

# **SAMUEL NKOPANE MOTITSOE**



## ***CURRICULUM VITAE***

Department of Zoology and Entomology  
Rhodes University  
Grahamstown (Makhanda), South Africa

October 2020

## 1. BACKGROUND INFORMATION

1.1 GENERAL INFORMATION							
<b>Surname</b>	<i>Motitsoe</i>	<b>Driver Lic.</b>	<i>Code B (8)</i>				
<b>First names</b>	<i>Samuel Nkopane</i>	<b>ID Number</b>	<i>8811145355089</i>				
<b>Citizenship</b>	<i>South African</i>	<b>Title</b>	<i>Dr</i>	<b>Female</b>	<input type="checkbox"/>	<b>Male</b>	<input checked="" type="checkbox"/>
<b>Place of birth</b>	<i>Kroonstad, Free State</i>	<b>Date of birth</b>	<i>1988-11-14</i>				
<b>Population group</b>	<i>African</i>	<b>Marital status</b>	<i>Married</i>		<input type="checkbox"/>		
<b>Department</b>	<i>Department of Zoology &amp; Entomology, Rhodes University</i>	<b>Position</b>	<i>Lecturer</i>				
<b>Direct Telephone</b>	<i>+27-46-603 7680</i>	<b>Cell-phone</b>	<i>083 559 7918</i>				
<b>E-mail</b>	<i><a href="mailto:s.motitsoe@ru.ac.za">s.motitsoe@ru.ac.za</a> or <a href="mailto:samy4045@gmail.com">samy4045@gmail.com</a></i>						
<b>Date of appointment</b>	<i>January 2016</i>	<b>Permanent full-time</b>	<input checked="" type="checkbox"/>	<b>Temporary full-time</b>	<input type="checkbox"/>		

1.2 ACADEMIC QUALIFICATIONS OBTAINED				
<b>Degree/ Diploma</b>	<b>Field of study</b>	<b>Higher education institution</b>	<b>Year</b>	<b>Status</b>
<i>BSc</i>	<i>General (Biology and Chemistry majors)</i>	<i>University of the Free State</i>	<i>2008 - 2011</i>	<i>Completed</i>
<i>BSc Hons</i>	<i>Zoology</i>	<i>University of the Free State</i>	<i>2012</i>	<i>Completed</i>
<i>MSc</i>	<i>Entomology</i>	<i>Rhodes University</i>	<i>2013 - 2015</i>	<i>Completed</i>
<i>PhD</i>	<i>Entomology</i>	<i>Rhodes University</i>	<i>2016 - 2020</i>	<i>Completed</i>

<b>1.3 WORK EXPERIENCE TO DATE</b>		
<b>Name of employer</b>	<b>Capacity and/or type of work</b>	<b>Period</b> <b>From (mm//yy to mm//yy)</b>
<i>Rhodes University</i>	<i>Lecturer</i>	<i>January 2016 - present</i>

## **2. RESEARCH INTERESTS**

I have vested interest in freshwater/aquatic ecology with more than 10 years research experience in the field. I am fascinated by how aquatic organisms, particularly invertebrates interact with other aquatic organisms and their response to different environmental constraints and external pressure. I use this biological information at local and regional scale, to better understand ecosystems structure and functions and how best can we mitigate and/or help restore freshwater systems. My work is evidence-based and inform policy-makers and environmental managers on how best to manage and conserve freshwater systems at large.

I also enjoy exploring freshwater habitats in extreme and remote areas i.e. mountain top, salt pans, mountain seepage and water fall, their hidden invertebrate diversity and extra-ordinary abilities (or life histories) which makes them unique and successful in such remote areas.

