

Issue 20  
October  
2014

### *Message from the editor*

*Dear PARSA Members*

Once again we have reached the final newsletter for the year and once again I am grateful to everyone who has submitted news for the newsletter and given such positive feedback regarding the new website this year! I truly appreciate it!!

This year's PARSA conference, held in the Kruger National Park along with the International Congress on Parasites of Wildlife, was a great success and we would like to thank all who attended and contributed in making it such a memorable meeting. A short synopsis along with the prize winners are given later on in the newsletter. This information is already available on the website and the abstracts will be put up shortly too. For those who would like to change their abstracts, please send them to me ([parsa.news@yahoo.com](mailto:parsa.news@yahoo.com)) by **15 November** so I can add them to the website before the end of the year. Thanks so much!

Some of the 2015 parasite conferences I have come across are mentioned too but please let me know if there is a conference I have not seen which you think others would be interested in and I will gladly share the details. The same can be said for any workshops or courses for 2015. Please also take note of the WAAVP African Foundation Grant for students to attend the WAAVP conference in August 2015 (details below and in the attached pdf file).

There is also a great recap of Prof. Ken MacKenzie's trip to South Africa, progress being made on the malaria vaccine, the outcome of the 2014 Science Expo award, the new impact factors for some parasitic journals, and an MSc opportunity available for next year.

This will be the last newsletter for 2014, with the next newsletter due January 2015, so please send through all your relevant news items by January and I will include them in that newsletter.

Finally, I would like to wish you all a happy and safe festive season!! May you be surrounded by loved ones and come back to work refreshed and recharged for another parasite-filled year in 2015!!

*Kind regards*

*Kerry*



Dear PARSA member:

What a year it has been! The biggest highlight has got to be the fantastic International Congress on Parasites of Wildlife (ICPW 2014) which incorporated the 43<sup>rd</sup> annual meeting of Parasitological Society of Southern Africa (PARSA) this year!! The conference was held in the world renowned Kruger National Park, Skukuza rest camp, in their new and modern conference facilities. Delegates from all around the world attended the conference with a total of 19 different countries being represented (Australia, Austria, Brazil, Canada, China, Czech Republic, France, Germany, Israel, Laos Peoples Democratic Republic, Nigeria, Poland, Russia, Sweden, Uganda, UK, USA, Zimbabwe and of course South Africa). A total of 137 delegates registered for the joint conference and over the three days, 83 oral presentations were given and 37 posters were viewed.

I would like to extend my deepest thanks to all those who helped make this conference possible. To the other members of the Scientific Programme Committee (Prof Ian Beveridge, Prof Thoko Hove, Prof Anja Joachim, Dr Michael Yabsley, Prof Samson Mukaratirwa, and the chairperson Prof Banie Penzhorn) for constructing a well thought-out and diverse programme which showcased all the different parasites in an excellent way. To the other members of the local organising committee (Prof Tshepo Matjila, Dr Sonja Matthee, Dr Sibusiso Mtjali and the chairperson Prof Banie Penzhorn as well as the two hard working and efficient ladies from SAVETCON, Petrie Vogel and Erna Kloppe) for all their help in making the conference into the success that it was. Thanks also to the session chairs and adjudicators who are desperately needed yet often acknowledged for all their efforts...we are deeply appreciative for your valuable contribution too! And lastly, special thank you to all the delegates who attended and presented and shared their work with us. Without you there would be no conference to attend so I am truly grateful for each attendee. I hope you all had a wonderful time.

Next year, Prof Samson Mukaratirwa from the University of KwaZulu-Natal has graciously offered to host the next PARSA meeting down at the coast. The dates and venue has not been confirmed yet but that information will be passed on as soon as it is available.

Sadly, we have just recently heard about the passing of Associate Professor Ian Whittington after a long illness. PARSA members may remember him for his passion for monogeneans and may have met him when he attended the 6<sup>th</sup> International Symposium on Monogeneans held in Cape Town in 2009. The Australian Society for Parasitology sent out a letter which is attached along with this newsletter.

Take care over the festive season!

