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Education

2018   Master's degree in Animal Biology and Conservation
Department of Zoology and Animal Biodiversity, University of Antananarivo

2015   Bachelor's degree in Organismic Biology and Ecosystem Ecology
Department of Zoology and Animal Biodiversity, University of Antananarivo

2014   License in Fundamental Biology
Department of Zoology and Animal Biodiversity, University of Antananarivo

2013   Diplôme Universitaire d'Etudes Universitaires (DUES I) in Natural Sciences
Faculty of Sciences, University of Antananarivo

Research Experience

2018   **Principal Investigator** (Master thesis project) – Assessing the importance of Madagascar's smallest primates in shaping rainforest structure – Ranomafana National Park and Kianjavato Classified Forest

2017   **Research Assistant** – P.I: Dr. Onja H. Razafindratsima
- Ranomafana National Park: A multidimensional evaluation of the conservation implications of the invasive strawberry guava in Madagascar

- Torotorofotsy-Ihofa Complex: Determinants of tree diversity in fragmented landscapes: relative importance of frugivore-mediated seed dispersal relative to abiotic factors

Publications

Martin, T. V., Rakotonirina, H., **Ramananjato, V**., Ravaoarinorotsihoarana, L. A., Razafindratsima, O. H., Razanajatovo, M. & Voarintsoa, N. R. G. (In review). Paving the way for Malagasy Women in Science.

Contributed conference presentation

2017   **Ramananjato V**., DeSisto, C. Park, D. S., Rakotomalala, Z. & Razafindratsima, O. H. Mouse lemurs facilitate the dispersal of both native and non-native plant species in Ranomafana rainforest. *Malagasy Primatological Society Inaugural Congress*. Toamasina, Madagascar. Poster.

Academic awards

2017   **Special prize for best poster presentation**, Malagasy Primatological Society Inaugural Congress. Toamasina, Madagascar.

Grants

2018   **Rufford Small Grant** (GPB 4,885): Assessing the importance of Madagascar's smallest primates in rain forest structure

EFN WWF Workshop Grant (USD 7,500): Seed dispersal in Madagascar: from concepts to applications in human-dominated landscapes, co-applicant with Dr. Zafimahery Rakotomalala, Dr. Onja Razafindratsima and Jadelys Tonos

2017   **Madagascar Primatological Society** (MGA 200,000), Travel grant: Mouse

lemurs facilitate the dispersal of both native and non-native plant species in Ranomafana rainforest

Other Professional Experience

2018   **Workshop organizer and instructor** for the workshop "Seed dispersal in Madagascar: from concepts to applications in human-dominated landscapes Workshop" in Andasibe, Madagascar

2017   **Co-founder** and **Outreach officer** of Ary Saina Association; Manjakaray, Madagascar

2015   **Transcriptor** at ATW Consultants Avaratra Antanimora, Madagascar

        Inventory provider at MultiService Groupe MSG Mandroseza, Madagascar

Relevant training and workshops

2017   Fieldschool with Vahatra Association in Ambohitantely, Madagascar: Training and application of relevant field research methods, Master student

        Workshop on DarwinCore data entry and cleaning with WCS, REBIOMA, Madagascar Biodiversity Fund (FAPBM) and GERP

2016   Workshop on "Climate change and Dwarf lemurs" with Dr. Marina Blanco (Duke Lemur Center) and Vahatra Association

        Workshop on Morphometrics and Data organization in R with Katherine Everson (University of Alaska) and Vahatra Association

2015   Developing rural nutrition program with Young Women Leadership Program, Youth First

        Applied training on studies of population ecology and habitat in Ankarafantsika, Madagascar. Bachelor student

2013   CNELA First Certificate & CNELA Advanced Certificate in General English – National Center for the Teaching of the English Language Antananarivo, Madagascar

Skills and Interests

Language   Writing and speaking Malagasy, English and French

Computer   Basics in ArcGIS, GoogleRefine, MEGA6, QGIS, R, SMART and Darwincore data entry

Membership   American Society of Primatologists (ASP)
                Asity Madagascar – Ligue Malgache pour la Protection des Oiseaux
                Association for Tropical Biology and Conservation (ATBC)
                British Ecological Society (BES)
                International Primatological Society (IPS)

ABSTRACT

In my project, I aim to investigate the roles and impacts of mouse lemurs as seed dispersers in Madagascar's southeastern rainforests. Specifically, my project seeks to (1) describe their dispersal effectiveness, both quantitatively and qualitatively, (2) investigate their contribution in the spread of invasive strawberry guava, and (3) examine the impacts of this latter on their diet and dispersal service. I intend to test the hypothesis that mouse lemurs are effective dispersers and that invasive species affect their diet and dispersal service.

