

Issue 10
April
2012



Message from the editor

Dear PARSA Members

This issue shows off the work of one particular PhD student and showcases the research being done at the Faculty of Veterinary Science, University of Pretoria with the MSc and PhD degrees conferred in the last year from the University of Pretoria being mentioned. Please send through information to be distributed in the next newsletter. It can be as little as one paragraph or a couple of pages on any newsworthy story (examples include: current or future projects, research notes, awards, conferences both past and upcoming, workshops, reviews etc).

Just a reminder to keep the beginning of October (1–3) open for this year's PARSA conference to be held at the University of the Free State, Bloemfontein. The first announcement will be sent out shortly with more detailed information.

In February this year I sent out the published PARSA abstracts for the 2010 PARSA conference. Please let me know if you did not receive this document or wish to have it sent again (ecology@uj.ac.za). The 2011 abstracts are currently being edited with the hopes of being in the 2012 edition.

Please also note the document sent with the newsletter for the WAAVP African Foundation grant for students to attend the WAAVP 2013 in Perth, Australia.

The time has also come for nominations for the annual PARSA awards, namely the Junior and Senior Neitz Awards as well as the Elsdon-Dew Medal. Please take note these nominations are due the **11th of May** and the **27th of July!** Incomplete applications will not be accepted so please ensure all of the required information is given.

Keep warm!

Kind regards

Kerry



Dear PARSA member:

I trust that everybody has diarised the dates and venue for this year's PARSA congress: 1–3 October 2012 in Bloemfontein. This will form part of the centenary celebrations of the Department of Zoology at the University of the Free State. Please respond to the call for papers and posters. As always, this will be a great opportunity for post-graduate students to "cut their teeth" in a friendly atmosphere when it comes to presenting their research findings.

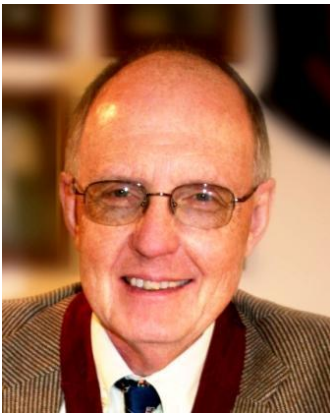
The planned **International Conference on Parasites of Wildlife** at the new conference centre in Skukuza, Kruger National Park, is slowly taking shape. The preliminary booking has been moved to the first week of September 2014 to allow slotting in with the 8th Tick & Tick-borne Pathogen Conference (TTP 8), scheduled for Cape Town during the last week of August 2014. This will make it easy for international delegates from abroad to attend both conferences.

At the next PARSA council meeting, scheduled for 15 May 2012, these dates will be confirmed and a scientific programme committee will be appointed. The council will also consider the proposal for PARSA being the official host for TTP 8. This will greatly facilitate administrative matters.

Please bear in mind that the term of office of the current council expires at the AGM in October. Please start thinking of possible nominees for the various offices.

Regards

Banie Penzhorn
President



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(President: PARSA)

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Next Issue...

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

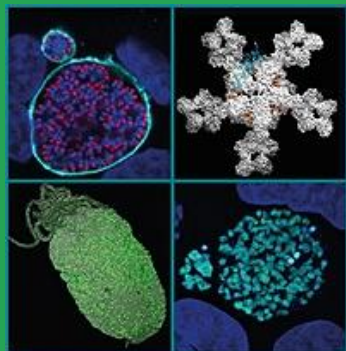
- Feature articles on research being done in your institute (with photos).
- Summary on the life and work of a respected and well-known parasitologist.
- Student abstracts from across southern Africa conveying the various research being done on parasites in Africa.
- Reviews and photos of the parasitological 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: June 2012

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



2012 Conferences

8th Annual BioMalPar Conference - Biology and Pathology of the Malaria Parasite

14 May – 16 May 2012

EMBL Heidelberg, Germany

The purpose of this conference is to bring together malaria researchers from Europe and overseas to share their research on malaria. The scientific aims are to address fundamental questions of the biology of the malaria parasite, its vector. Registration is now open.

www.embl.de/training/events/2012/BMP12-01/

Colloquium Crustacea Decapoda Mediterranea

3 June – 7 June 2012

Athens, Greece

The Crustacean Society invites submissions of papers for oral and poster presentation and proposals for Symposia topics at its Annual Conference jointly hosted with the Colloquium Crustacea Decapoda Mediterranea in June 2012, in Athens – GREECE. The event will place particular emphasis on innovating research from all areas of crustacean science including systematics, taxonomy, evolution, phylogeny, ecology, behaviour, sociobiology, development and larval biology, physiology, symbiosis, parasitology, genetics, molecular biology, biogeography, fossils and ichnology, taphonomy, palaeobiology, conservation and introduced species.

www.cssm2012.gr/

American Society of Parasitologists, 87th Annual Meeting

12 July – 17 July 2012

Richmond, Virginia

The site for our 87th annual meeting is a history buff's mecca. Virginia is the birthplace of many of our country's founding fathers, including 8 U.S. presidents, notably George Washington, our first president, and Thomas Jefferson, our third president and the principal writer of the Declaration of Independence. Richmond, the state capital and our host city, also has a history as storied as the state. Anchorage is the largest city in Alaska with a population of over 260,000. As always, the scientific program will offer a diverse array of paper and poster sessions as well as several symposia for your enjoyment.