Regards



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(President: PARSA)

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## *Next Issue...*

For the next issue we are looking for the following contributions:

- Feature articles on research being done in your institute (with photos).
- Summary on the life and work of a respected and well-known parasitologist.
- Student abstracts from across southern Africa conveying the various research being done on parasites in Africa.
- Reviews and photos of the parasitological conferences and workshops attended.
- News to be distributed including job and bursary opportunities, post-graduate project opportunities and awards won by our PARSA members.

**Due: January 2015**

## *Please note...*

Please note that most of this information is also available on the PARSA website as well as some additional information not present here. Check it out at:

**[www.parsa.ac.za](http://www.parsa.ac.za)**

**World Association for the  
Advancement of  
Veterinary Parasitology  
African Foundation  
(WAAVP AF)**

The WAAVP AF will provide a limited number of partial scholarships to assist the veterinary parasitologists from Africa to attend the 25<sup>th</sup> WAAVP Conference to be held in Liverpool, UK, from 15–20 August, 2015.

**Applications should  
include:**

- A copy of the abstract(s) for paper(s) or poster(s) which were submitted to the 24<sup>th</sup> WAAVP Conference Convener
- Recommendation letter from a current supervisor
- An indication of how other costs (beyond a WAAVP AF grant) will be met (i.e. possibility of obtaining other funds elsewhere)
- Other envisaged contributions to the conference (i.e. workshop participant, chairperson of session, etc.)
- Brief indication of how the applicant sees attendance contributing to their development in veterinary parasitology.

**Submit applications to:**

Dr Tammi Krecek  
Ross University School of  
Veterinary Medicine  
New Jersey, USA  
[tkrecek@rossvet.edu.kn](mailto:tkrecek@rossvet.edu.kn)

**DEADLINE:  
1 March 2015**



## 2015 Conferences

### **6<sup>th</sup> Scandinavian Baltic Society for Parasitology**

23 April – 24 April 2015  
Uppsala, Sweden

SBSP6 will bring together parasitologists from all over Scandinavia and the Baltic area. We look forward to gathering people in academia and society interested in parasitology to share the latest trends and important issues relevant to our field/subject area. The scientific programme of the conference is broad and embraces different research aspects with focus on applied and ecological parasitology, and in particular with a veterinary and medical interest.

[www.trippus.se/web/presentation](http://www.trippus.se/web/presentation)

### **British Society for Parasitology (BSP)**

16 April – 18 April 2015  
Liverpool, United Kingdom

The meeting will be themed around Malaria, the Neglected Tropical Diseases (NTDs) and their Vectors together, with a fusion of traditional and contemporary multi-disciplinary approaches to Parasitology research.

[www.bsp.uk.net/news-and-events/bsp-events/bsp-spring-meeting-2015-liverpool](http://www.bsp.uk.net/news-and-events/bsp-events/bsp-spring-meeting-2015-liverpool)

### **World Association for the Advancement of Veterinary Parasitology (WAAVP)**

15 August – 20 August 2015  
Liverpool, United Kingdom

WAAVP 2015 will bring together parasitologists from around the world to present and discuss the latest advances in their research as well as important issues relevant to veterinary parasitology. Our discipline embraces a broad and growing field of applied parasitology and WAAVP 2015 will provide a Congress which showcases the best in veterinary parasitology activity worldwide.

[www.waavp2015.com](http://www.waavp2015.com)

### **International Conference on Parasitology**

24 August – 26 August 2015  
Philadelphia, USA

International Conference on Parasitology (Parasitology-2015) is scheduled from August 24-26, 2015 in Philadelphia, USA which aims to gather the most elegant societies and industries along with the renowned and honourable persons from top universities across the globe.

[parasitology.conferenceseries.com](http://parasitology.conferenceseries.com)

### **9<sup>th</sup> International Symposium on Fish Parasites (ISFP)**

31 August – 4 September 2015  
Valencia, Spain

We invite you to both enjoy this exceptional scientific event and get to know Valencia, a wonderful Mediterranean city. In the scientific program we would like to include the diversity of approaches and research fields in fish parasitology, with a special interest on the “New Challenges in Fish Parasitology” facing us for the next years. Please, keep visiting this web page to follow the progress, new details and news.

