

PARSA

Quarterly Newsletter

Issue 5
January
2011



Message from the editor

Dear PARSA Members

New Year...new parasites?!?

Let's hope so! This year is almost 30 days in and already there is so much parasitology work being done. If anyone would like to send through their work please do so and we will share it with our PARSA members.

This current newsletter comprises of work being done by a post-doc on eel parasites, a synopsis of the HAA conference and the tortoise parasite work that was presented there, and a summary of the Eskom Expo for Young Scientists and the 2010 PARSA winner. Lastly, there are two opportunities for an MSc (or PhD) from Stellenbosch University – deadlines for these applications close on **21 February 2011!** There are also applications for the PARSA annual awards so please take note of the deadlines and what is required for review for the awards.

This year, PARSA will be held at the Stellenbosch University, Western Cape. This is a joint conference with ZSSA and will be held on 10-13 July. The closing date for abstract submissions is **30 March**, early registration **30 April** and the closing date for regular registration is **24 June!** So please be aware of these dates! All delegates are required to register online at www.savetcon.co.za and abstracts need to be submitted electronically on www.easyabstract.com. If anyone has not received the first announcement, with all these details and more, please contact me (ecology@uj.ac.za) and I will gladly pass it on!

Have a fantastic 2011!!

Kind regards

Kerry



Dear PARSA member:

I trust that you were able to take it easy during the festive season, and that the New Year started off well. Let's hope that 2011 will be a bumper years for parasitologists!

With the copious rains over large parts of the country this summer, vector-borne diseases pose a major threat. In fact, Rift Valley fever (a viral disease transmitted by mosquitoes) has already broken out again. Last year this disease cause major losses among livestock and, sadly, also resulted at least 20 fatal human cases.

I am happy to report that arrangements for this year's PARSA congress, which will be a joint one with the Zoological Society of Southern Africa, are well in hand. You should have received the first announcement late last year. The congress will be held at the University of Stellenbosch, 11–12 July 2011. We are grateful to the hard work of Dr Sonja Matthee, who represents PARSA on the local organising committee.

At last year's PARSA congress, Prof Jo van As mentioned that the Department of Zoology at the University of the Free State would be celebrating its centenary in 2012 and that he was considering inviting PARSA to hold its next conference in Bloemfontein.

In 1991 PARSA hosted a very successful International Conference on Parasites of Wildlife at Berg-en-Dal in the Kruger National Park. Shouldn't we start thinking about another one in 2013? Please let me know what you think.

Members who attended the PARSA congress at Drakensville last year will remember the address by Dr Rajendra Maharaj, Director of the Malaria Research Programme of the Medical Research Council (MRC). PARSA is supporting the MRC's bid to host the **International Congress on Tropical Medicine and Malaria (ICTMM)** in South Africa in 2015. Dr Maharaj recently informed me that the bid is over the first hurdle, and then the choice is between South Africa and Australia. Africa's time has come! Ke nako!

Regards

Banie Penzhorn
President



Prof Banie Penzhorn
(President: PARSA)

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Faculty of Veterinary Science
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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: March 2011

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

**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 23rd WAAVP Conference to be held in Buenos Aires, Argentina, 21 - 25 August 2011.

Applications should include:

- A copy of the abstract(s) for paper(s) or poster(s) which were submitted to the 23rd 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:

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Veterinary Medicine
630 US Highway 1,
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North Brunswick
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08902-3311 USA
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Fax: 1 869 465 6156
tkrecek@rossvet.edu.kn

**DEADLINE:
1 March 2011**

2011 Conferences

Biology and Pathology of the Malaria Parasite

16 – 18 May 2011

EMBL Heidelberg, Germany

The scientific aims of the network are to address, in an integrated, collaborative manner, fundamental questions of the biology of the malaria parasite, its vector, and the disease, allowing optimal exploitation of the resulting knowledge to impact on public health.