<http://asp.unl.edu/> or email asp.meeting@gmail.com

31th International Symposium of the European Society of Nematologists

23 September – 27 September 2012

Adana, Turkey

The annual symposium will be held in Turkey in 2012. *Adana* is located in the East Mediterranean region of Turkey and has always been an important agricultural area of Turkey as well as a region with fascinating geography, history and culture. More information will be posted on the website. The registration deadline will be 15th April 2012.

www.esn-online.org

Challenges in Malaria Research

10 October – 12 October 2012

Basel, Switzerland

Challenges in Malaria Research will see internationally renowned speakers present their insights into malaria elimination, including social science and policies; Artemisinin resistance; new drugs; vaccines; diagnostic challenges and vector controls. Attendees of Challenges in Malaria Research will learn about the latest developments in key areas and initiatives that are at the forefront of malaria research.

www.challenges-in-malaria-research.com

Student Research

Luther van der Mescht (PhD student, Stellenbosch University)

Supervisor: Dr. Sonja Matthee

Fit as a flea?

For my Msc project I investigated the effect of anthropogenic habitat fragmentation on the ectoparasite assemblage of the Four-striped mouse (*Rhabdomys pumilio*) in the Cape Floristic Region (CFR) of South Africa. Habitat modification is concurrently increasing with human development. This modification normally results in the fragmentation of natural habitat. Natural rodents and other fauna are then left with smaller fragments to habituate. These fragments provide abundant food and shelter for generalist rodents (like *R. pumilio*) to out-compete specialists. Further, predators are found in very low abundance and diversity or are absent in these fragments. Remaining fragments provide the ideal habitat for generalist rodents to thrive in high abundances. The CFR is classified as a biodiversity hotspot due to its high plant diversity and endemism. Increasing growth in agricultural activities has contributed to fragmentation of natural vegetation. A diverse assemblage of rodents is known from this region, but very little information is available with regards to their natural parasite assemblages.

Rodents were trapped at 8 localities consisting of 4 remnant habitat fragments and 4 pristine natural areas. The aim was to trap 30 adult individuals (>30g) at each locality. Ectoparasites were removed and identified by experts and fleas were identified by me. Relative density, average body size and body condition of *R. pumilio* were recorded. Rodents were larger and had a better body condition in remnant natural fragments. Flea body size (vertical, horizontal, head and product of length) were recorded for the two most abundant flea species (*Chiastopsylla rossi* and *Listropsylla agrippinae*). A positive body size relationship was found between the most abundant flea (*Listropsylla agrippinae*) and *R. pumilio*. Diversity and species composition of ectoparasites were compared for the two treatments. A total of 8361 ectoparasites consisting of 6 flea, 1 louse, 8 mite and 11 tick species were recorded. Mean abundance and prevalence of overall ectoparasites combined and separately were higher in remnant natural fragments. Then, temporal variation in mean abundance of fleas, mites, ticks and the louse were recorded within the remnant natural fragment. Mites and fleas were more abundant on mice during cool wet months, whereas ticks and the louse were found to be more abundant during hot dry months of the year in this winter rainfall region.

My study provided further evidence that *R. pumilio* is host to a large diversity of ectoparasite species in the CFR. Moreover, remnant habitat fragments within agricultural landscapes can facilitate larger parasite burdens and higher ectoparasite prevalence in rodent populations. Changes in the ectoparasite assemblage may have severe consequences and can lead to an increase in disease risk given that several of the parasite species are important vectors of pathogens that can cause disease in domestic, wild animals and humans.

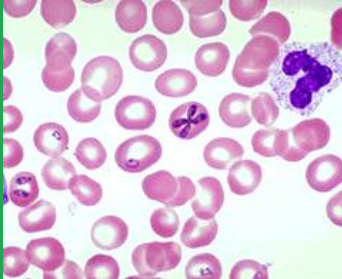


Four-striped mouse
(*Rhabdomys pumilio*)



Hidden rodent trap





Research Focus

Parasitology - Faculty of Veterinary Science, University of Pretoria

Parasitology features prominently at UP's autumn graduation ceremony

Parasitology topics featured prominently at the autumn graduation ceremony of the University of Pretoria on Friday 13 April 2012. Two PhDs and four masters' degrees were conferred on post-graduate candidates from the Department of Veterinary Tropical Diseases (DVTd), Faculty of Veterinary Science:

PhD

Mamohale CHAISI: Diversity of *Theileria* parasites in African buffalo (*Syncerus caffer*) and the challenge of differential diagnosis.

