He earned his PhD in Surgery at UCT in 2016. His pioneering work on curvilinear transport distraction osteogenesis has set new standards for reconstructing extensive post-maxillectomy defects. His innovations have led to patented medical devices, including a tongue suspension implant for OSA, which has received international recognition and media attention. He has published extensively in peer-reviewed journals, contributed to international conferences, and received multiple accolades, including the prestigious Fellowship of the Royal Society of South Africa.

Recently, Prof. Hendricks was elected a councillor to the Royal Society of South Africa for the 2025-2026 term. His research continues to have a significant global impact, particularly in advancing treatments for obstructive sleep apnoea.

In addition to his academic and research achievements, Prof. Hendricks is a dedicated educator and mentor. He has trained hundreds of undergraduate and postgraduate students both locally and internationally. He also serves as an international course faculty member for the *Arbeitsgemeinschaft für Osteosynthesefragen* (AO) Foundation, based in Switzerland where he instructs advanced surgical courses.

Prof. Hendricks is passionate about community outreach, providing pro bono surgical care to under-served populations and supporting initiatives such as the Al-Ansaar Project and the Vision Medical Suite. His deep commitment to patient care, groundbreaking research, and dedication to education have solidified his reputation as a leader in maxillofacial surgery and a valuable contributor to the global medical community.

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News from Fellows and Members of the RSSAf

The Royal Society of Southern Africa proudly congratulates **Professor Trevor Nyakudya MRSSAf**, a C2 NRF rated member of the Department of Physiology in the School of Medicine at the University of Pretoria's Faculty of Health Sciences, on his promotion to full professor of pre-clinical Medical Physiology, effective 1 January 2025. Prof. Nyakudya's research expertise lies in investigating the therapeutic potential of plant-based medicines (phytomedicines) and their phytochemical constituents in managing metabolic disorders such as diabetes. Beyond his research, Prof. Nyakudya plays a pivotal role in shaping physiology education and mentorship. He serves as a member of the International Union of Physiological Sciences (IUPS) Education Committee and contributes to the IUPS African Mentorship Taskforce, which aims to strengthen research collaborations and enhance physiology education across the continent. Reflecting on this milestone, Prof. Nyakudya expressed:

"Being promoted to full professor is both an honour and a privilege. This achievement is a testament to the collective efforts of my students, collaborators, and colleagues who have supported and contributed to our research journey. I look forward to continuing to make meaningful contributions to physiology research and mentorship, particularly in advancing alternative therapeutic approaches for metabolic diseases." We extend our heartfelt congratulations to Prof. Trevor Nyakudya on this well-earned recognition. His dedication and contributions to advancing scientific knowledge in Southern Africa continue to inspire the next generation of researchers and academics.



In September 2024, **Emeritus Professor Daya Reddy FRSSAf** was elected to membership in two academies:

- The Pontifical Academy of Sciences (PAS). The aim of the PAS is to 'promote the progress of the mathematical, physical, and natural sciences and the study of epistemological problems related thereto'. The Academy has a maximum of 80 members who are leading scientists in different fields from all hemispheres. See also <https://www.pas.va/en/about.html> for more information.
- International Honorary Member of the American Academy of Arts and Sciences: see <https://www.amacad.org/about-academy> for further details.

Dr Lwando Maki MRSSAf was recently appointed as follows:

- Co-chair of the International Congress Council for the World Congress of Public Health 2026.
- Member: International Advisory Committee World Health Regional Meeting 2025.



News from Fellows and Members of the RSSAf

Guimarães: European Green Capital 2026

A Remarkable City from Ancient to Modern Times

For a decade, **Prof. Em. Jane Carruthers FRSSAf** has been a member of the External Scientific Advisory Committee working with officials and citizens of Guimarães, a city in northern Portugal with a population of some 160 000, to gain the prestigious award of European Green Capital (EGC). This is an annual European Union-wide competition for a city that meets numerous stringent requirements for environmental quality, sustainability, and resilience, and presents firm plans for maintaining and improving high environmental targets into the future. After years of effort, hard work, and commitment, the award was made to Guimarães for 2026 at a ceremony in Valencia, Spain, in November 2024.