<http://www.embl.de/training/events/2011/BMP11-01>

American Society of Parasitologists, 86th Annual Meeting

1 – 4 June 2011

Sheraton Anchorage Hotel and Spa, Anchorage, Alaska

The site for our 86th annual meeting is indeed a vacationer's paradise. 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. Make your plans now for what portends to be one of our best meeting locations and programs ever.

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

2011 Australian Society for Parasitology Annual Conference

10 – 13 July 2011

Pullman Reef Casino, Cairns, Queensland, Australia

Conference website will open soon. Send interest to Lisa (Lisa.Jones@uts.edu.au)

<http://parasite.org.au/?p=100>

World Association for the Advancement of Veterinary Parasitology

21 – 25 August 2011

Buenos Aires, Argentina

On behalf of the Society of Veterinary Medicine (Argentina) and the Argentine Association of Veterinary Parasitologists (AAPAVET), we have great pleasure in inviting you to the 23rd. International Conference of the World Association for the Advancement of Veterinary Parasitology in Buenos Aires, from 21-25 August, 2011, to discuss together new advances in this highly specialized field of veterinary parasitology.

<http://www.waavp2011-argentina.com.ar/>

Ticks and Tick-borne pathogens conference

28 August – 2 September 2011

Zaragoza, Spain

The main theme of the conference is Integration: studies aimed toward inclusion of different strategies to solve problems in the complex world of ticks and tick-borne pathogens. Integrative and comprehensive studies intended to solve the complex puzzle of pathogen-vector-host-habitat interactions.

http://www.unizar.es/ttp7/Sitio_web/Main.html

8th International Symposium on Fish Parasites (ISFP)

26 – 30 September 2011

Viña del Mar, Chile

This Symposium will be an important forum for the discussion and distribution of new findings in this rapidly expanding field. The theme of the conference is "**Fish parasitology: from classical taxonomy to holistic approach**". We hope to develop an exciting scientific program that will provide an update in our field of research.

<http://www.8isfp.com/>

Student Research

Maryke L. Ferreira (Post Doctoral Fellow, University of the Free State)

Supervisor: Prof Linda Basson

Since I've started my post doctoral research at the University of the Free State I have been privileged to work in collaboration with Dr. Olaf Weyl from SAIAB (South African Institute of Aquatic Biodiversity) and Prof. Horst Tarachewski from the University of Karlsruhe, Germany on a project entitled "Parasitological and ecological research on south African eels". Eels are valuable aquaculture and fisheries species globally and their potential to contribute to the development of an industry in South Africa has long been recognised. Of the four species occurring in South African rivers, *Anguilla mossambica* and *Anguilla marmorata* are the most abundant. Both species have established markets in Asia, while little is known on the vulnerability of the South African species to parasites.

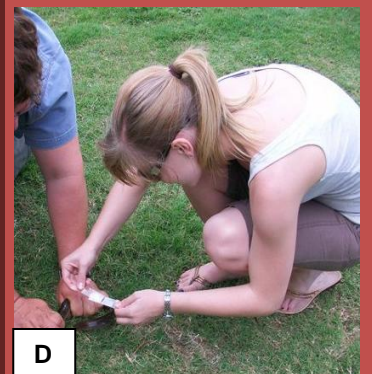
In South African eels, a number of helminth parasites including the native swim bladder parasite *Anguillicola papernaii*, the gastro-intestinal nematodes *Heliconema longissimum*, *Paraquimperia africana* and the alien gill parasite *Pseudodactylogyrus anguillae*, have been documented in wild stocks. As a result, proactive approaches for the control of parasitic diseases will be required if eel aquaculture is to develop and wild stocks are to be protected in South Africa. Thus the overall aim of this research project is: *to contribute to the development of proactive approaches to the control and treatment of parasitic diseases in South African eels*. The objectives are firstly to assess the current status of parasite populations on *Anguilla mossambica* and *Anguilla marmorata* in South Africa by identifying parasites, describing new species (if found), and quantifying intensity and prevalence; secondly to provide information against which to assess the effect of subsequent parasite invasions and thirdly to assess the longitudinal distribution of *A. mossambica* and *A. marmorata* in South African rivers and assess the effect of parasites on their ecology. My first sampling trip was in October 2010 to the Eastern Cape, where we sampled (Figure A) the Keiskamma and Kei systems. A total of 98 fish were collected, from which 32 were eels. Sampled fish were identified to species level, measured and weighed (Figure B). The specimens were dissected and the swim-bladder, gills and digestive tract were examined (Figure C). Blood, skin and gill smears were also made (Figure D). Parasites were collected, fixed and stored prior to their identification. So far nematodes, cestodes and myxosporidians have been found and samples are being identified by various taxonomists. Blood, skin and gill smears are still being processed for the presence of protozoan parasites. This project is highly significant as the research will build a foundation for understanding the biology, distribution, and taxonomy of eel parasites and most importantly will assess the effect of the parasite on the ecology and distribution of these host species.