[www.9isfp.com](http://www.9isfp.com)

### **Molecular and Cellular Biology of Helminth Parasites VIII**

31 August – 5 September 2015  
Hydra, Greece

All major areas of helminth research are included, in 12 thematic sessions. An important aspect of this meeting is the interface between parasite biologists and investigators from worm model systems such as *C. elegans*, which is proving highly effective at bringing new blood and fresh perspectives into the field.

[hydra.bio.ed.ac.uk](http://hydra.bio.ed.ac.uk)

## PARSA 2014

This year PARSA's 43<sup>rd</sup> annual meeting was incorporated with the International Congress on Parasites of Wildlife in Skukuza, Kruger National Park. SAVETCON pulled out all the stops providing us with a spacious and modern venue in the largest rest camp in the Kruger Park. Each day the conference began with an excellent keynote speaker and, due to the large number of delegates, there were parallel sessions during parts of the programme. Each tea and lunch break, delegates were treated to large quantities of good food and poster viewing. With the daily programme ending around 3, there was also ample opportunity for delegates and guests to go on private or guided tours of the park where all of the Big 5 could be seen on a daily basis. The conference ended with a gala dinner along the banks of the Sabie River where prizes were handed out to the lucky winners:

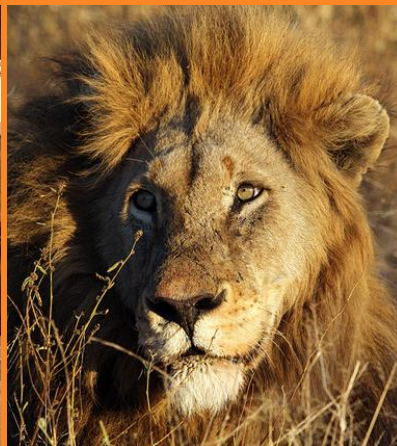
- Best first-time poster presentation (shared): **Kelly Dymond & Karlien Malan**
- Best first-time oral presentation: **Katlego Mogorosi**
- Senior student poster presentation: **Ilse Vorster**
- Senior student oral presentation: **Luther van der Mescht**
- Veteran poster presentation: **Padriag Duignan**
- Veteran oral presentation: **Courtney Cook**

Additionally the following medals were handed out:

- Junior WO Neitz Medal for the best MSc in parasitology in South Africa: **Ronel Pienaar** for her dissertation entitled "Assessment and improvement of molecular diagnosis of *Theileria parva* of African Buffalo (*Syncerus caffer*) in southern Africa".
- Senior WO Neitz Medal for the best PhD in parasitology in South Africa: **Not awarded**
- Elsdon-Dew Medal: **Prof. Maureen Coetzee**

### Workshop:

As an added bonus, a workshop on "How to write great papers" was held on the following Thursday for all interested parties. It was presented by **Dale Seaton** (an Elsevier Publisher) and **Andrew Thompson** (Editor of Journal of Parasitology: Parasites and Wildlife) and aimed at educating researchers on what an editor looks for. From title to references, from submission to publication, all of the bases were covered and everybody walked away a little wiser on manuscript preparation. It was a fantastic experience and I would like to thank all the organisers, especially Petrie from SAVETCON, who once again made another memorable PARSA conference possible.





### *Visit Review*

#### **Dr Cecile Reed and Dr Carl van der Lingen**

*University of Cape Town*

Prof. Ken MacKenzie, a retired parasitologist from the Marine Laboratory at the University of Aberdeen in Scotland, visited the Department of Biological Sciences UCT from the 3<sup>rd</sup> to 12<sup>th</sup> September 2014. During this period he spent time working with Dr. Cecile Reed and numerous students (Ayesha Mobara, Hend Noser, Thomas Morris, Irfan Nunkoo, Nwamaka Ukomadu and Yusuf Agabi), helping them with their projects related to either using parasites as biological tags for fish stock discrimination or as indicators of environmental pollution.

Prof. MacKenzie is a renowned parasitologist with over a 100 publications, numerous book chapters and many invited plenary lectures relating to applied marine parasitology. He has visited UCT annually since 2010, principally to provide advice on the identification and selection of parasite biotags for fish population structure assessments, and his collaboration with Dr. Reed from UCT and researcher Dr. Carl van der Lingen (and others) from the Department of Agriculture Forestry and Fisheries has pioneered this work on sardine, horse mackerel, Cape hakes and most recently kingklip.