### **Key research interests:**

- Aquatic entomology, biodiversity and conservation
- Freshwater ecology and food webs (Rivers, wetlands and lakes)
- Freshwater pollution studies and biological monitoring
- Invasion biology – Invasive alien species ecological impacts and management
- Biological control of invasive alien plants
- Restoration ecology

### **Thesis Produced**

Quantifying the ecological benefits of biological control of invasive alien macrophytes in South Africa. PhD Thesis (Rhodes University: 2016 - 2019) **Passed**

Using aquatic biota to trace nutrient loading in freshwater systems, a case study in the Eastern Cape, South Africa. MSc Thesis (Rhodes University: 2013 - 2015) **Passed**

Survey of aquatic invertebrates' biodiversity on temporary wetlands within the Maluti-Drakensberg Mountain. BSc Hons Dissertation (University of the Free State: 2013) **Passed With Distinction**

### 3. TEACHING ACTIVITIES

3.1 Courses presented		
Course	Level (e.g. second year, Masters)	Self developed (Yes or No or Edited)
<i>Zoology (Introduction to Arthropoda: Insects)</i>	<i>First year - Life Sciences</i>	Yes
<i>Medical and Veterinary Entomology</i>	<i>Second year - Entomology</i>	No
<i>Freshwater Ecology (Extension to Aquatic Entomology 2<sup>nd</sup> year)</i>	<i>Third year - Entomology</i>	Yes
<i>Advanced Insect Ecology</i>	<i>Hons - Entomology &amp; Zoology</i>	Yes
<i>Invasion biology: Alien Invasive macrophytes Ecological impacts and Restoration</i>	<i>Biological Control of Weeds: Rhodes University Short Course</i>	Yes

### 4. POSTGRADUATE SUPERVISION

#### Completed postgraduate supervisions:

Name of student	Degree <sup>1</sup> /Title of dissertation/ thesis	Supervisor	Co-supervisor(s)
<i>Ben Kirkaldy (RU)</i>	<i>BSc Hon – Arthropods diversity patterns between different land-use. Jan – Dec 2017</i>	<i>Dr. S.N Motitsoe</i>	<i>Prof M.P Hill (RU)</i>
<i>Nonkazimulo Mdidimba (RU)</i>	<i>BSc Hon – Aquatic invertebrate diversity and trophic ecology of Afromontane temporary wetlands. Jan - Dec 2018</i>	<i>Dr. S.N Motitsoe</i>	<i>M.C Mlambo (Albany Museum)</i>
<i>Kaylee Campbell (RU)</i>	<i>Hons - Review article Feb – Dec 2020</i>	<i>Dr. S.N Motitsoe</i>	<i>M.C Mlambo (Albany Museum)</i>
<i>Getrude Tshithukhe (RU)</i>	<i>MSc – Assessing the potential of Invasive alien aquatic plants species for phytoremediation in urban river</i>	<i>Dr. S.N Motitsoe</i>	<i>Prof M.P Hill</i>

<sup>1</sup> Indicate whether Honours, Masters research or Doctorate

	<i>system. Feb 2018 – March 2020</i>		
<i>Robert Netshiongolwe (UniVen)</i>	<i>MSc - Spatiotemporal variation of heavy metals in superficial sediments and uptake by macrophytes along subtropical river. Feb 2019 – Dec 2020</i>	<i>Dr. T. Dalu (Univen)</i>	<i>Dr. S.N Motitsoe Dr. L.D Chari (RU)</i>

#### Ongoing postgraduate supervisions:

<b>Name of student</b>	<b>Project title</b>	<b>Supervisor</b>	<b>Co-supervisor(s)</b>
<i>Esethu Nkibi (RU)</i>	<i>MSc – Aquatic invertebrates diversity in lake ecosystems of Southern Africa. March 2020 – present</i>	<i>Dr. S.N Motitsoe</i>	<i>M.C Mlambo (Albany Museum)</i>
<i>Sibusisiwe Moyo (RU)</i>	<i>MSc - Taxonomic revision of Spinicaudata (Crustacea: Branchiopoda) in the Afromontane region of South Africa. Feb 2021</i>	<i>M.C Mlambo (Albany Museum)</i>	<i>Dr. S.N Motitsoe</i>
<i>Kaylee Campbell (RU)</i>	<i>MSc – tbc Feb 2021</i>	<i>Dr. S.N Motitsoe</i>	<i>M.C Mlambo (Albany Museum)</i>