B



C



D



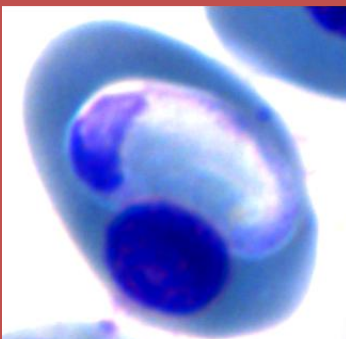
A



10th Conference of the
Herpetological Association of Africa
Cape Town, South Africa
12-14 January 2011



Don Broadley



Haemogregarina parvula

Conference Contributions

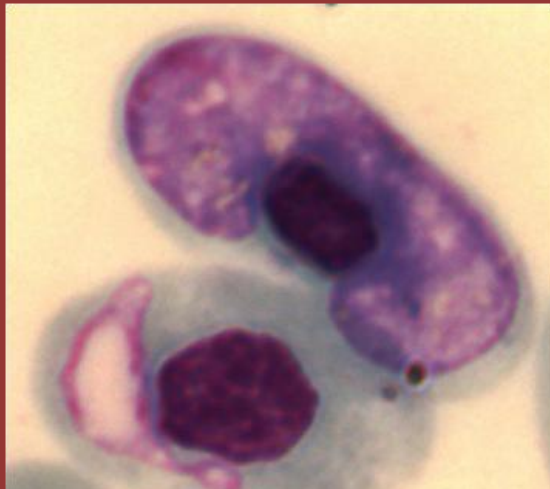
Courtney Cook (PhD student, UJ) – HAA, Cape Town

The HAA, founded in 1965 and dedicated to the study and conservation of reptiles and amphibians of Africa, recently held their 10th biannual conference in Cape Town. Presentations ranged from distribution and ecology to phylogenetics, including not least of all parasites of reptiles.

I presented a descriptive presentation entitled: Preliminary results on the conservation of South African tortoises using apicomplexan haematozoans, as well as biological and metal fingerprinting. South Africa has the richest biodiversity of tortoises in the world, making conservation of these animals and their parasite fauna important. A survey of the biodiversity of apicomplexan parasites infecting tortoises was presented, which included three redescriptions and the description of a new species, *Haemoproteus natalensis* Cook, Smit and Davies 2010. The survey revealed an apicomplexan with a wide host and distribution range, *Haemogregarina fitzsimonsi* Dias, 1953, which along with its suggested well-adapted host parasite relationship status, was assessed as a bio-indicator for tortoise stress. It was observed that with a decrease in body condition there was an increase in prevalence of the infection. Life cycle studies revealed the tick to be the vector and reassessment of the genus may be required. The use of reptile parasites as possible future biological tags was also briefly touched upon.

The 'meet and greet' was held at the Irma Stern Museum, besides the fascinating company and the free bubbly and cocktail snacks, one could attempt to look artistically learned by appreciating the paintings of the well known early 1900's artist. The following evening was held at the UCT Club, pub and restaurant. As a fund raiser for the HAA society, an auction was held comprising of donated photographs, books, collectibles, as well as the finger of Don Broadley himself, founder of the African Journal of Herpetology, which went for R6000! (He lost it many years ago to a puff adder bite). All in all it was a success, raising almost R20 000.

