



REPORT

Taxonomic training & access to collections in Belgium

NOTICE

The present questionnaire must arrive with the Belgian National Focal Point to the Global Taxonomy Initiative within one month of the official closure of the capacity building visits. Electronic submission on the general e-mail address of the Belgian GTI NFP (cbd-gti@naturalsciences.be) is strongly encouraged. If electronic submission should however be impossible, paper copies may be sent by fax or ordinary mail. The Belgian GTI NFP will acknowledge receipt of all project reports.

If grantees have **relevant pictures** to illustrate their capacity building visit, these may be annexed to the report. The Belgian National Focal Point might use some of these pictures in one of its reporting activities, but only after the copyright holder has given his permission.

Contact and further information

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PART I – CANDIDATE INFORMATION

Family name:	Naturinda
First name(s):	Zerubabeeli
Nationality:	Ugandan
Date of arrival and departure in / from Belgium	8/11/2015 to 10/12/2015
Number of training days:	34 days
Type of visit	<input type="checkbox"/> Mainly training in taxonomy and collection management <input type="checkbox"/> Mainly access to collections <input checked="" type="checkbox"/> Other, <i>specify</i> Processing ants collections from research work in Uganda, (sorting, mounting, identification and digitization)
Location of training:	<input checked="" type="checkbox"/> Royal Belgian Institute of Natural Sciences, Brussels <input type="checkbox"/> Royal Museum for Central Africa, Tervuren <input type="checkbox"/> Botanic Garden of Meise <input type="checkbox"/> Other, <i>specify</i>

PART II - GENERAL INFORMATION

Describe concisely how you have learned about the Belgian GTI Project	The first time i heard about it is was when a fellow research associate, Ir. Koen Vanderhaegen was looking for me a scholarship for accessing laboratory for processing the ants collected from the field work in 2014 from Uganda though he found there were no calls for proposals at that time of his inquiry. The second time i learned about GTI Project was after Dr. Lucie Marie the GTI programme officer visited us at RBINS while processing our ants' samples with the help of Dr. Wouter Deconinck.
Describe concisely how you have learned about this specific call for proposals	I was notified about the call for proposals by Dr. Lucie Marie after her visit in our lab at RBINS when processing ants and she informed me about the opportunity that was on for students in Africa. It was close to the deadline and i checked on the link for GTI and then i submitted in my proposal for consideration. Fortunately enough i was considered. Glory to be God that am one of the lucky beneficiaries.
Describe concisely why you needed capacity building in taxonomy and collection management	In this research i want to use ants as bio-indicators for environmental changes and so there was need of capacity building in order to learn how to identify the different ant species collected in the study area for me to come out with their diversity, species richness, and species evenness and linking the different ants communities for biodiversity conservation conclusions. To make policy recommendations to policy makers towards biodiversity conservation in my home country Uganda.

<p>Describe concisely what support (e.g. training, access to collections,...) you have received and how this training can be related to taxonomy and /or collection management</p>	<p>I received training in identification of ants up to genus level and some up to specific level; i was also exposed to the management of ants' collections and other organisms like beetles and butterflies. This is all geared towards finding the different taxonomic hierarchies of ants' species in eastern Uganda. I got access to equipment and tools used in the study of ants (processing).</p>
<p>Describe concisely how your gained capacity will help you in your professional duties</p>	<p>Having learnt how to identify ants up to specific level and some to genus level will help me perform different analysis that will help me draw conclusions on the use of ants species as bio indicators for environmental changes that are fast like climate change, degradation, increased natural disasters like landslides. The conclusions drawn on this will help in coming up with right policy recommendations towards biodiversity conservation since am a conservationist. We sorted out 116 samples, containing 14,585 arthropods of which 6,755 ants in a period of one month at RBINS. Emphasis will be put towards sustainable use of the environment for both the present and future generations to meet their needs</p>
<p>Describe concisely how your gained capacity will be implemented in your institution</p>	<p>As now a trained personnel, i shall be are to demonstrate and teach other interested students in my University, Busitema on how to identify insects(especially ants) and to digitize and also to use e-resources like antweb for conducting research that is aimed at biodiversity conservation for sustainable development. Am also in affiliation with the National Forestry Resources Research Institute (NaFORRI) Uganda where the gained skills and knowledge in digitizing specimens and collection management shall be put to exercise. I will help in training and practise in digitizing their collections.</p>
<p>Describe concisely what other support you eventually would need</p>	<p>To upscale the ants' diversity studies from Eastern Uganda to the rest of Uganda a fund would be needed to support in collection of ants in other regions to come up with a complete ants' diversity in Uganda as a whole. I would wish to access the RBINS Laboratory and the expertise of Dr. Wouter in future research studies. I would also wish to get more training in entomology. If i could get a Masters scholarship in Entomology it would be of great importance to me and my country at large. I thank you for your continued support.</p>
<p>Describe concisely what infrastructural and human resources you and your institution eventually still need to become fully functional</p>	<p>There is a need of a fully functioning laboratory. My institute lacks a laboratory for entomology studies. There is also need of equipment like Microscopes, Insect collection equipment like light traps, Winkler bags, Sieves, Mounting kits among others. There is also need of constructing a mini-museum at the institute for keeping the different collections for various students' research studies There is also need of the institution to employ a technician who is knowledgeable in entomology.</p>

