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EDUCATION

2014-2016 **MSc** in Zoology and Animal Biodiversity; University of Antananarivo, Madagascar
Dissertation topic: Diversity of ectoparasite communities on *Rattus rattus*

2011-2014 **BSc** in Animal Biology, Ecology, and Conservation; University of Antananarivo, Madagascar

PUBLICATIONS

Heinding, D., **Andrianiaina, A.,** Rakotomalala, Z., Cotton, S. 2018. The use of vanilla plantations by lemurs: Encouraging findings for both lemur conservation and sustainable agroforestry in the SAVA region, Northeast Madagascar. *Journal International of Primatology* **39**: 141-153.

Heinding, D., **Andrianiaina, A.,** Rakotomalala, Z., Cotton, S. 2017. Range extension and behavioural observations of the recently described Sheth's dwarf lemur (*Cheirogaleus shethi*). *Folia Primatologica*, **88**:401-408

RESEARCH EXPERIENCES

2018 **Research consultant, (**Moramanga district, Madagascar) Conducted a survey on the endangered northern shrew tenrec (*Microgale jobihely*) and assessing small mammal communities at the Analamay and Basibasy conservation sites.

2018 **Field Research Assistant, (**Moramanga district, Madagascar) Collected data to model disease dynamics in native bat populations in an effort to determine the mechanism of seasonal disease transmission. PI: Christian Ranaivoson

2017 **Field Research Assistant, (**Loky-Manambato, Madagascar. 4 months) Collected data on the density of diurnal lemur species and behavior of golden-crowned sifakas (*Propithecus tattersalli*). PI: Brandon Semel

2017 **Field Research Assistant, (**ComplexeTorotorofotsy-Ihofa, Madagascar. 2 months) Collected data on plant-frugivore interactions, conducted animal surveys using transects, monitored seed dispersal and plant survival within botanical plots, monitored phenology, and supervised a research team of 8 people. PI: Dr. Onja Razafindratsima

2017 **Field Research Intern, (**SAVA region, Madagascar. 4 months) Conducted biodiversity assessments in vanilla plantations with researchers from Bristol Zoological Society. PI: Dr. Sam Cotton

2016 Field Research Assistant, (Analamazaotra forest, Madagascar. 2 weeks) Collected data on the effects of predation by snakes in populations of small mammals including rodents and mouse lemurs (*Microcebus lehilahytsara*).

2015 Principal Investigator, (Moramanga district, 3 months) Designed and implemented a research project investigating community structure of small mammals in six sites. MS thesis project, founded by Wellcome Trust through the Association Vahatra Antananarivo, in collaboration with Institut Pasteur de Madagascar; led a research team of 9 people.

2015 Field Research Assistant, (New Protected Area of Analalava Foulpointe, Madagascar. 1 month) Conducted a research assessing the community of the small mammals in the area; led a research team of 6 people. PI: Dr. Zafimahery Rakotomalala

OTHER EXPERIENCE

- Organizing committee member for a workshop on seed dispersal in Andasibe Madagascar (to be held July 2018)
- Teaching Assistant for upper-level zoology labs since 2015

WORKSHOP PARTICIPATION AND TRAINING

2016 Art of Negotiation and Persuasion, by Tontolo Isainana and COACh International

2016 Conservation and Development Concepts in Madagascar, organized by the University of Hildesheim (Allemagne), GERP, University of Toamasina and University of Antananarivo

2014 Application of several ecological field methods (small mammals traping, bird watching and distance sampling, herpetofauna survey) at the New Protected Area of Maromizaha, Madagascar (one week)

2013 Applied training on Ecological survey and monitoring in Ankarafantsika National Park, Madagascar. Educational trip organized by the University of Antananarivo (10 days)

2013 Advanced Communications in Natural Sciences, Université d'Antananarivo, Madagascar, (one year)

PROFESSIONAL MEMBERSHIP

- Association Ary Saina, an association of Malagasy conservation biologists, (Co-founder) since 2017
- Groupe d'Etude et de la Recherche sur les Primates de Madagascar (GERP), since 2015

SKILLS

- **Computer skills:** Microsoft Office , R, Pyton (Notion), QGIS, ArcGIS
- **Language skills:** Malagasy (native), French (fluent), English (professional proficiency)

Abstract of planned research project

Bats are known as reservoirs of different diseases and hosts of many species of parasites. Bat flies, a species of flies are one group of ecto-parasite specific for bats. They have important role on the transmission of the micro-parasite in one population of bats. However, the transmission of diseases in a population of bats is less understood especially in fruit bats. The study aim is to modeling and creates a pattern of the diseases transmission between the bats flies and the host and also to improve the knowledge on the dynamic of the population genetic of bat flies.

The study will be caring on three species of Madagascar fruits bats and in different locality. For that, an assessment monthly will be effectual to determine the dynamic of the population of bat flies parasites of *Rosettus madagascariensis*, *Eidolon dupreanum* and *Peropus rufus*. We will assess the variation of the bat flies in different season and will evaluate their dynamic of the population genetic. We will evaluate also the prevalence of the bat flies and the fluctuation of the rate of the micro parasite on the host during the different seasons.

As result, we expected to see that the prevalence of the bat fly is not the same for the different seasons and the rate of individuals infected by micro-parasite change with the prevalence of bat flies. And also the structure of the population of bat flies change with the season and is not the same in the different locality. We assume too that the micro parasite rate and diversity change with the abundance of the bat flies.

A Statement of Interest and Intent indicating how the experience of attending this workshop would enhance your short-term and long-term research goals

I am a student in Animal Biology, Ecology and Conservation. I am interested in Wildlife diseases and public health, particularly in the ecology of parasite. Modeling and statistics became useful tools especially on ecology study. However my skills and my background on statistics and modeling are not strong enough and I have a big lake on the data analysis. I would like to learn more on it and I hope that this workshop, E2M2 is an opportunity for me, to get new and more skills and also practice in sciences computation. Attending this workshop is very important for me.

Furthermore, this workshop will improve my knowledge on modeling and statistics, especially using the different programs such as R or Python. I think that this workshop is an opportunity to ask more about the R program and to solve the problem that had before. Because when I use this program for my master thesis, I meted many problems.

In addition, this workshop will be an occasion for me too to develop Ideas for my PhD project. Modeling is also one of the bases of my project. I would like to model the transmission of the micro parasite in different population of small mammals through the ectoparasite species. For that, I need good skills on the modeling. I think that this workshop will procure me many things for my project such as capacity to explore data correctly. It will provide me helps, not only to choose the best way to analyze field data but also choose the appropriate statistic method for realizing it. Through this workshop I will be able to well interpret the result outcome and develop a good conclusion for a best decision.

In plus, other the statistics this workshop may teach me other things such as the spacial modeling using geographical information system. Furthermore, it might help me to learn another informatics tools or software we can use for different ecological research and modeling.

Moreover, E2M2 workshop will provide me a new way for a future research and project. As an early career on research, this workshop is an opportunity to meet the other researcher and/or students working in the same interests. Through this workshop I will develop new skills and new ideas to develop my current research projects in ecology and wildlife diseases and this will help me to develop a future project after a sharing with them. And probably to develop collaboration in the future project to resolve the different question about the ecology of the diseases.

E2M2 is an opportunity for me to get communication skills. Other the modeling skills that I hope to have through this workshop, I think that my participation active on the discussion in other language and with the native speaker will help me to improve my communication skills and my English.

Finaly, I hope that after attending this workshop I will have good skills in modeling and have a new vision to develop my PhD project. Also, after this meeting with different specialists on modeling, I will have new perspective on the future researches.