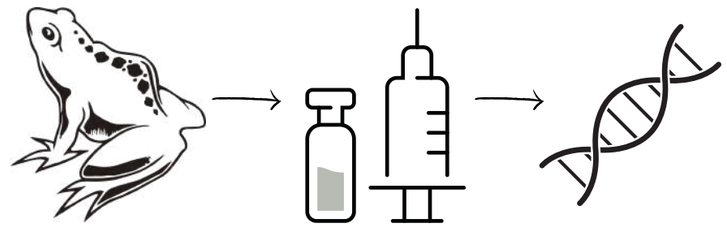
Morphological and molecular data of a species of *Schellackia* (Apicomplexa: Schellackiidae) parasitizing the common River frog, *Amietia delalandii*, from the northern parts of South Africa

Joretha du Buisson*, Edward C. Netherlands & Louis H. du Preez

BACKGROUND

- Haemococcidia are heteroxenous parasites.
- Transmission occurs through a mechanical or paratenic haematophagous invertebrate vector.
- Vertebrate hosts are infected during the feeding of or via ingestion of infected vectors.
- *Schellackia* is one of three genera of haemococcidia.
- Thirteen species of *Schellackia* have been described worldwide.
- It was believed that frog haemococcidia comprised only of species of *Lankesterella* and that species of *Schellackia* only infected reptiles.
- Only two species of *Schellackia* have been reported within the peripheral blood of frogs, with a third species found in an African frog (unpublished data).
- The undescribed *Schellackia* sp. in this study is the fourth species found to infect frogs and the second within African frogs.

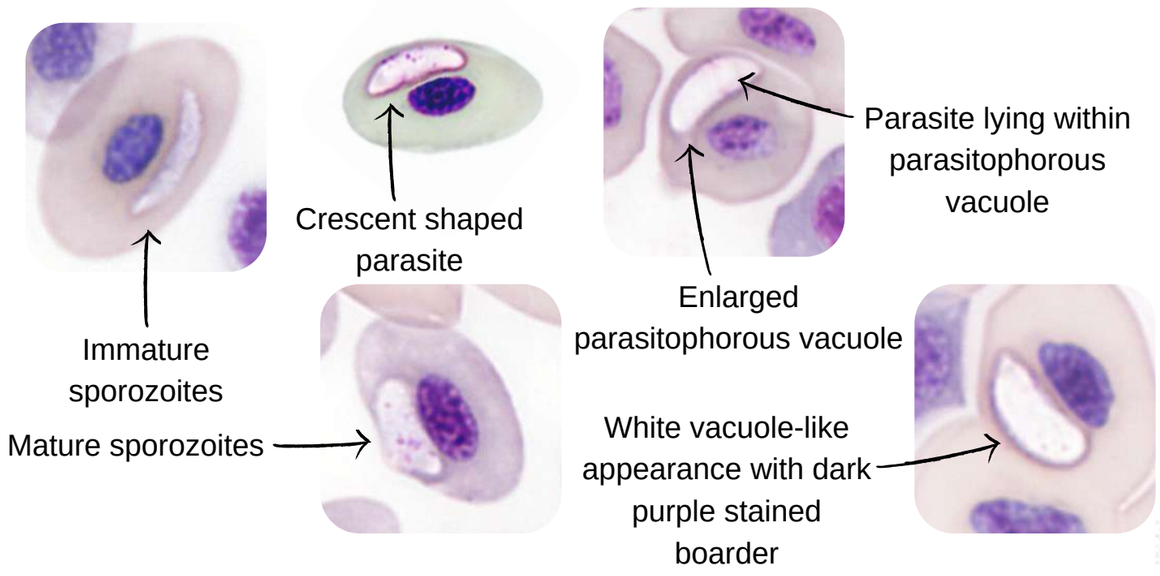
MATERIALS AND METHODS



- Frog blood samples were collected and screened for blood parasites.
- Morphological and molecular characterization was used to estimate the phylogenetic placement of an undescribed haemococcidian.

RESULTS

MORPHOLOGICAL CHARACTERISTICS



MOLECULAR RESULTS

CONCLUSION

- Phylogenetic analysis shows species of *Schellackia* isolated from reptiles and anurans, formed separate clades nested between clusters of species of *Eimeria.*
- Based on morphological and molecular findings an unknown species of *Schellackia* from a South African frog is presented.

Unit of Environmental Sciences
Faculty of Natural and Agricultural Sciences
North-West University, Potchefstroom

SCAN ME