Mayor Domingos Bragança and Jane Carruthers with the trophy of European Green Capital

On 24 June 1128 Afonso Henriques conquered his mother's army of León at the Battle of São Mamede in Guimarães and declared Portugal's independence. Guimarães is thus the birthplace of the country of Portugal. Known for its high-quality leather tanning, cloth, and cutlery industries for many centuries thereafter, in more recent years Guimarães has reinvented itself and has been honoured with World Heritage status in 2001 (area extended 2023), European Capital of Culture in 2012, European City of Sport in 2013, and many other awards.

Motivated by international ideas of appropriate urban environmental management and stimulated by the 2014 World Conference of the International Consortium of Environmental History Organizations, of which Jane was President at the time, Guimarães Mayor Domingos Bragança used the complex EGC application process as an incentive to mobilise the polycentric urban area towards a common goal for a sustainable environmental future and better quality of life. This required a great deal of work. Political will and consensus were developed, governance structures were created and specialised teams of professionals and advisors were appointed. Appreciating the benefits that would accrue from following EGC guidelines as their vision, citizens embraced the project enthusiastically, attending meetings, volunteering assistance in Green Brigades, and proffering advice. So too did the regional universities, other academic institutions, and many businesses. The Ave River and its polluted streams required cleaning and restoration as did Penha Mountain and its biodiversity. Green areas were expanded, and a biocultural corridor was conceptualised. Other priorities included minimising waste, traffic, air and noise pollution while, in addition, initiatives to mitigate or adapt to climate change began in earnest. Most importantly, citizens had to become environmental warriors and eco-citizens. Young people took the lead, responding to educational programmes, initiating a student eco-parliament, and engaging with politicians to make their own case, for their own future.

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The process was not always smooth; there were disappointments as well as stiff competition from contending cities. Guimarães made three applications – in 2022, in 2023 (when it was a finalist) and again in 2024 when it was the winner. However, for citizens and City Hall, this recognition is not an end but the beginning of an ongoing journey to benefit everyone and ensure this remarkable city's long-term environmental viability by confronting the future with confidence and foresight.

Further information:

https://environment.ec.europa.eu/topics/urban-environment/european-green-capital-award_en

[https://argus-alliance.eu/news/guimaraes-elected-2026-european-green-](https://argus-alliance.eu/news/guimaraes-elected-2026-european-green-capital/#:~:text=Guimar%C3%A3es%2C%20one%20of%20the%20cities,also%20among%20the%20three%20finalists.)

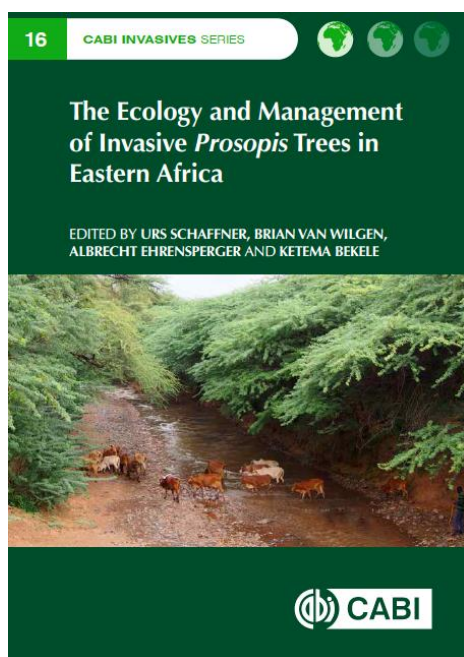
[capital/#:~:text=Guimar%C3%A3es%2C%20one%20of%20the%20cities,also%20among%20the%20three%20finalists.](https://argus-alliance.eu/news/guimaraes-elected-2026-european-green-capital/#:~:text=Guimar%C3%A3es%2C%20one%20of%20the%20cities,also%20among%20the%20three%20finalists.)

