



Issue 48

PARSA

Newsletter

I am pleased to present to you the 48th issue of the PARSA newsletter. A big thank you to everyone for your contributions; your input is truly appreciated. This edition features feedback from the 52nd PARSA conference, highlighting the collective efforts and contributions to the parasitological community. We also remind you to begin preparing for the upcoming joint conference with the International Congress on Parasites of Wildlife.

I encourage you to join the PARSA LinkedIn page to stay connected and engage with our community.

Wishing you all a wonderful festive season ahead!

Kind regards,
Zamantungwa Mnisi
Marketing Manager, PARSA



PROF LINDA BASSON



PROF SAMSON
MUKARATIRWA



SAVE THE DATE!!

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PRESIDENT

Dear PARSA Member,

As we approach the end of the year, I find myself reflecting on how quickly 2024 has flown by and how much we have accomplished.

One of the highlights of this year was undoubtedly PARSA 2024 in Magaliesberg. For those who were able to attend, I hope you agree that it was an unforgettable and truly enjoyable conference. The picturesque gardens, breathtaking views, and ideal climate of Magaliesberg provided a perfect backdrop for an exciting program. The presentations and posters were outstanding as always, showcasing the incredible work being done in parasitology. Our theme, "**Stronger Together: Advancing Parasitology with Collaboration,**" resonated deeply with so many of our delegates, which brings me great joy. We were also treated to some delightful culinary experiences—from desserts at breakfast to the build-your-own-pizza evening—adding a touch of indulgence to the event. A special thank you must go to **Ms. Corné Engelbrecht** from SAVETCON, whose unwavering support and assistance ensured that the conference was a resounding success.



PROF KERRY MALHERBE

This year also brought fantastic news for PARSA: our application to become a Non-Profit Organisation (NPO) was approved! We are now officially registered under Registration No.: 313-988 NPO. This milestone marks a new chapter for our society, further strengthening our foundation for future growth and assisting with the payment of our annual society awards.

Looking ahead, I'm thrilled to share that next year's conference will again be a joint **event with the International Congress on Parasites of Wildlife**. It will be held from **14 to 18 September 2025** in the stunning setting of **Skukuza, Kruger National Park**. The first announcement, including key dates, pricing, and accommodation options, will be shared soon. Please mark your calendars and spread the word to your colleagues and collaborators about this fantastic opportunity!

As we wrap up 2024, I want to thank each of you for your support and contributions to PARSA. Your dedication to research and enthusiasm for parasitology are what make our society thrive. I wish you a joyous holiday season and a fantastic start to the new year, filled with success, happiness, and more opportunities to grow and collaborate.



Warmest regards,
Prof Kerry Hadfield Malherbe
PARSA President

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2024 MEDALS' RECIPIENTS

ELSDON-DEW MEDAL



PROF SAMSON MUKARATIRWA
UNIVERSITY OF KWAZULU NATAL &
ROSS UNIVERSITY SCHOOL OF
VETERINARY MEDICINE (RUSVM)



PROF LINDA BASSON
UNIVERSITY OF THE FREE STATE

- 1. ANGELA DAVIES RUSSELL AWARD
- 2. EARLY-CAREER CONFERENCE SUPPORT



LINDA VAN DER SPUY
NORTH WEST UNIVERSITY

SENIOR NEITZ MEDAL



THANKHOE RANTS'O
WITWATERSRAND UNIVERSITY

JUNIOR NEITZ MEDAL



JABU MAHLANGU
WITWATERSRAND UNIVERSITY

WO NEITZ MEMORIAL SCHOLARSHIP



BERNIE JORDAAN
UNIVERSITY OF THE FREE STATE

2024 PARSA WINNERS

BEST ORAL PRESENTER (FIRST TIME)



KELSEY LONGSTAFF
NORTH WEST UNIVERSITY

BEST ORAL PRESENTER (SENIOR)



MADALI DE BRUIN
UNIVERSITY OF PRETORIA

BEST ORAL PRESENTER (VETERAN)



ANDELIZA SMIT
UNIVERSITY OF PRETORIA

BEST POSTER PRESENTER (FIRST TIME)



EMILY EMSLEY
NORTH WEST UNIVERSITY

BEST POSTER PRESENTER (SENIOR)



LINDA VAN DER SPUY
NORTH WEST UNIVERSITY

BEST POSTER PRESENTER (VETERAN)



ROBY VAN ZYL
WITWATERSRAND UNIVERSITY



PROF LINDA BASSON

UFS

ELSDON-DEW MEDAL 2024

Prof. Linda Basson's extensive and impactful career within the parasitology community and beyond stands as a testament to her dedication to parasitology, research, and education. Her accomplishments reflect a lifetime of service, mentorship, and scholarly contributions that have left an indelible mark on the field.

