



## 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](mailto:cbd-gti@naturalsciences.be)) is strongly encouraged.

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

Dr M-L Susini Ondafe

Belgian Focal Point to the Global Taxonomy Initiative,

Royal Belgian Institute of Natural Sciences

Vautierstraat 29,

B-1000 Brussels, Belgium

Tel.: +32 2 627 45 90

Fax: +32 2 627 41 41

Email: [cbd-gti@naturalsciences.be](mailto:cbd-gti@naturalsciences.be)

## PART I - CANDIDATE INFORMATION

Family name: UMUNTUNUNDI

First name(s): Prosper

Nationality: Rwandese

Date of arrival and departure in /from Belgium: 28<sup>th</sup> August till 22<sup>nd</sup> September 2018

Number of training days: 26

Type of visit: Capacity Building in Taxonomy, access to collections and Collection Management

Location of training: Royal Belgium Institute of Natural Sciences (RBINS), Brussels

## PART II - GENERAL INFORMATION

*Describe concisely how you have learned about the Belgian GTI Project*

I have learned about GTI project via an email from a colleague.

*Describe concisely how you have learned about this specific call for proposals*

Same as above.

*Describe concisely why you needed capacity building in taxonomy and collection management*

I desired capacity building in taxonomy and collection management. Because I wanted to compare the shells of the semi-slugs that I collected in the Kahuzi-Biega National Park (PNKB), Democratic Republic of Congo. With described species of similar forest housed at the Royal Museum of Central Africa (RMCA). During the two days visit at the RMCA. I managed to clarify and change our already determined shells of the semi-slugs of PNKB with already described species. Thus, my previous determination of the semi-slugs species (Sheldoniinae species H, Sheldoniinae species Z, Sheldoniinae species G, Sheldoniinae species F ) respectively, changed to *Angustivestis bouilloni* (Van Mol, 1969), *Angustivestris kahuziensis* (Van Mol, 1969), *Angustivestis lioderma* (Pilsbry, 1919 ), *Angustivestis schubotzi* (Thielle, 1911). While, the rest of shells Vis versa described species which did not match topped up the land snail's species list of the PNKB. For example *Cahylamydarion congoensis* (Van Mol, 1969), *Verdcourtia auriformis* (Thielle, 1911) and *Verrucarion kivuensis* (Van Mol, 1969). The rest of my training visit. I was at the Royal Belgian Institute of Natural Sciences (RBINS). At RBINS I mastered slug's dissection/determination, to an extent that I found a slug species (*Bukobia zonata* Pollonera, 1906) that was recognized only in Uganda. This species was recorded in Volcanoes National Park (PNV), Rwanda. Furthermore, the slugs determination was interesting because we (I and my training supervisors) encountered with four different slug species (*Atoxon phallic*, *Atoxon X*, *Bukobia nov (near picta)?* and *Bukobia picta?*) that will probably lead to new species. In other words, further investigation is still

needed, i.e: laboratory works and fieldworks to sort out and have representative samples for the four slug specimens already mentioned above.

*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*

During the training I was deepened into slug's determination by dissecting the genital apparatus. The slug's genital apparatus dissection provide further determination, basing on the internal features. I also received literature on Belgian Congo lands snail molluscs and learnt how to extract Genomic DNA from animal tissues. By following the guideline available on [www.mn-net.com](http://www.mn-net.com) with the assistance or help of molecular laboratory technician, Malacology department of RBINS.

*Describe concisely how your gained capacity will help you in your professional duties*

The comparison of the semi-slugs I recently collected in the PNKB with described semi-slugs species stored at RMCA, the ability to dissect slugs and to use the anatomy for classification improved my preliminary determinations based on shell morphology and, thus, the quality of my work. The resulting data out of this training will supplement to the planned publications of the land snail fauna from the Kahuzi-Biega National Park and Afromontane forests of the Albertine Rift Valley. It will also enable me to perform taxonomic revisions and new descriptions of several semi-slugs and slugs from the Afromontane forests in Albertine Rift Valley. The training helped me to update an identification key. For the semi-slugs and slugs based on shell characters and morphology that I am currently developing. The acquired abilities and knowledge will also help me to prepare for a planned PhD study on the systematics and biogeography of land snails from the Albertine Rift Valley.