In honour of this collaboration with Prof. MacKenzie, a workshop entitled "Parasite Research on Marine Commercial Species 2014" (PRoMCS 2014) was held at UCT on Friday the 5<sup>th</sup> September 2104, during which an entire morning was dedicated to presentations by the many researchers involved in these projects, most of which have been successful due to the valuable contribution made by Prof. MacKenzie. The workshop concluded with a brief discussion on future research and ended with a lunch sponsored by SeaKeys, a multi-institutional South African research programme that aims to unlock basic biodiversity knowledge, including that on fish parasites, for improved management of marine resources and ecosystems.

Prof. MacKenzie also made a fleeting visit to Port Elizabeth where he met with Dr. Stephanie Plön, a marine mammal scientist working at Nelson Mandela Metropolitan University. Dr. Plön is heading up a new project of dolphin parasites and received some guidance on the way forward with her project and with some parasite identifications by Prof. MacKenzie.

Subsequent to Prof. MacKenzie's visit to UCT, he and three others from UCT (Dr. Cecile Reed and MSc students Irfan Nunkoo and Thomas Morris) presented papers at the annual Parasitological Society of southern Africa's (PARSA) conference in Skukuza from the 14<sup>th</sup> to the 17<sup>th</sup> September 2014. To conclude Prof. MacKenzie's visit to South Africa, the entire group from UCT attending the PARSA conference were invited to visit the University of Limpopo and present guest lectures in the Department of Biodiversity. They were hosted by Prof. Wilmien Luus-Powell who holds an NRF Chair for research in Aquatic Parasitology and Dr. Ali Halajian, a post doc from Iran, with whom fruitful discussions were held.



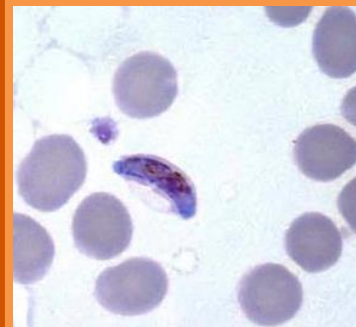
## Malaria Vaccine

**Prof Miles Markus**

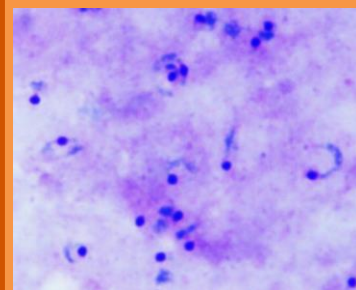
*University of the Witwatersrand*

High up on the research agenda in the overall field of infectious and tropical diseases is the goal of finding an effective vaccine(s) against malaria. In this regard, a non-South African, international article of unusual significance appeared recently in the high-impact journal *PLoS Medicine*. It reports the very promising results of a massive clinical malaria vaccine trial that was conducted at 11 sites in Africa. Worm infections can diminish the immune response to particular malaria and other non-helminthic vaccines, and the article cites a 2007 publication by Professor Miles Markus (Wits University). The second of the two authors of his paper is Dr John Fincham (now retired from the S.A. Medical Research Council). This analysis provides a novel technical basis concerning how to control for helminthiasis in clinical vaccine trials. Within the first 2 weeks after publication, the new article in *PLoS Medicine* had already been viewed online by approximately 12 500 people. It can be accessed at:

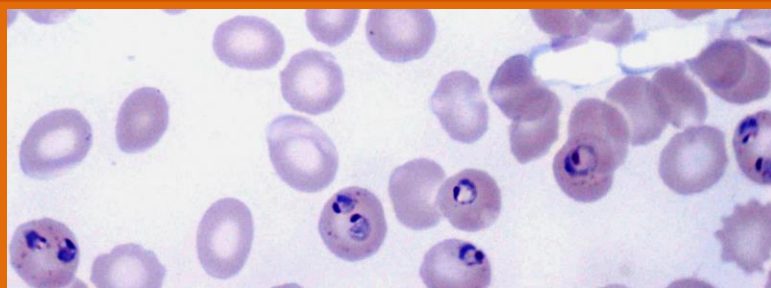
<http://dx.doi.org/10.1371/journal.pmed.1001685>



Characteristic crescentic gametocyte of *Plasmodium falciparum* in the peripheral blood. Photo: Prof. J.A. Frean.