As an active PARSA member and committee contributor, Prof. Linda played a pivotal role in organizing multiple conferences that brought together parasitologists from across the world. Notably, she was integral to the conferences held in 1984, 1986, and 1991, with the latter including the first International Congress on Protozoan and Waterborne Diseases (ICPOW) in Kruger National Park. Her commitment continued with the 6th International Symposium on Fish Parasites (ISFP) in 2003 at the University of the Free State (UFS), and the 2019 conference that was ultimately held in 2022 in Denmark due to unforeseen delays. Serving as the Vice President of PARSA from 2003 to 2006, she also represented Africa as part of the ISFP for four years, showcasing her leadership on both national and international platforms.

Prof. Linda's mentorship has been exceptional, supervising 18 MSc students—nine of whom graduated cum laude, with two receiving the prestigious Junior Neitz Medal. Her guidance extended to 8 PhD students, whose research topics spanned peritrich protozoans, parasitic crustaceans, helminths, and even insects. Her scholarly output includes six book chapters, 56 full-length scientific papers, and numerous conference contributions (69 local and 21 international). These accomplishments are highlighted by two keynote addresses and the description of over 40 new species, along with the establishment of two new genera, *Pallitrichodina* and *Hemitrichodina*. Her collaborative spirit is evident in partnerships with scientists from South Africa, the UK, USA, Mexico, France, Denmark, and the Czech Republic.

In addition to her academic achievements, Prof. Linda has been a dedicated mentor and reviewer, providing her expertise for almost 80 manuscripts, serving on editorial boards of three scientific journals, and evaluating dissertations and theses for various universities including UCT, UL, UJ, and NWU. She has also played a crucial role in reviewing National Research Foundation (NRF) applications, contributing to the advancement of scientific research funding.

Prof. Linda's passion for science outreach is as inspiring as her academic accomplishments. She actively engaged in school programs aimed at "selling science," igniting a love for parasites among young learners. Her annual excursions to the Bloemfontein Botanical Garden, where she captivated children and their families with frog-hunting adventures and nature presentations, highlight her dedication to making science accessible and enjoyable.

Although Prof. Linda officially retired from her position at UFS at the end of 2023, her scientific journey is far from over. She continues to be involved in research and postgraduate supervision as a Research Fellow and Emeritus Professor at UFS. Her enduring passion for parasitology ensures that her influence on the scientific community and future generations of researchers will persist for years to come.

Congratulation Prof Linda Basson!!



PROF SAMSON MUKARATIRWA (RUSVM & UKZN)

ELSDON-DEW MEDAL 2024

Prof. Samson Mukaratirwa is a distinguished veterinarian, academic, and researcher whose lifelong dedication to advancing biomedical sciences and parasitology has made a significant impact across Africa and beyond.

Born and raised in Zimbabwe, his early fascination with animal welfare and veterinary medicine set him on a path of academic excellence. He earned his DVM, MVSc, and PhD, establishing a foundation for a career marked by passion, innovation, and an unwavering commitment to solving some of the most pressing challenges in veterinary and medical parasitology.

Prof. Mukaratirwa's expertise is vast, encompassing taxonomy, pathology, and the epidemiology of helminth infections, as well as the study of vectors and vector-borne diseases that pose significant economic and public health risks in sub-Saharan Africa. His research has not only contributed to a deeper understanding of these complex issues but has also emphasized a One Health approach to disease prevention and control, particularly focusing on "Neglected Parasitic Zoonoses and Vector-Borne Diseases." His commitment to integrating Indigenous Knowledge Systems into his research underscores his respect for local communities' unique cultures, languages, and histories, thereby enriching the scientific discourse with a culturally sensitive lens.

A prolific scholar, Prof. Mukaratirwa has authored numerous peer-reviewed publications, contributing valuable insights to veterinary and medical parasitology, both within Africa and internationally. His academic influence extends beyond his publications, having supervised an impressive total of 24 MSc students, 22 PhD students, and 5 postdoctoral fellows to completion. His dedication to capacity building in academia is evident in his mentorship of the next generation of veterinarians, researchers, and scientists. His teaching roles at the University of Zimbabwe, University of KwaZulu-Natal, and Ross University School of Veterinary Medicine in the West Indies highlight his commitment to fostering academic growth and scientific inquiry among his students.