*Describe concisely how your gained capacity will be implemented in your institution*

I was official appointed as a research affiliate at University of Rwanda, Biodiversity Centre of Excellence, Huye Campus. The University of Rwanda was newly given the national herbarium of Rwanda. With this cooperation I will mobilize staff members of University of Rwanda, Biology department, Huye Campus and train undergraduate biology students about land snail ecology, land snail sampling and sorting, collection management, etc. Thus, with my intended project entitled "**Taxonomy of Terrestrial Gastropods and Establishment of a Scientific Zoological Collection, Rwanda**". I think that I will be the first person to provide animal collections in that institute.

*Describe concisely what other support you eventually would need*

I would need containers for land snail specimens preservation and storage, a stereo-microscope for laboratory work.

*Describe concisely what infrastructural and human resources you and your institution eventually still need to become fully functional*

I have been allowed to be based and use the laboratory of University of Rwanda, Huye Campus. Though I am the only person working on land snail in the whole country, Rwanda. As mentioned previously, I will mobilize staff members of University of Rwanda, Biology department, Huye Campus and train undergraduate biology students. But I still need two part time volunteers who can assist me to become fully functional.

*Describe concisely how you think the Belgian GTI National Focal Point could further construct capacity for you and your institution*

The Belgian Focal Point to GTI can further construct capacity for me and my institution by:

- Scientists from RBINS can pay visits to Rwanda, give seminars/short training and if applicable signing a memorandum of understanding with the University of Rwanda or Vis versa.
- The memorandum of understanding signature I think it will easily open up many opportunities, for example we can get visiting lecturers from RBINS and other partner's institution with RBINS in Belgium.

### PART III – TAXON SPECIFIC INFORMATION

*What is your taxon of interest?*

My taxon of interest is Mollusca, Gastropoda, Pulmonata/ Urocyclidae/ Urocyclid semi-slugs and slugs

*Describe concisely how you intend to make your taxonomic data available to other colleagues*

I hope to attend international malacological conferences so that I can present my results there. I will try to create more public awareness regarding the ecological importance of terrestrial snails in tropical rain forest ecosystems by presenting my findings at the University of Rwanda, Biodiversity Centre of Excellence, Rwanda Development Board (RDB) and the Rwanda Environmental Management Authority (REMA). I finally, hope to publish my taxonomic data in peer reviewed journals.

*Describe how your taxonomic work helps improving the status of biodiversity in your country*

With my work, I want to contribute information beneficial to the successful management of conservation areas in the Albertine Rift Valley, especially with regard to the threat of global warming and changing climate patterns on Afromontane rainforests. My study will also contribute a scientific basis for Rwanda's reforestation program and promote ecosystem health. Terrestrial gastropods can be used as bio-indicators to assess the status of degradation in tropical rainforests or to document the progress of reforestation attempts in Rwanda.

*Describe how your project could help reduce poverty in your country*

During the Rwandan reforestation processes, local communities around protected areas will have new job opportunities due to various community conservation programs initiated by the Rwandan authorities. This includes numerous income-increasing activities such as honey harvesting, but also short training programs on family planning. Employed people will be mobilized to form cooperative units that will help them to easily get access to bank loans. Such loans will improve their business investment opportunities and lead to a diversification of livelihoods. Though, my project will have no direct impact on those activities, but it will help Rwandan politicians and conservation managers to make the right decisions regarding the delimitation and zonation of protected areas and their buffer zones. This also includes biodiversity managing in areas designated to community conservation projects, i.e. areas in which biodiversity is moderate.