## 5. RESEARCH FUNDING

<b>5.1 Obtaining research funds</b>		
<b>Origin of research funds</b> (e.g. research grant/contract research, mobility grant, international funding organisations, other(s))	<b>Title of research project or programme</b>	<b>Duration</b>
<i>Rhodes University: Mellon Foundation Grant</i>	<i>Research Workshop: Freshwater ecosystems recovery and restoration</i>	<i>2016</i>
<i>Rhodes University Research Council Grant</i>	<i>Quantifying ecological benefits of the biological control of invasive alien aquatic weeds in South Africa</i>	<i>2016-2019</i>
<i>National Research Foundation: New generation of Academics Programme Research Development Grant</i>	<i>Quantifying ecological benefits of the biological control of invasive alien aquatic weeds in South Africa</i>	<i>2016-2017</i>
<i>British Council: Newton Mobility Grant</i>	<i>Aquatic macrophytes ecology</i>	<i>2018</i>

Rhodes University Research Council Grant	Aquatic invertebrates diversity and trophic ecology of temporary wetlands in the Afromontane region of South Africa	2020
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## 6. RESEARCH OUTPUTS

### 6.1 Publications in peer-reviewed or refereed journals

Dalu, T., Wasserman, R.J., Tonkin, J.D., Alexander, M.E., Dalu, M.T.B., **Motitsoe, S.N.**, Manungo, K.I., Bepe, O. & Dube, T. 2017. Assessing drivers of benthic macroinvertebrate community structure in African highland streams: An exploration using multivariate analysis. *Science of the Total Environment* **602**: 1340-1348.

**Motitsoe, S.N.**, Hill, M.P., Avery, T.S. & Hill, J.M. 2020. A new approach to the biological monitoring of freshwater systems: Mapping nutrient loading in two South African rivers, a case study. *Water Research* **171**: 115391.

**Motitsoe, S.N.**, Hill, J.M., Coetzee, J.A. & Hill, M.P. 2020. Biological control of *Salvinia molesta* (D.S. Mitchell) drives aquatic ecosystem recovery. *Diversity* **12** (5): 204.

Blanckenberg, M., Mlambo, M.C., Parker, D., **Motitsoe, S.N.** & Reed, C. 2020. Protected and un-protected urban wetlands have similar aquatic macroinvertebrates communities: A case study from the Cape Flats Sand Fynbos region of southern Africa. *PLoS ONE* **15** (5): e0233889.

<https://doi.org/10.1371/journal.pone.0233889>

Netshiongolwe, N.R., Cuthbert, R.N., Maenetje, M.M., Chari, L.D., **Motitsoe, S.N.**, Wasserman, R.J., Munyai, L.F. & Dalu, T. 2020. Quantifying metal contamination and potential uptake by *Phragmites australis* (Poaceae) along a subtropical river system. *Plants* **9**: 846. DOI:10.3390/plants9070846

Coetzee, J.A., Langa, S., **Motitsoe, S.N.** & Hill, M.P. 2020. Biological control of water lettuce L. facilitates macroinvertebrates biodiversity recovery: a mesocosm study. *Hydrobiologia*.

<https://doi.org/10.1007/s10750-020-04369-w>

#### Research articles Under-review

**Motitsoe, S.N.**, Hill, J.M., Coetzee, J.A. & Hill, M.P. (*Under review: Hydrobiologia*). Invasive alien aquatic plant species management drives aquatic ecosystem community recovery: An exploration using stable isotope analysis.

Mdidimba, N.D., Mlambo, M.C. & **Motitsoe, S.N.** (*Under review: Aquatic Sciences*). Trophic interactions and food web structure of aquatic macroinvertebrate communities found in the Afromontane temporary wetlands, a case study of the Maluti-Drankensberg.

#### Research articles in preparation

Shelton, J., Broom, C., Coetzee, J.A., Hill, M.P., **Motitsoe, S.N.**, Esler, K., Jacobs, S., van Der Walt,

R. & Weyl, O. (*In prep.*). Restoring freshwater ecosystems in South Africa's Cape Fold Ecoregion Biodiversity Hotspot: what has been done and what can we learn?

**Motitsoe, S.N.**, Hill, J.M., Coetzee, J.A. & Hill, M.P. (*In prep.*). Phase-shifts or stable states in macrophyte succession following invasive macrophyte removal: Ecosystem interactions and their implications to ecological restoration

Tshithukhe, G., Hill, M.P. & **Motitsoe, S.N.** (*In prep.*). Assessing phytoremediation success of invasive alien aquatic plant species using biological indicators.