Prof. Mukaratirwa's approach to parasitology goes beyond traditional research methodologies. He is a staunch advocate for a holistic, inclusive approach to tackling the challenges of parasitic diseases, particularly in resource-limited settings. His work reflects an understanding of the broader social, economic, and environmental factors at play, especially the impact of climate change on vulnerable communities in sub-Saharan Africa. This integrative perspective not only advances scientific knowledge but also aligns with sustainable development goals, making his contributions particularly relevant in today's global health landscape.

His outstanding career, as detailed above, stands as a testament to his commitment to advancing the field, fostering academic excellence, and driving innovative research that benefits both science and society.

Congratulation Prof Samson Mukaratirwa!!

EARLY-CAREER CONFERENCE SUPPORT & ANGELA DAVIES RUSSELL AWARD 2024

Linda Van Der Spuy (NWU) reporting on the Trematodes 2024 conference

The Trematodes 2024 Conference, held from September 8 to 13, 2024, at the Queensland Museum in Brisbane, Australia, marked a significant gathering for researchers focused on trematodes. As an early career PhD researcher, participating in this international meeting was a remarkable opportunity for both my professional development and networking opportunities, made possible by the generous funding from our PARSA society.or your support!

The conference brought together 85 delegates from around the globe, creating a vibrant atmosphere for collaboration and knowledge exchange. The program featured an impressive lineup of plenary speakers, such as Tim Littlewood, Sara Brant, Robert Poulin, Neil Young, Misako Urabe, Isabel Blasco-Costa, Vasyk Tkach and Olena Kudlai, who presented groundbreaking research on trematode evolution and the role of museums in parasite studies.

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The South African team from the NWU.
WRG:

Dr. Clarisse Louvard, Dr. Russel Yong, Prof Kerry Malherbe, Anja Vermaak, Linda van der Spuy (me), Adri Joubert, Prof. Wynand Malherbe, Prof Nico Smit and Dr. Marliese Truter.

EARLY-CAREER CONFERENCE SUPPORT AND ANGELA DAVIES RUSSELL AWARD 2024

Linda Van Der Spuy (NWU) reporting on the Trematodes 2024 conference

A highlight was the series of workshops designed to stimulate discussion among participants. Topics ranged from genetic approaches to biogeography and best practices in parasitology research. These sessions encouraged active participation, allowing attendees to share insights and experiences, which is particularly beneficial for early-career researchers seeking mentorship and guidance. I had the privilege of presenting my research during a dedicated poster session. This experience allowed me to showcase my work and receive valuable feedback from established experts in the field. Engaging with peers during this session enhanced my visibility and opened doors for potential collaborations on future projects. The emphasis on student involvement through travel awards and recognition for presentations highlighted the community's commitment to nurturing new talent. The workshops facilitated discussions that will undoubtedly influence my future research directions. Engaging with fellow researchers on topics such as species recognition and genetic sampling strategies has opened avenues for potential collaborations that can enhance my academic journey.



A standout feature of the conference was the excursion to Australia Zoo, famously associated with Steve Irwin. This visit was not only an enjoyable break but also an educational experience that highlighted the importance of conservation and biodiversity. Observing Australia's unique wildlife provided context for understanding ecological interactions, including those involving parasitic species. My participation in the Trematodes 2024 Conference was a pivotal experience that enriched my knowledge and expanded my professional network. I am immensely grateful to the PARSA society for funding my travel, enabling me to engage with the global trematode research community and gain insights that will shape my future endeavours in parasitology.



Thank you for your support!



Madeli de Bruin (UP)



This recognition has helped me realise and appreciate my presentation skills and has emphasised the passion that I hold for my research project. This achievement would not have been possible without the support and dedication of my supervisory team, particularly my main supervisor, Prof. Darshana Morar-Leather. When I reflect on this award, it encompasses so much more than one 12-minute presentation. It represents a whole chapter of my Masters journey, all of the wonderful people I got to meet along the way, and of course the fascinating research I was fortunate to be a part of.

Overview of my research:

Toxoplasma gondii is a protozoan parasite that causes toxoplasmosis, a zoonotic disease. The definitive host are felids; however, this parasite infects a diverse range of intermediate hosts, including humans, domestic animals, and wildlife species. Despite its prevalence, little is known about the eco-epidemiology of *Toxoplasma* in southern Africa. In this context, our study aims to determine the seroprevalence of *T. gondii* in wildlife in the Kruger National Park (KNP, South Africa). To achieve this, we analysed the seroprevalence of *T. gondii* in retrospective (2015 – 2023) wildlife serum samples from the KNP using the modified agglutination test.