*Plasmodium falciparum* trophozoites in a thick blood film, which is used to facilitate rapid diagnosis. Photo: Prof. J.A. Frean.

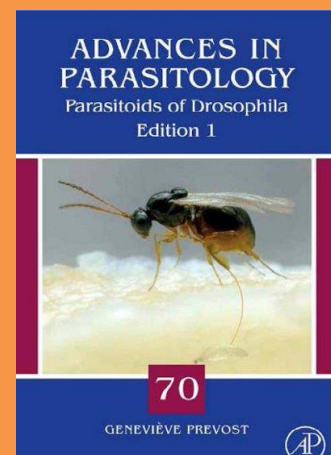
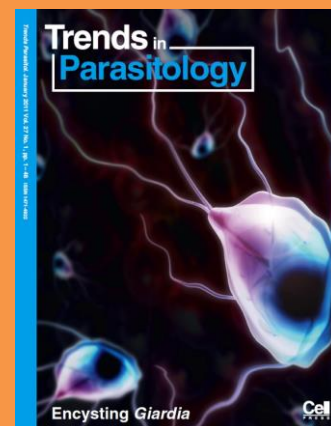


Intra-erythrocytic trophozoites of *Plasmodium falciparum* in a thin blood smear from a patient with clinical malaria. Photo: Prof. J.A. Frean.

## Parasitic Journal Impact Factors

Recently, the 2013 (released in 2014) impact factors were released with most parasitic journals showing a lower factor than 2012. The latest numbers of some journals can be seen below:

Parasite Journal	2013/2014	2012	2011
Acta Parasitologica	0.965	1	0.789
Advances in Parasitology	4.36	3.778	4.39
Annals Of Tropical Medicine And Parasitology	1.203	1.313	1.429
Comparative Parasitology	0.737	0.876	0.757
Experimental Parasitology	1.859	2.154	2.122
Folia Parasitologica	1.211	2.515	1.812
International Journal for Parasitology: Drugs and Drug Resistance	2.514	-	-
International Journal For Parasitology	3.404	3.637	3.393
International Journal For Parasitology: Parasites and Wildlife	-	-	-
Iranian Journal of Parasitology	0.872	0.326	0.421
Journal Of Parasitology	1.258	1.321	1.405
Korean Journal Of Parasitology	0.965	0.881	1.042
Molecular And Biochemical Parasitology	2.243	2.734	2.551
Parasite	0.822	1.116	-
Parasite Immunology	1.849	2.208	2.601
Parasites & Vectors	3.251	3.246	2.937
Parasite-Journal De La Societe Francaise De Parasitologie	0.822	1.116	1
Parasitology	2.35	2.355	2.961
Parasitology International	2.111	2.302	2.132
Parasitology Research	2.327	2.852	2.149
Phytoparasitica	0.675	0.724	0.887
Revista Brasileira De Parasitologia Veterinaria	0.961	0.722	-
Systematic Parasitology	1.035	1.26	1.25
Trends In Parasitology	6.217	5.513	5.144
Veterinary Parasitology	2.545	2.381	2.579





## *Eskom Expo for Young Scientists*

*Heloise Heyne & Gert Venter*

Eskom Expo for Young Scientists is a science fair where students are able to show others their projects about their own scientific investigations. This initiative is aimed at increasing the awareness of the wonders of science and students are able to grow and broaden their scientific horizons.

PARSA has been involved with judging at the Eskom Expo for Young Scientists for the past nearly 30 years. Scholars excelling in outstanding work / tasks on parasites are awarded a special PARSA prize.

The 34<sup>th</sup> International Science Fair was held this year at the Birchwood Hotel, Boksburg from 7–10 October. This year, 822 students participated in the expo from 31 regions and more than 5 countries. There were 477 female participants and 345 male participants. Sadly this year there were only two Parasitology entries and neither one was worthy of the PARSA prize.