Cornette, R., **Motitsoe, S.N.** & Mlambo, M.C. (*In prep.*). The new dissipation tolerant Chironomidae species from South African Highlands.

Mlambo, M.C., Cornette, R., Khubheka, P.S., Mdidimba, D.N., **Motitsoe, S.N.** (*In prep.*). Flies of rock pools. Dipterean species found in temporary freshwater rock pool of Afromontane region.

**Motitsoe, S.N.**, Hill, J.M., Coetzee, J.A. & Hill, M.P. (*In prep.*). If you build it, they will come: Aquatic microalgae and macroinvertebrates recovery following control of an invasive alien aquatic macrophyte.

**Motitsoe, S.N.** (*In prep.*). Invasive alien aquatic plants species management: Aquatic ecosystem recovery and restoration, a synthesis.

## 6.2 Non-refereed publications or popular articles

Motitsoe, Samuel. "*Ecological monitoring leading to decision making the use of stable isotopes technique for freshwater biological monitoring of two river systems in the Eastern Cape Province, South Africa*". **Special Edition Newsletter - 2nd National Global Change Conference, held in Port Elizabeth from the 1st-5th December 2014.**

(<http://www.saeon.ac.za/enewsletter/archives/2014/december2014/doc14>)

Motitsoe, Samuel. "*Rhodes University MBA students to 'Administer' Bloukrans Rivers systems*". Grocott's Mail [Grahamstown, South Africa], 03 February 2017. Published: Environ News, volume 147 Issue 005

## 6.3 Technical reports

Hill, J.M., **Motitsoe, S.N.** & Hill, M.P. 2015. Pollution mapping in freshwater systems: using aquatic plants to trace N-loading. WRC Report No. KSA 2262/14.

# 7. OTHER SCHOLARLY RESEARCH-BASED CONTRIBUTIONS

## 7.1 Participation in conferences, workshops and short courses

### 7.1.1 Local & Regional Research Workshops

#### **African Freshwater (AFRSH) Entomology Workshop**

RE: Prioritising freshwater biodiversity research and conservation in Africa, and Enhancing research collaboration between African freshwater scientists  
Guests: 69 delegates (21 African countries)

#### **Aquatic Ecosystem Recovery and Restoration following Alien Species Control Workshop**

Invited guests: Prof Jenny Day (UWC & UCT); Prof Jay O'keeffe (RU); Dr David Le Maitre (CSIR); Dr James Pryke (SU); Dr Helen Barbar-James (Albany Museum); Dr Iain Paterson (RU); Dr Jaclyn Hill (RU); Dist. Prof Martin Hill (RU) and Ass. Prof Julie Coetzee (RU)  
RE: Restoration of previously invaded (invasive alien aquatic weeds species) ecosystems  
Place: Rhodes University, Grahamstown (March 2016)

#### **Annual Workshop on Biological Control of Weeds: Research and Implementation**

Guests: Biological Control researchers/practitioners, DEAFF Officials and Implementational officer  
RE: Discuss biological control current-future research and implementation in Southern Africa

#### **Restoration of Drastically Disturbed Sites using Natural Processes**

Facilitator: David Polster (Polster Environmental Services LTD.)  
RE: The use of natural systems to restore disturbed environments  
8<sup>TH</sup> World Conference on Ecological Restoration, Cape Town South Africa, September 2019

### 7.1.2 National Conference

**S.N. Motitsoe**, J.M. Hill & M.P. Hill. Mapping nitrogen loading in freshwater systems using aquatic biota to trace nutrients. 42<sup>nd</sup> Annual Research Symposium on the Management of Biological Invasions. 18-20 June 2014. Amazimtoti, South Africa. **Speed talk**

**S.N. Motitsoe**, J.M. Hill & M.P. Hill. Stable isotope analysis: A new step in biological monitoring of freshwater systems. Southern African Society of Aquatic Scientists. 28 June – 2 July 2015, Drankensberg (Champagne Sport Resort), South Africa. **Oral**

**S.N. Motitsoe**, J.M. Hill & M.P. Hill. Isotopic ratios of aquatic macroinvertebrates as an indication of nutrient loading, a preliminary investigation. XIX Congress of the Entomological Society of Southern Africa and 37<sup>th</sup> Congress of the Zoological Society of Southern Africa. 12-17 July 2015, Grahamstown, South Africa. **Oral**