The results highlighted that definitive felid hosts, (lion (n=136, 91.2%) and leopard (n=18, 88.9%) had the highest seroprevalence, followed by spotted hyena (n=88, 65.9%). The seroprevalence among herbivores and omnivores was as follows: hippopotamus (n=35, 51.4%), white rhinoceros (n=138, 29%), African elephant (n=138, 21.7%), African buffalo (n=137, 18.2%), black rhinoceros (n=35, 17.1%) and warthog (n=35, 14.3%). Analysis of these results (CI 95%) revealed that species and diet (carnivore, herbivore or omnivore) showed a significant difference in the seroprevalence among the different groups, and were thus found to be significant predictors of seroprevalence ($p=2.2e-16$). A significantly higher seroprevalence was found in carnivores compared to herbivores and omnivores ($p<0.05$). The results further suggested, when simply comparing the seroprevalence's, that larger herbivores, especially grazers, such as the white rhinoceros and hippopotamus, have a higher seroprevalence compared to browsers (for example black rhinoceros) or smaller herbivores. However, no significant difference ($p=0.423$) was found in the seroprevalence between the herbivore types (grazer or browser). The observed seroprevalence trends could be attributed to dietary differences as carnivores are more likely to ingest infected prey. Furthermore, oocysts that are released into the environment by felids circulate through grass and water, and contribute to the observed trends in the other species.

Therefore, our work provides some insight into the eco-epidemiology of *T. gondii* in the Kruger National Park and the role of diet in potentially influencing *Toxoplasma* seroprevalence.



Veronica Phetla (SANBI)



THERE IS A FIRST
TIME FOR
EVERYTHING



The 52nd PARSA conference marked an important milestone in my research career - it was my first-ever conference attendance and presentation. To my delight, I was honored with a 3rd place award for a first-time oral presentation. This recognition not only filled me with personal pride but also affirmed the significance of my research work.

Hidden Passengers: The Complex World of sub-Saharan African Wildlife Helminths

The theme of the conference, "**Stronger Together, Advancing Parasitology with Collaboration**", perfectly encapsulated my experience. Beyond the award, I was thrilled to have the opportunity to share my research findings and establish valuable new connections within the parasitology community. The presentation I gave was based on one of my recently published articles, titled "Epidemiology and diversity of gastrointestinal tract helminths of wild ruminants in sub-Saharan Africa: A review" (DOI: <https://doi.org/10.1017/S0022149X24000361>).

This comprehensive review examines the distribution, diversity, and prevalence of gastrointestinal helminth infections in wild ruminants across sub-Saharan Africa. Importantly, the review underscores the critical need for more extensive research on gastrointestinal helminths in wild ruminants. Deepening our understanding of their diversity and epidemiology is essential for informing effective conservation and public health strategies in this region. Overall, the 52nd PARSA conference proved to be a transformative experience, allowing me to showcase my research, build professional networks, and gain recognition for my work - all while contributing to the advancement of parasitology through collaborative efforts.

53rd Annual Conference of the Parasitological Society of Southern Africa/5th International Congress on Parasites of Wildlife

14-18 September 2025 | Kruger National Park, South Africa



Prof. Sonja Matthee
PARSA 2025 Conference Chairperson

The Parasitological Society of Southern Africa (PARSA) is delighted to invite you to the 5th International Congress on Parasites of Wildlife (ICPOW), to be held at the Nombolo Mdhuli Conference Centre in Skukuza, the main congress centre of the world-famous Kruger National Park, South Africa, during 14-18 September 2025.

The congress provides a perfect opportunity to exchange research findings and engage in stimulating conversations around the broader theme of wildlife parasites. All parasitologists (in the fields of biology, taxonomy, systematics, evolutionary biology, epidemiology, veterinary science, etc.) are invited to participate. The venue complements the congress theme and will allow everyone to experience the African bush in all its glory. The event is an ideal opportunity to strengthen existing friendships and collaborations and forge new ones. As in previous years, the congress will be hosted by PARSA and will thus coincide with the 53rd annual meeting of the Society.

As a Society it is our pleasure to host national, regional and international delegates and, together with the local organizing committee, we commit to making this another memorable event.

We are looking forward to welcoming you to Skukuza in September 2025.

Sincerely,

Sonja Matthee

ICPOW2025 Chairperson

Local Organising Committee

- Prof. Sonja Matthee (Chairperson) - Stellenbosch University
- Prof. Wilmien Powell (University of Limpopo)
- Dr Mamohale Chaisi (South African National Biodiversity Institute)
- Prof. Kerry Malherbe (North-West University) - represents PARSA council
- Prof. Maxwell Barson (University of Botswana)

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