<p>Describe concisely how you think the Belgian GTI National Focal Point could further construct capacity for you and your institution</p>	<p>I would desire the Belgian GTI National Focal Point to invite me over to Belgium again to get further skills in ants Identification, the one month period i got we were able to sort out 116 samples, containing 14,585 arthropods of which 6,755 ants and work on 2014's collections at RBINS. We identified most ants to genus level and a few to species level and therefore it is instrumental to identify all the ants to species level for further analysis.</p> <p>I would also like GTI to support our research activities to upscale them from just Eastern Uganda to the whole of Uganda to come up with the ants' diversity of Uganda.</p> <p>For the case of the institution, there is a need to establish a strong partnership, by patterning up in biodiversity research projects.</p> <p>Build capacity of other students from home country visits and training.</p>
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PART III – TAXON SPECIFIC INFORMATION

<p>What is your taxon of interest</p>	<p>Phylum <i>Arthropoda</i>; Class <i>Insecta</i>; Order <i>Hymenoptera</i>; Family <i>Formicidae</i>; many genera</p>
<p>Describe concisely how you intend to make your taxonomic data available to other colleagues</p>	<p>After full identification of ant species and digitisation, they will be uploaded on antweb plus on the RBINS website for public access and use. Also after publishing the research papers they will be made available online for use by other people. The results of the research shall be accessed by all stakeholders like the certification bodies of coffee in Eastern Uganda like Gumutindo Ltd and Kyagalanyi Ltd. The reports shall also be made available to the funding organisations like VLIROUS, Busitema University, Lueven University and other major stakeholders.</p>
<p>Describe how your taxonomic work helps improving the status of biodiversity in your country</p>	<p>To improve the conservation of biodiversity in Uganda public awareness and political/financial support has to be obtained. Currently very few is known about local biodiversity and its importance for the Elgon region. This study aims to indicate the role of agroforestry systems for the conservation of biodiversity in human-modified land use systems outside the borders of the Mt. Elgon National Park in eastern Uganda. The project aims to demonstrate that the use of indigenous shade tree species combined with sustainable management practices can increase the provision of ecosystem services by coffee gardens. Increased provision of ecosystem services and a higher resilience/sustainability of the coffee production are important goals for coffee certification organizations. Also in PES (payment for ecosystem services) schemes such as carbon sequestration projects these ecosystem services are important co-benefits that can increase the carbon credit's values and attractiveness of projects. Since land use changes around Mt. Elgon are happening on a large scale and often in an irreversible way this study is of high importance for the documentation and taxonomy of species that might get lost very soon.</p>
<p>Describe how your project could help reduce poverty in your country</p>	<p>Our project can contribute to poverty reduction by promoting sustainable ways of coffee production in the Mt. Elgon region. The study of ant communities in small holder coffee plantations around Mt. Elgon will indicate the effects of different management systems on biodiversity. It will provide evidence that can convince policy makers and foreign donors to support the extension of sustainable management practices, certified coffee production or PES schemes in the region.</p>

Pictures demonstrating the fieldwork in collection of the entomofauna following the ALL protocol (Agosti *et al* 2000)



a)



b)



c)



d)



e)



f)

Plates a) ants capture from litter, b) baiting, c) extraction by wickler, d) ants on baits, e) pitfall, f) after the interview session with a coffee farmer

Pictorial during the processing of ants samples during the capacity building courses of GTI



a)



b)



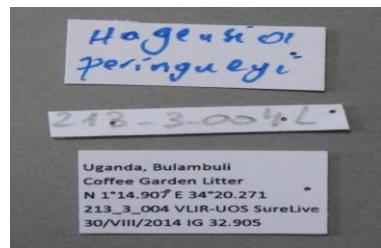
c)



d)



e)



f)

Plates a) sorting ants from other organisms, b) separating and mounting, c) Labelling, d) species identification, e) training in digitising, f) some of the digitised ants species(Dorsal,frontal, lateral view)