<https://en.wikipedia.org/wiki/Guimar%C3%A3es>

<https://ineews.eu/guimaraes-eleita-capital-verde-europeia-2026/>



Logo of Guimarães European Green Capital 2026



The ecology and management of invasive *Prosopis* trees in Eastern Africa

A new book on a destructive invasive weed in Africa is available online. The work presented in the book came about through a decade-long collaboration of six universities from Ethiopia, Kenya, South Africa, Switzerland, Tanzania, and the United States of America.

The introduction of *Prosopis* trees in Eastern Africa was originally aimed at providing timber, fodder, and shade and combating desertification, but one species, *Prosopis juliflora*, became invasive.

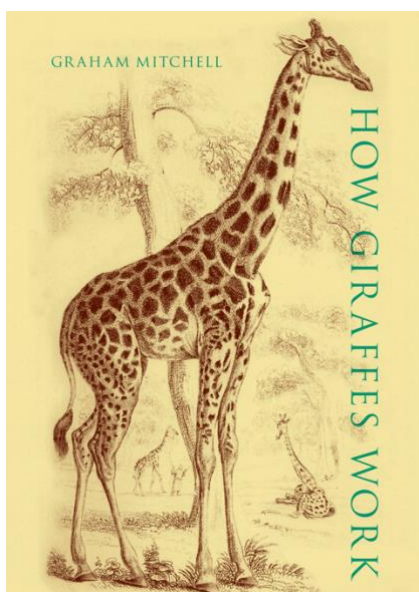
Prof. Brian van Wilgen FRSSAf, one of the book's editors and Emeritus Professor of invasion biology at Stellenbosch University, says that to date, this tree has invaded close to ten million hectares (roughly the size of the Northwest Province) of land in eastern Africa.

The book fills a significant gap in the field of invasion biology, which the authors hope will become the 'go-to' source for policy- and decision-makers in Africa.

The book was edited by Brian W van Wilgen (Stellenbosch University), Urs Schaffner (Commonwealth Agricultural Bureaux International, better known as CABI, Switzerland), Albrecht Ehrensperger (University of Bern, Switzerland), and Ketema Bekele (Haramaya University, Ethiopia) and is available online at <https://www.cabidigitallibrary.org/doi/book/10.1079/9781800623644.0000>.



News from Fellows and Members of the RSSAf



How Giraffes Work

By Graham Mitchell (Author; **FRSSAf**)

Many researchers have documented giraffes' social and ecological impact. However, their inner workings are less well-known. This book provides a comprehensive overview of the anatomy, physiology, and biochemistry of free-living wild giraffes and explains how they are adapted to their natural environment. It is illustrated with over 200 plates, figures, and diagrams and has over 700 references.

Oxford University Press published the book. For more information, please visit <https://global.oup.com/academic/product/how-giraffes-work-9780197571194?cc=za&lang=en&#>.

General Announcements

In addition to the usual activities, such as the *Transactions of the Royal Society of South Africa*, Newsletters, Fellowships, and Awards, this year, we are running the School Essay Competition after a short hiatus because we now have the necessary funding. The letter about the competition has already been sent to schools.

This year is the 200th anniversary of Charles Darwin's visit to South Africa on the *Beagle*, and the sailing ship *Oosterschelde* is retracing the route of the *Beagle* and will arrive at Cape Town in April 2025. Many events are occurring in Cape Town from 10 to 29 April, including visits to schools, the opening of a play about Charles Darwin, and the unveiling of a bust of Darwin at Simon's Town Jetty.

We are also planning to re-start the Northern Branch of the RSSAf, starting with the University of the Witwatersrand, although other institutions will, we hope, be included. We also hope to get the student and early career researchers more involved.

Lesley Cornish (*Professor Emerita*)
RSSAf President



Elisabeth Vrba (1942–2025)

Called by some "*Curious, brilliant, and fiercely independent*—*Elisabeth Vrba dedicated her life to understanding the great forces shaping the history of life. She passed away at 82, leaving behind a legacy that will inspire generations*" [Pikaia](#)
The President and Council of the Royal Society of South Africa are saddened by the passing of this exceptional RSSAf Fellow. An Obituary has been published in [Nature](#)

General Announcements

The Society congratulates Dr Rosalind Skelton on her appointment as the new Managing Director of the South African Astronomical Observatory (NRF-SAAO). She has been the Acting Managing Director of the facility since 2014.