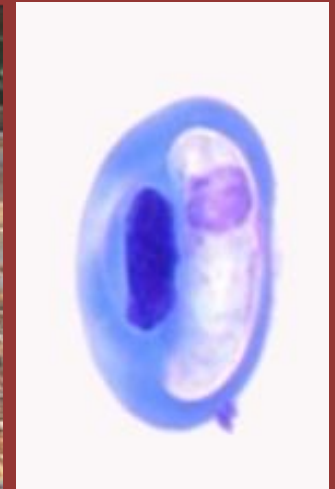
The banquet evening, again held at the UCT Club, comprised of a buffet and refreshment from Jordan Wines. The Don Broadley Prize for excellence in African herpetology was awarded to Wulfe Haake for his life time contribution to African herpetology. Other prizes included best student oral, descriptive and poster presentations for which book and money prizes were awarded. All in all, much fun was had, research shared and collaborations made.



Haemoproteus natalensis n.sp.



Juvenile leopard tortoise



H. fitzsimonsi

Eskom Expo for Young Scientists 2010

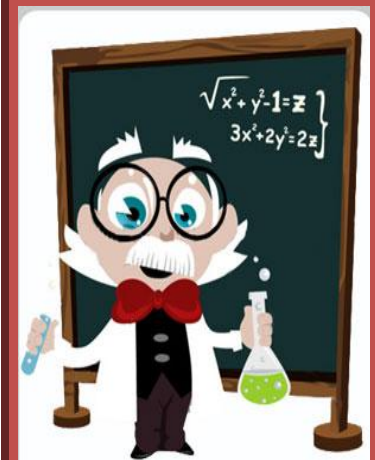
Ms Heloise Heyne (Acarology) & **Dr Gert Venter** (Entomology) – PARSA Judges
National Finals (1–2 October 2010)

Eskom Expo for Young Scientists is an exposition, or science fair, where learners have a chance to show others their projects about their own scientific investigations. Learners initially participate in 27 regional Expos, after which 450 projects are selected to participate in the National Finals, held annually in October. The projects displayed are from 24 categories in the field of science and technology. The award includes prize money to the pupil(s) and the school.

Last year, the PARSA prize was awarded to Christine Popich, a Grade 7 pupil from Laerskool Elarduspark, Pretoria for her project entitled: "Aai spaai... 'n flaaï" / "I spy ... a fly". We were overall impressed with her presentation, her knowledge of the subject field and the experiments she conducted. She collected flies from her immediate environment and studied them. Christine especially made an effort to observe the behaviour of the various fly species collected. She also made a study of the different fly species' seasonal occurrence and their impact on the environment. Her collection is curated very professionally and accompanied by a photographic guide for identification. We are convinced that whomever sees this project and hears her talk will observe flies in a new light and realise that flies are more than just pesky insects whose only aim in life is to be irritating.

The other possible entrants:

- "Slenkdal-wat?" "Rift Valley what?" - Janica Vogel, Grade 9, Afrikaans Hoër Meisieskool, was aimed more at the aetiology of the disease and the people's perceptions than the vector.
- "Aloe tick trick" – Paul van Vuuren, Grade 8, Hoërskool Warmbad, did not attend the function.
- "Ticks on animals" – Demetri & Katie Demetriou, Grade 8, Selly Park Primary School, used Paint-ball guns to apply acaricides as a game. A commercially available systemic acaricide was injected into the paint balls, together with some paint, and then the animals were "shot" with the pellets, thus applying the acaricide from a distance and simultaneously marking the treated animals. However it was done very unscientifically. No study was done to see how many pellets per kg-weight/animal were needed and there was no data on "before and after tick counts" available.