**S.N. Motitsoe**, J.M. Hill, J.A. Coetzee & M.P. Hill. Investigating the ecological recovery and the restoration of aquatic ecosystem integrity post successful biological control of alien aquatic weeds. 43<sup>rd</sup> Annual Research Symposium on the Management of Biological Invasions. 18-20 May 2016. Worcester, South Africa. **Speed Talk**

**S.N. Motitsoe**, J.M. Hill, J.A. Coetzee & M.P. Hill. Trophic dynamics in alien invasive macrophyte dominated aquatic ecosystems with special emphasis on ecosystem structure and functioning. Southern African Society of Aquatic Scientists. 30 June – 4 July 2019, Bela-Bela (Zebula Lodge), South Africa. **Oral**

M.C. Mlambo, **S.N. Motitsoe**. Drankensberg-Maluti Mountain: a source of incredible biodiversity,



now potentially threatened by gas fracking. Southern African Society of Aquatic Scientists. 30 June – 4 July 2019, Bela-Bela (Zebula Lodge), South Africa. **Oral**

G. Tshithukhe, **S.N. Motitsoe** & M.P. Hill. Invasive alien macrophytes species for phytoremediation in aquatic environment. Southern African Society of Aquatic Scientists. 30 June – 4 July 2019, Bela-Bela (Zebula Lodge), South Africa. **Oral**

### 7.1.3 International Conference

**S.N. Motitsoe**, J.M. Hill, J.A. Coetzee & M.P. Hill. Stable isotopes techniques: From freshwater biological monitoring to conservation. International Long-Term Ecological Research Network, 1<sup>st</sup> Open Science meeting. 11-13 October 2016, Kruger National Park (Skukuza), South Africa. **Oral**

**S.N. Motitsoe**, J.M. Hill, J.A. Coetzee & M.P. Hill. Quantifying ecosystem benefits of biological control of invasive aquatic weeds in southern Africa. 15<sup>th</sup> International Symposium of Aquatic Plants. 18-23 February 2018, Queenstown, New Zealand. **Oral**

M.C. Mlambo, N.D. Mdidimba & **S.N. Motitsoe**. Flies on rock pools – survival and emergence of dipterans from dried soil sediments of temporary wetlands. 9<sup>th</sup> International Congress of Dipterology. 25-30 November 2018, Windhoek, Namibia. **Oral**

**S.N. Motitsoe**, J.M. Hill, J.A. Coetzee & M.P. Hill. Invasive alien aquatic plant management: Ecosystem recovery and restoration. 8<sup>th</sup> World Conference on Ecological Restoration. 24-28 September 2019, Cape Town, South Africa. **Invited talk**

M. O'Hare, C. Ongore, J. Coetzee, **S. Motitsoe**, M. Hill & F. Gerard. How to beat a bully: New biocontrol agents and novel remote sensing applications in the fight to suppress water hyacinth. International Symposium of the Great Lakes of the World 9. Emerging frontiers for Africa Great Lakes. 5-7 August 2019, Kisumu, Kenya. **Oral**

\*G.D. Martin, **S.N. Motitsoe**, I.D. Paterson, J.A. Coetzee & M.P. Hill. Measuring success of aquatic weed biological control in Africa. XXVI International Congress of Entomology. 19-24 July 2020, Helsinki, Finland. **Invited talk**

\***S.N. Motitsoe**, J.M. Hill, J.A. Coetzee & M.P. Hill. Multiple stable states following mechanical removal of a non-native macrophyte species: Implications for ecological restoration. 16<sup>th</sup> International Symposium on Aquatic Plants. 15-19 June 2020, Aarhus, Denmark. **Oral**

*\*Conference postponed due to COVID-19 pandemic*

## 7.2 Teamwork and collaboration with others:

International collaboration on significant projects:

**100 Plastic rivers: A global investigation. University of Birmingham, United Kingdom.**

### **Project Vision:**

- *To coordinate the first systematic and global analysis of microplastics in freshwater ecosystems by:*
- *Developing a global freshwater microplastic database.*
- *Investigating what drives microplastic fate and transport using outdoor flumes.*
- *Model microplastic fate and transport using data collected in 1 and 2.*
- *Identify impacts on freshwater ecosystem functioning and realistically complex food webs*