Dr Skelton completed her Honours degree in Theoretical Physics at the University of Cape Town, where she also completed her Master's degree through the National Astrophysics and Space Science Programme (NASSP). She then moved to the University of Heidelberg and the Max Planck Institute for Astronomy in Germany, where she completed her PhD in Galaxy Formation and Evolution. After a stint as a postdoctoral fellow at Yale University in the USA, she returned to South Africa in 2013 for a postdoctoral fellowship at NRF-SAAO under the NRF's Professional Development Programme.

She joined the Southern African Large Telescope (SALT) Astronomy Operations team at NRF-SAAO in 2016 and was appointed as the facility's Head of Research in 2023. She is an Honorary Research Associate at the University of Cape Town and has supervised several postgraduate students. Through multiwavelength observations, her group investigates the processes and interactions affecting galaxies in different environments. Her work has led to more than 60 co-authored publications. She is also involved in several international research collaborations, including the 4MOST Hemisphere Survey, where she is the science policy lead, and multiple large projects involving South Africa's flagship telescopes, SALT and the MeerKAT radio telescope.

In addition, her ongoing research and duties as the MD of NRF-SAAO, Dr Skelton co-chairs one of the science working groups of the LADUMA Large Survey Project on MeerKAT and is a member of the South African National Committee for Astronomy of the International Astronomical Union and South African Women in Science and Engineering.

NRF Press Release, 3 February 2025



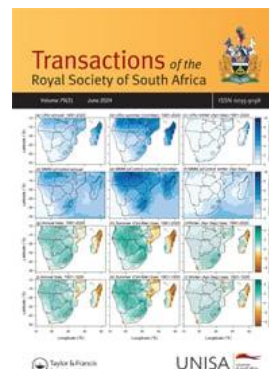
Left to right: The Board Chairman of the National Research Foundation (NRF) and Vice-Chancellor of the University of Cape Town, Prof Mosa Moshabele, the newly appointed Managing Director of the NRF-SAAO, Dr Rosalind Skelton, and the CEO of the NRF, Dr Fulufhelo Nelwamondo at the official launch of the PRIME Telescope in Sutherland, Northern Cape on Friday 31 January 2025 (NRF photo).

Transactions of the Royal Society of South Africa: Editor's Notes

Please note that access to the journal is free to all Fellows and Members of the RSSAf.

The Editor also welcomes any thoughts/suggestions, ideas for special issues, and opportunities for us to advertise the journal more widely and improve the offerings. **Please email the Editor directly: hillt@ukzn.ac.za**

Trevor Hill, FRSSAf
Editor-in-Chief
Transactions of the Royal Society of SA



<https://www.tandfonline.com/toc/ttrs20/79/2>

Historical Note

The Coat of Arms of the Royal Society of South Africa



On its establishment in 1908, the Royal Society of South Africa was granted a Royal Charter, but no heraldic achievement (armorial bearings, commonly referred to as a coat-of-arms)¹ was registered with the College of Arms in London at the time. While no explanation for this omission can be found in the Society's records, one might speculate that bringing the Society into existence had been so long and so difficult that finding consensus over this matter might have led to further divisions among the region's scientific community.

It was not until 1969 – some fifty years later, and after South Africa had become a Republic outside the British Commonwealth – that the Council sought advice on the issue from Dr Cornelis Pama (1916-1994), heraldist, genealogist, prominent member of the South African Heraldry Council and chairman of the Heraldry Society of South Africa.² A discussion with Pama followed on 16 April the following year. He recommended that the general layout of the achievement should follow that of the Royal Society of London, but with African elements that might include, for example, a South African eagle with a raised foot holding a scroll with two indigenous animals serving as supporters. He warned of the high cost of drawing up and registering the achievement (c.R150) and that preparing the printing block and dies for the seal might amount to a further R200.