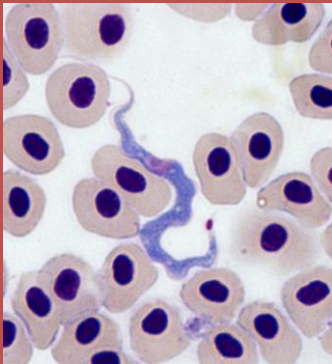
PARSA Application

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
0110

Tel: +27 (0)12 529-9208
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spicketta@arc.agric.za



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.

Research Position – 2011-2012

MSc Project (Parasite Ecology)

Stellenbosch University

Macroparasites such as ticks, mites, fleas, lice and helminths (worms) form part of our local and global diversity. Parasites also make a valuable contribution to ecosystems by regulating host populations. Research in parasite ecology is gaining momentum globally. The Parasite Research Programme in the Department of Conservation Ecology and Entomology at Stellenbosch University addresses various aspects of macroparasites that include ecology, systematics and phylogeography.

Position available:

A NRF MSc bursary (**R30 000 p.a.**) is available for 2 years (2011 and 2012). The project will focus on the ectoparasite diversity associated with the four-striped mouse (*Rhabdomys pumilio*) and several co-occurring rodent species in South Africa. The project will investigate the role of several host related aspects and also vegetation type on the natural parasite diversity. It is anticipated that novel information will be contributed to host parasite species lists and the level of host association/specificity of individual parasite taxa. The student will participate in field trips and will be expected to assist with the handling of rodents and sample collection. The project will entail microscope work for parasite removal, sorting and identification.

Requirements:

1. At least a 60% average for a BSc (Honours) or 4-year BSc
2. A valid South African driver's license
3. Medically fit
4. Enthusiastic and self-driven

Contact:

Dr Sonja Matthee
Department of Conservation Ecology and Entomology
Stellenbosch University
Tel (021) 808 4777/3304
E-mail: smatthee@sun.ac.za



Closing date for applications:

21 February 2011

WO Neitz Memorial Scholarship (for postgraduate study abroad)

This assists post-graduate study in parasitology 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.

Deadline for applications is 29 July 2011. Incomplete applications will not be considered.

Applications should be sent to: Prof. Banie L. Penzhorn (details on page 2)

Research Position – 2011-2012/2013

MSc or PhD Project (Parasite Ecology)

Stellenbosch University

Macroparasites such as ticks, mites, fleas, lice and helminths (worms) form part of our local and global diversity. Vegetation structure and the availability of food (seeds and insects) play an important role in shaping the species composition and diversity of rodent and insectivore species. The Parasite Research Programme in the Department of Conservation Ecology and Entomology at Stellenbosch University addresses various aspects of macroparasites that include ecology, systematics and phylogeography.

Position available:

A NRF MSc (**R40 000 p.a.**) or a PhD bursary (**R60 000 p.a.**) is available for 2/3 years (2011 & 2012/2013). The project will compare the macroparasite diversity associated with murid rodents and insectivores in plantations and natural forests in the coastal region of the Western Cape, South Africa. The PhD project will also include the construction of a phylogeny tree on the flea species associated with small mammal species in South Africa. The student will participate in field trips and will be expected to assist with the handling of small mammals and sample collection. The project will entail vegetation analyses, microscope work for parasite removal, sorting and identification (taxonomy) and in addition molecular genetics (PhD).

Requirements:

1. For MSc: At least a 65% average for a BSc (Honours) or 4-year BSc
2. For PhD: At least 70% and one scientific manuscript in press or published in a peer reviewed journal
3. A valid South African drivers licence
4. Medically fit
5. Enthusiastic and self-driven

Contact:

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Department of Conservation Ecology and Entomology
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Closing date for applications:

21 February 2011

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Call for Applications – 2011

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 **15 April 2011**. 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 **6 May 2011** to the PARSA Secretary, Dr. Marinda C. Oosthuizen at marinda.oosthuizen@up.ac.za or +27 (0)12 529-8390.