### **Project 1:** Grade 10 pupil (Hoërskool Waterkloof) titled: ***Ruminantum [sic] Resistance.***

The pupil's hypothesis was that springbok did not have natural immunity and if brought into a Bushveld environment (?) (nowhere was it evident where the introduced springbok were kept) could be immunised against heartwater. The glaring spelling mistake [*Ruminantum*] was evident throughout the student's work even though Anna Haw's thesis was copied *in toto*.

Only two springbok were vaccinated and the blood together with that of a bushbuck was sent to ARC-OVI to be analysed. The two veterinarians that were interviewed (and subsequently the student) were also of the opinion that the only antelope susceptible to Heartwater were springbok. We could also not see the feasibility of putting a herd of springbok into a crush, vaccinating them against *Ehrlichia ruminantium*, monitoring the herd for several days and then treating the individual animals.

### **Project 2:** Grade 7 & 11 pupils (Kismet Combined School) titled: **Frequency vector control.**

They built a device (prototype) that uses high frequency to control mosquitos. There was, however, no evidence (statistical analysis or even data) to corroborate the assertion that the device worked.



## MSc Opportunity – 2015

*Anopheles arabiensis* presents a singular challenge in Malaria control. It is a hardy vector that copes well under stressful conditions. It is also becoming the major Malaria vector of deforested and urbanised areas. It is extremely difficult to control as it is an indiscriminate feeder and does not rest indoors, making it hard to control by indoor residual spraying. It also displays great behavioural plasticity, and is one of the most interesting African Malaria vectors to study. *Anopheles arabiensis* has added a new behaviour to its arsenal. It has now been found to cope well in polluted water. Pollutants of various types have been shown to exacerbate insecticide resistance. The aim of this study is therefore to examine the effects pollution on the life history, insecticide resistance phenotype and genotype of *An. arabiensis*.

The major aims of the study are as follows:

1. To determine whether resistant *An. arabiensis* larvae cope better with metal and agricultural pollutants than their susceptible counterparts.
2. To determine whether pollution in larval breeding sites affects the insecticide resistance phenotype and life history of the adult.
3. To determine the genetic and biochemical basis of the observed phenotypes.

This project promises to be exciting and rewarding, as the results of the related studies looking at environmental stress has produced interesting and publishable results. The candidate will have the opportunity to learn a variety of techniques, including insect husbandry, microscopy, enzymology and real-time PCR. There are strong publication opportunities with the project. I am therefore looking for a keen MSc student to take on this challenging but exciting project. If you are interested or would like more information, please contact me (Shüné Oliver) at [shuneo@nicd.ac.za](mailto:shuneo@nicd.ac.za).

Shüné Oliver,  
Medical Scientist,  
Vector Control Reference  
Laboratory, NICD.



## Congratulations!!

PJ Mokumo received his MSc degree at the University of Limpopo's graduation ceremony on the 25<sup>th</sup> of September. The title of his project was: **A SYSTEMATIC STUDY OF SELECTED KROYERIA SPECIES FROM THE SOUTH AFRICAN COAST**

Well done and good luck with your future endeavors =)

## Contact Details

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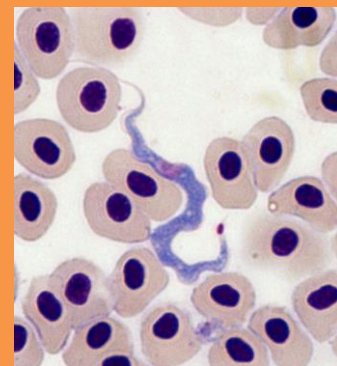
## PARSA Application

The application form for new members is available on the PARSA website or from the PARSA secretary. The current joining fees are R80 per member thereafter it is R100 per year to maintain membership.

The application form can be sent to the PARSA secretary:

Mrs Andrea Spickett  
Parasites, Vectors and  
Vector-Borne Diseases  
Onderstepoort Veterinary  
Institute  
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Onderstepoort  
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Tel: +27 (0)12 529-9208  
Fax: +27 (0)12 529-9434  
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## Members

The Parasitology Society of Southern Africa currently has 135 members from around the world. Memberships of members that are 3 years in arrears will be terminated.