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The issue lapsed for a couple of years until a concept design was tabled before Council on 3 May 1972. It consisted of a shield containing a Quarter of England, a protea, ostrich plumes, four flowers of the red disa (*Disa uniflora*, the floral emblem of the Cape province), blue crane supporters (*Anthropoides paradisea*, the national bird of South Africa) and the motto '*Res Parvae Crescent Concordia*' [By agreement small things grow].

Three more years of silence followed, until on 2 November 1975 a new design came before a Council meeting. In this version, two lions had taken the place of the blue cranes, there was a scroll and quill, and the crest was a rising fish eagle (*Haliaeetus vocifer*) with a protea in its talons. The motto had been changed to '*Ex Africa Semper Aliquid Novi*' [Out of Africa always something new].

A decision on a formal coat-of-arms was becoming urgent in these years because the Society wanted to have one registered in time for centenary celebrations in 1977. This was not, however, the centenary of the Royal Society of South Africa but that of its antecedent, the South African Philosophical Society. But when 1977 came around, although the matter had moved forward, there was still no finality. In March 1977 the Council minutes record that there was an agreed draft design, and that it would be drawn up professionally by Miss E.A. Sheila Fort, well-known Cape Town heraldic artist and calligrapher. A crown would allude to the Royal Society of London, a scroll and quill would symbolise scientific writings and publications, the supporters would be lions, a rising fish eagle would suggest high aspirations and the bird would clutch in its talons a king protea (*Protea cynaroides*, South Africa's national flower).

Miss Fort's finalised design was debated at a Council meeting on 16 June 1977. After discussion however, the scroll and quill were considered 'as being too literary' for a scientific society and were replaced by a quadrant referencing the instrument used by the Abbé Nicolas-Louis de Lacaille (1713-1762), an astronomer who visited the Cape early in its settler history.³ There was a new motto: '*In Experiendo Progressus*' [Progress through experimenting].

This newer version was disseminated for comment to all Fellows and Members of the Royal Society of South Africa. In the following month, July 1977, small changes were made to the shape and size of the fish eagle as well as to the quadrant, and the protea was given a 'better appearance'. Sheila Fort fell ill in October 1977 and Miss J. Walker, an artist employed in the Department of Haematology at UCT Medical School, undertook the corrections. By 30 November 1977 there was a final design at last: the lions and the fish eagle remained but the latter now had its wings drawn back and there was no flower in its talons, presumably on the basis of scientific evidence that fish eagles generally catch fish, not proteas.

By February 1978 this design had found general favour within the Society. Miss Walker's final tricking – the heraldically annotated but uncoloured draft – was paid for (her fee was R25) and the document was despatched to the Bureau of Heraldry in Pretoria. Pama's only suggested change, in June 1978, was that the crown be simplified by having three leaves rather than five. After publication in the *Government Gazette* Notice 1788 of 8 September 1978, the achievement was finally registered on 16 March 1979 and the certificate was issued, in English, on 20 June 1980.⁴

At registration in 1979, the heraldic achievement of the Royal Society of South Africa is formally described – the blazon – in correct heraldic terminology as follows:

Arms: Fer fess enhanced Azure and Sable, a bar indented enhanced Argent, between in chief a crest coronet and in base an astronomer's quadrant, Or.

Crest: A fish eagle rizant, wings elevated and addorsed, proper.

Wreath and mantling: Argent and Azure.

Supporters: Two lions Or.

Motto: IN EXPERIENDO PROGRESSUS.

By: **Jane Carruthers, FRSSAf**

Footnotes to the Historical article

¹ The word achievement – as in an armorial or heraldic achievement – refers to the shield displayed with all its surrounding parts.

² Heraldry in South Africa is governed by the *Heraldry Act* No. 18 of 1962.

³ Lacaille was a French astronomer and geodesist who was in Cape Town between 1750 and 1754.

⁴ National Archives of South Africa: Data of the Bureau of Heraldry on registered heraldic representations: HER 1079; H4/3/1/2541.

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