To achieve these, my main research methods consist of behavioral observations, through direct tree watches and camera traps, seed collection from fecal samples collected from live-trapped individuals, and germination trials in Petri dishes and on forest soil. I use these experiment data to calculate parameters on seed germination and seedling survival from weekly monitoring. I collected data in four different sites, among which two are invaded by the strawberry guava and the two others are primary forest. In addition, one more trapping session was done in invaded sites to compare the species in mouse lemurs defecations at the beginning and at the peak of the strawberry guava fruiting season.

I am interested in using these empirical data in (1) modeling Seed Dispersal Effectiveness, a concept developed by Schupp *et al.* (1983) that takes into account the quantitative and qualitative aspects of seed dispersal to determine the relative impacts of seed dispersers, (2) modeling the potential of mouse lemurs in compensating the roles of highly threatened frugivores through simulation approaches under different scenarios, and (3) comparing germination and survival parameters, per trial, between defecated seeds and seeds extracted from fresh fruits (control) to examine the effects of gut-passage. Also, I would like to find a way to compare the diversity and proportions of defecated seeds during the two steps of the strawberry guava fruiting, and model the modification along with the increase or decrease of the abundance of strawberry guava in long term.

STATEMENT OF INTEREST AND INTENT

Modelling is nowadays a compulsory tool for a researcher to produce relevant research and test hypotheses. As an early-career researcher in community ecology, attending the E2M2 workshop will be an opportunity for me to enhance my competences related to biostatistics and ecological modelling. I can learn more about R capacities in biological and ecological modelling, which are crucial for improving and building better research projects.

My long-term professional goal is to develop more research and educational projects related to the importance of seed dispersal across Madagascar's forest ecosystem in conservation. In the shorter term, I would like to draw attention on the importance of mouse lemurs in shaping forest diversity and structure. Attending this E2M2 workshop will equip me with an important tool to reach these goals.

I recently got my Master degree with the preliminary results of the project described above and think to start a PhD scheme based on the same project. This workshop will then help me using more appropriately my data set according to my project objectives. In fact, activities and courses given during this workshop will provide me new perspectives in developing a research project within a better modelling framework. Also, working with others students and instructors from different research background would give me opportunity to get new ideas and relevant feedbacks on my projects to design my PhD project.

I am now on the last step of data collection in my project. By the workshop time, I will begin data analysis and write-up, then publish my work in a peer-reviewed journal. Thus, attending the E2M2 workshop will provide me useful tools to appropriately model my results and test my hypotheses for publication. The workshop will also help me to think about the data needed for an accurate modelling to design my PhD project.

I also started mentoring a Master student who works on the dispersal service of red-fronted lemurs in southwestern dry deciduous forest. He would like to explore its effectiveness in dispersing seeds of fruit-bearing plant species and to compare eaten fruits with actually dispersed seeds. The gain from this workshop can help me giving him tips and letting him know about the importance of statistics and modelling in his Master thesis project.

In my future research projects, I would like to look closer at the specificity of plant guild dispersed by mouse lemurs in different type of forest and the potential consequences of their extinction. I am also thinking about using meta-analysis to formulate new hypotheses about seed dispersal mouse lemurs. I would base them on research done about their feeding ecology and general activity. As a conservation biologist, I would use knowledge and competences gained during this workshop would give me basic information to explore this scheme and design more researches in ecology geared to conservation. Discussing and networking during the workshop will also be an opportunity for me to collaborate with other students and researchers to develop more community ecology researches.

Regarding educational goals, my position as outreach and education officer in our association is an opportunity to raise students' awareness about sciences. I would then use my experience of attending this workshop for a skill-sharing with the members as well as to mentor/assist them in their projects or their work. It will also be extended to others graduate students with high dispersal and ecology interests, and children and teenagers in our research sites. In this latter case, R skill will help us producing more playful and funnier hands-on experience that will deepen their interests in sciences and show them the usefulness of mathematics.

I really hope to be among the participants of the 2019 E2M2 workshop as it will tremendously help me achieving my research goals, either in short or in long-term. It will help me developing new personal skills, in ecology and in education to promote conservation in Madagascar. Finally, the gain from this workshop will not just stay mine but will benefit a lot of people in my surroundings, especially women's perspective in STEM.