Supervisor: Marinda Oosthuizen; Co-supervisors: Nicola Collins (DVTd), Dirk Geysen (Institute of Tropical Medicine, Antwerp, Belgium).

Habib GOLEZARDY: Prevalence of *Babesia* species and associated ticks (Acari: Ixodidae) in captive cheetah (*Acinonyx jubatus*) populations in South Africa.

Supervisor: Banie Penzhorn; Co-supervisors: Ivan Horak (DVTd), Marinda Oosthuizen (DVTd).

MSc

Edward KARIUKI: A survey of tick species on cattle and African buffaloes in the Tsavo Conservation Area. Kenya.

Supervisor: Banie Penzhorn; Co-supervisor: Ivan Horak (DVTd).

Petunia MALATJI: Detection of *Babesia rossi* genotypes using a earl-time PCR.

Supervisor: Tshepo Matjila; Co-supervisor: Banie Penzhorn (DVTd).

Dondald SIBANDA: Molecular characterisation of tick-borne pathogens of domestic dogs from communal areas in Botswana.

Supervisor: Tshepo Matjila; Co-supervisor: Banie Penzhorn (DVTd).

Hein STOLTSZ: Aspects of the epidemiology of *Theileria parva* infections in cattle and African buffalo (*Syncerus caffer*) in South Africa revealed by tick transmission and sub-inoculation of blood.

Supervisor: Nicola Collins; Co-supervisors: Banie Penzhorn.

In addition, one PhD in the Faculty of Health Sciences was on a parasitology topic:

Yunus ASSANE: Human *Taenia solium* cysticercosis in the district of Angonia, Mozambique: prevalence rates and clinical aspects.

Supervisor: Prof C Schutte; Co-supervisors: Dr E.V.R.I. Noomahomed (Eduardo Mondlane University, Mozambique), Dr P. Magnussen.



Hein Stoltz (MSc), Mamohale Chaisi (PhD) and Petunia Malatji (MSc)

Call for Applications – 2012

Junior and Senior WO Neitz Award (annual)

The Parasitological Society of Southern Africa confers two awards annually for a postgraduate (MSc and PhD) thesis in parasitology. In short, the MSc or PhD thesis must have been accepted within the last 18 months by a tertiary institution. Each thesis must be accompanied by a nomination in writing by the candidate's supervisor or Head of Department. The deadline for nominations is **11 May 2012**. For further information contact the PARSA Secretary, Dr. Marinda C. Oosthuizen, at marinda.oosthuizen@up.ac.za or +27 (0)12 529-8390.

Elsdon-Dew Medal (annual)

The Parasitological Society of Southern Africa (PARSA) awards this medal on merit to individuals who add valuable contributions to parasitology in Africa. Motivated nominations, with a detailed curriculum vitae (4 copies), are called for and should be submitted confidentially to the PARSA secretary. Documents may be submitted before **11 May 2012** to the PARSA Secretary, Dr. Marinda C. Oosthuizen at marinda.oosthuizen@up.ac.za or +27 (0)12 529-8390.

WO Neitz Memorial Scholarship (for postgraduate study abroad)

The Wilhelm Neitz Memorial Trust was created to assist South African nationals or permanent residents for post-graduate study in parasitology at institutions abroad. Honours, master's doctoral and post-doctoral study will qualify. As the amount available will not cover the total costs of study abroad, it is imperative that applicants should seek other sources of funding, e.g. NRF bursaries.

Applications should include the following:

1. A curriculum vitae
2. A certified academic record, including undergraduate studies
3. Detailed outline of the field of study or research project
4. Letter of support by employer or most recent academic supervisor
5. Details of how the proposed study will be financed.

Applications should be sent to:

Prof. Banie L. Penzhorn
Tel: +27 (0)12 529-8253
Fax: +27 (0)12 529-8312
Email: banie.penzhorn@up.ac.za

Deadline for applications is 27 July 2012.
Incomplete applications will not be considered.

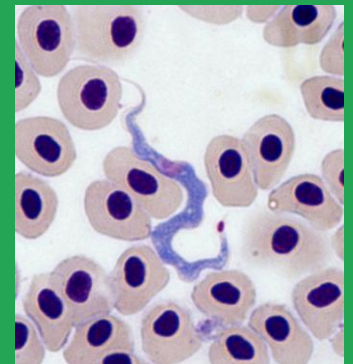
PARSA Application

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:

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Members

The Parasitology Society of Southern Africa currently has 139 members from around the world. Memberships of members that are 3 years in arrears will be terminated.