**BiodiversIRES: Global biodiversity of intermittent rivers and ephemeral streams:** *The second coordinated effort of the 1000 Intermittent Rivers Project (an international initiative) which aim to gain understanding of the ecology of intermittent rivers.* [https://1000\\_intermittent\\_rivers\\_project.irstea.fr/](https://1000_intermittent_rivers_project.irstea.fr/)

**Project Vision:**

- *Are IRES unique from a biodiversity perspective?*
- *What are the global and local drivers of IRES biodiversity?*
- *How will climate change alter riverine biodiversity through increased drying of river networks?*

**Mass development of aquatic macrophytes – causes and consequences of macrophyte removal for ecosystem structure, function, and services (Madmacs project)**

**International collaboration:** *Norway (Norwegian Institute for Water Research), South Africa (Rhodes Uni.), France (Uni. Rennes), Germany (IGB-Leibniz-Institute of Freshwater Ecology & Inland Fisheries) and Brazil (Uni. Federal do Parana)*

**Project Vision:**

- *Analyse which combination of natural conditions and stressors can cause mass development of macrophytes*
- *Quantify the effect of macrophyte presence/removal on structural and functional diversity of aquatic organisms (biodiversity)*
- *Quantify the effect of macrophyte presence/removal on nutrient and carbon retention and greenhouse gas emission (water quality)*
- *Quantify the effect of macrophyte presence/removal on the full range of ecosystem services*
- *Develop a tool to assess and balance benefits and costs of macrophyte removal*

**Zooplankton as Indicators: Global Lake Ecological Observation Network (GLEON) in Huntsville, Ontario, Canada**

*This project will expand on existing uses of zooplankton as sentinels of ecosystem change and explore developing new indicators using existing long-term datasets of zooplankton. Zooplankton community composition and abundances are known to be driven by both top-down and bottom-up forces. The intermediate position of zooplankton in the food web enables using zooplankton as lake trophic state indicators, as targets of field or experimental biomanipulation studies, and could lead to the development of additional indicators of ecosystem change using zooplankton community data. Developing additional ecosystem indicators using zooplankton could be helpful for managers and researchers that can easily collect zooplankton but are limited in fishery or water quality sampling. The two early questions for this project include:*

*Can zooplankton lengths, community composition, and abundances be used as early indicators of shifts in food web dynamics, such as changes in nutrient loading, habitat availability, or changes in planktivory from vertebrate or invertebrate predators?*

*Do the current established uses of zooplankton as indicators show consistent results across a numerous long-term zooplankton monitoring programs? Which existing indicators provide the most consistent results? Are some indicators more likely to suggest specific ecosystem changes when long term data indicates that no change has actually occurred?*

**DOMseasons: tracking seasonality in dissolved organic matter: GLEON**

*Dissolved organic matter (DOM) is central to the functioning of lakes, but its molecular composition remains a "black box" at large spatial and temporal scales. This project aims to understand how the*

*origin and composition of DOM varies through time using ultra-high-resolution mass spectrometry and its association with biogeochemical data collected from high-resolution sensors (e.g. dissolved oxygen, chlorophyll a, fDOM/CDOM). We are interested in collecting water samples at a monthly interval for 1 year from the deepest point in your study lakes. We will process all samples using a standardised protocol and make data freely available for reuse on a cloud server*

#### **Dessication Tolerant Diptera in Afromontane Region of Southern Africa**

*This is joint research collaboration effort between Albany Museum (Freshwater Invertebrates Division), Rhodes University (Zoology and Entomology) and the Anhydrobiosis Research Group (National Institute of Agrobiological Sciences, Insect Mimestics Research Unit) to work on the ecology, physiology and taxonomy of dessication tolerant dipteran species found in temporary wetlands in South Africa.*

*The research has already identified a new to science desiccation tolerant dipteran species found in SA and follow-up research on the ecology and physiology studies is under-way.*

#### **Taxonomic revision of some Branchiopoda species in the Afromontane Region of Southern Africa**

*This is a joint research collaboration effort between Albany Museum (Freshwater Invertebrates Division), Rhodes University (Zoology and Entomology) and National History Museum in France.*

