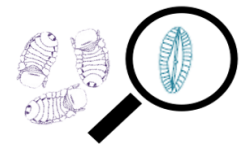




13	Al	78	Pt
Aluminum	27,01	Platinum	195,1
25	Mn	54,94	Manganese



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9 Questions with WRG authors

Title of the paper: Two new species of *Hepatozoon* (Apicomplexa: Hepatozoidae) parasitising species of *Philothamnus* (Ophidia: Colubridae) from South Africa

Journal: Folia Parasitologica

Authors: C. A. Cook, E. C. Netherlands, J. van As, N. J. Smit

Read the article: <https://doi.org/10.14411/fp.2018.004>



Field work group with large southern African rock python

[Dr. Courtney Cook](#)



1. What previous work was integral to the new study?

The authors needed to complete a comprehensive review of the literature on haemogregarines (*Hepatozoon* being a genus within this group) of snakes from Africa. Many of the descriptions of these parasites from African snakes were completed in the beginning of the last century, which proved quite a challenge.





2. Why do you care about this particular subject?

Before the study, only two species of haemogregarine (specifically *Hepatozoon*) had been described from snakes of South Africa. This species tally was not as a result of a lack of biodiversity, but a lack of biodiversity research in this field. The genus *Hepatozoon* at present is phylogenetically controversial and would thus benefit from increased taxon sampling.



3. Did any of the findings surprise you?

At first yes, the molecular findings suggesting two species of *Hepatozoon* parasitising these snakes, however, the authors were only able to identify one species morphologically. This prompted the authors to increase sampling efforts to find the 'cryptic' second species. Morphologically, this second species compares to a species described, but unnamed, from a *Philothamnus* in 1920 from Uganda, which suggests a wider distribution range than expected.



Tubing a Mozambique spitting cobra during field work in order to take a blood sample



4. What are some of the limitations of this study?

Drought can be a major limitation as the animals need to be actively collected, which means going out into the field and actively looking for and capturing them; animals become scarcer during times of drought. This form of capture also exposes researchers to many of the dangers associated with sampling in areas containing dangerous animals.





5. Do you expect these findings to be controversial in your field?

They are to some degree. Species of *Hepatozoon* parasitising snakes appear to cluster into clades containing a potential other intermediate host, suggesting a possible three-host life cycle; all researchers do not readily accept this.



6. What are the broader implications of these findings?

From a behavioural or diet point of view, *Hepatozoon* may give us insight into preferred prey animals. Increased taxon sampling of this group of parasites increases our knowledge on their biodiversity in snakes of Africa, as well as contributing to the number of taxa which can be used in phylogenetic analyses of the genus *Hepatozoon*, which at present is paraphyletic.



7. What do people usually get wrong about this subject?

They appear to believe parasites are simple, revolting and unnecessary. However, they are important components of a functional and healthy ecosystem, providing many services that are not readily observable.



8. Looking back on the study, what were some of the most memorable moments for you and your colleagues?

Walking through the bush looking for snakes is very soothing to the soul... walking back to and standing by the car, feeling rather despondent for finding none in the field, and looking up straight into the face of a spitting cobra is not so soothing, but very exciting!



9. What are you working on next?

The authors are working on the taxonomic placement and phylogenetic relationships of fish blood parasites from the eastern Caribbean, UK, Australia and South Africa; parasites that are in desperate need for redescription.



Thank you for your time, Courtney!