*The research will look into the revision of some Branchiopoda species and document a species list of crustacean species found with the Afromontane Region of South Africa.*

#### **7.3 Membership in national and international bodies**

*Young Water Professionals South Africa (2020 - present)*

*Entomological Society of Southern Africa (2017 - present)*

*Southern African Society of Aquatic Scientists (2015 - 2019)*

*South African Scoring System Practitioner: River Health Programme, Department of Water Affairs, Forestry and Fisheries (DWAFF) (2015 - 2018)*

#### **7.4 Visits to local and overseas universities or research institutes as student researcher**

*Awarded the British Council Newton Research Mobility Grant to visit the Center for Ecology and Hydrology in Edinburgh, Scotland, June – August 2018 (6 weeks).*

*Host: Dr. Matthew O'Hare (Senior Freshwater Ecologist)*

## **8. MANAGEMENT AND ADMINISTRATIVE DUTIES**

*Rhodes University Entomology 2<sup>nd</sup> year course coordinator*

*January 2017 – present*

*Center for Biological Control (Department for Zoology and Entomology) – Scientific Committee  
January 2017 – present*

*Rhodes University, Science Faculty Board Member  
January 2016 – present*

## 9. COMMUNITY SERVICE OR PROFESSIONAL SKILLS

### 9.1 Outreach projects

**Department of Science and Technology and National Research Foundation Internship (2018-2019) - Mentor**

**Facilitate field excursion and laboratory demonstrations for high school learners, introduce them to entomological services and environmental education.**

*Annual Rhodes University Grade 10-11 High School Biology Interns programme – 15-20 learners visit Rhodes University during their school holidays for hand-on experiences in Zoology and Entomology.*

*Annual National Science Festival – Introducing learners to Life Sciences discipline and careers.*

*Annual Rhodes University and Entomological Society of Southern Africa Outreach day*

### 9.2 Involvement with other universities/scientific institutions

Advisary and Review committee:

Alien Species Risk Analysis Review Panel (ASRARP) committee member from April 2020 – March 2022.

Initiation by the Department of Environment, Forestry and Fisheries: BioSecurity Services Directorate and the South African National Biodiversity Institute (SANBI) – To constitute a scientific advisory panel dealing with issues pertaining to the risks posed by alien species.

Local Conference/Symposium Scientific committee member:

Scientific committee members to review abstracts and decide on the final congress programme:

2019 National Symposium of Biological Invasion – Tulbagh (Western Cape)

### 9.3 Referee duties

Journal Peer-review experience:

Water Research Journal

Fundamentals to Tropical Freshwater Wetlands Book

Grant Proposal Reviewer:

*Water Research Commission: Research Grant Proposal (June 2019 - present)*

*Water Research Commission: Reference Committee (June 2020 - present)*

Examiner:

*University of the Free State, Freshwater Ecology Course (3<sup>rd</sup> year) external examiner: 2016 – 2018.*

## 10. AWARDS AND SCIENTIFIC/SCHOLARLY RECOGNITION

### 10.1 Research awards and prizes

Best BSc Hons student in Research Dissertation, Biostatistics, Environment Science & Advance Insect Ecology Course. University of the Free State, Faculty of Natural and Agricultural Sciences, December 2012.

Best Oral Presenter: South African Environmental Observation Network (SAEON), Student Graduate Network Conference. Port Elizabeth, 5-8 September 2014.

Community Engagement Student Researcher of the Year Finalists: Rhodes University Community Engagement Awards, 2019.

## 11. References

Dist. Prof Martin Hill

Center for Biological Control, Rhodes University

Mentor and PhD Supervisor

[m.p.hill@ru.ac.za](mailto:m.p.hill@ru.ac.za)

046 603 8712

Mr Musa Mlambo

Freshwater Invertebrates: Albany Museum

External Mentor and Collaborator

[m.mlambo@am.org.za](mailto:m.mlambo@am.org.za)

046 622 2312

Dr Thabiso Mokotjomela

SANBI: Free State & Northern Cape

Collaborator

[t.mokotjomela@sanbi.org.za](mailto:t.mokotjomela@sanbi.org.za)

073 324 6118