



Belgium
partner in development

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 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:	UMUNTUNUNDI
First name(s):	Prosper
Nationality:	Rwandan
Date of arrival and departure in / from Belgium	6 October to 31 October 2019
Number of training	
Type of visit	<input checked="" type="checkbox"/> <input type="checkbox"/> Mainly training in taxonomy and collection management <input type="checkbox"/> Mainly access to collections <input type="checkbox"/> Other, <i>specify</i>
Location of training:	<input checked="" type="checkbox"/> <input 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
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.

<p>Describe concisely why you needed capacity building in taxonomy and collection management</p>	<p>I needed capacity building in taxonomy and collection management. Because I wanted to enrich and finish the identification of the unconfirmed samples of slug and semi-slugs from my last GTI training in Belgium. Thus, during my GTI training I managed to confirm the identification of the following slugs to species level: <i>Atoxon phallic</i>, <i>Atoxon X</i>, and <i>Bukobia nov</i> (near <i>picta</i>)?, <i>Bukobia picta</i>?). These slugs specimen were confirmed as <i>Derocheras laeve</i> (Muller, 1770); <i>Atoxon pallens</i> Simroth, 1895 and <i>Bukobia picta</i> (Simroth, 1897). The semi-slugs specimens Shelidoniinae species H, Shelidoniinae species G, Shelidoniinae species F respectively, remained as and changed to <i>Angustivestis bouilloni</i> (Van Mol, 1969), <i>Angustivestis lioderma</i> (Pilsbry, 1919) and <i>Angustivestis kivuensis</i> (Thiele, 1911). I sorted the mixed up of Shelidoniinae species K specimens, basing on our former shell character determination. Specimens of Shelidoniinae species K changed to <i>Angustivestis bequaerti</i> (Pilsbry, 1919), <i>Angustivestis niger</i> (Pilsbry, 1919), <i>Angustivestis kivuensis</i> (Thiele, 1911) and <i>Angustivestis lioderma</i> (Pilsbry, 1919). <i>Angustivestis schubotzi</i> (Thielle, 1911) previously named Shelidoniinae species F remained as <i>Angustivestis schubotzi</i> (Thielle, 1911). Shelidoniinae species B, C & V after dissection, I found out that they were different from each other and the rest of previously known semi-slugs basing on Van Mol, 1970 identification scheme. I grouped them into the genus of <i>Chylamydarion</i>. Because they presumably share similar anatomical and morphological characters. I collected 2 live specimens of semi-slugs, these specimens are fully adult. Before and after dissection I easily noticed that they belong to the genus of <i>Angustivestis</i>. But their anatomy does not match to any semi-slugs basing on Van Mol, 1970 identification scheme and our recent collected specimens. Furthermore, <i>Chlamydarion spatiosus</i> (Preston, 1914) changed to <i>Chylamydarion congoensis</i> (Van Mol, 1969).</p>
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<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>During the training I was deepened into slugs and semi-slugs determination using their genital apparatus. I also took some foot tissue of the expected new slug species (<i>Ataxon phallic</i>) of my previous GTI training in Belgium. The molecular analysis helped us to prove its species name and confirmed as <i>Deroceras laeve</i> (Muller, 1770) the first record of an introduced species ever to Rwanda. Furthermore, using relevant literature I found <i>Dendrolimax osborni</i> Pilsbry, 1919. This reveals its new distribution record from Rwanda, at Ryabatsinda tomb, Rusizi District.</p>
<p>Describe concisely how your gained capacity will help you in your professional duties</p>	<p>The ability to dissect slugs and semi-slugs and use of their anatomies for classification improved 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 in Rwanda. It will also enable me to perform taxonomic revisions and new descriptions of several slugs and semi-slugs. The training helped me to update an identification key of semi-slugs. I am currently developing. The acquired abilities and knowledge boosted my confidence and encouraged to prepare for a planned PhD study this coming academic year.</p>
<p>Describe concisely how your gained capacity will be implemented in your institution</p>	<p>I have started training one person of the Centre of Excellence in Biodiversity and Natural Resources Management (CoEB), University of Rwanda (UR), Huye Campus. But I have another plan of training interested students of Zoology and Conservation of UR, department of Biology, Huye Campus. The national herbarium of Rwanda was given to UR and under management of CoEB. I am a Research Fellow at CoEB. Thus, with my intended project entitled "Taxonomy of Terrestrial Gastropods and Establishment of a Scientific Zoological Collection of Rwanda". I have deposited 150 specimens of slugs and semi-slugs at the National Herbarium of Rwanda. From my recent field survey from Bugoye forest, Rubavu district, Rwanda.</p>
<p>Describe concisely what other support you eventually would need</p>	<p>I would need containers for land snail specimens preservation or storage, a stereo-microscope for laboratory work. Another funding opportunity for the molecular analysis of the 4 new semi-slugs species from last GTI training in Belgium.</p>

<p>Describe concisely what infrastructural and human resources you and your institution eventually still need to become fully functional</p>	<p>As mentioned previously, I have started training one person of the Centre of Excellence in Biodiversity and Natural Resources Management (CoEB), University of Rwanda (UR), Huye Campus. But I have another plan of training students of Zoology and Conservation of UR, department of Biology, Huye Campus. But I still need two part time volunteers who can assist me to become fully functional.</p>
<p>Describe concisely how you think the Belgian GTI National Focal Point could further construct capacity for you and your institution</p>	<p>Scientists from RBINS can pay visits to Rwanda, give seminars/short training and signing a memorandum of understanding between the UR and RBINS.</p> <p>If applicable I can be given just one stereo microscope. Because in the whole College of Science and Technology, UR there is only one. Sometimes my lab may be slow due to stereo microscope sharing by many people for similar lab works.</p> <p>Furthermore, If possible a researcher from RBINS and I we can cooperatively apply for and implement GTI type II research grant.</p>

PART III – TAXON SPECIFIC INFORMATION

<p>What is your taxon of interest</p>	<p>My taxon of interest is Mollusca, Gastropoda, Pulmonata/ Urocyclidae/ Urocyclid Slugs and Semi-slugs.</p>
<p>Describe concisely how you intend to make your taxonomic data available to other colleagues / people in your homeland</p>	<p>I hope to attend international malacological conferences so that I can present my research results there. It is planned that late February 2020 I will present my research findings at the CoEB, UR. I will also create more public awareness regarding the ecological importance of terrestrial snails in tropical rain forest ecosystems by presenting my research findings to different University and Secondary students, Rwanda Development Board (RDB), the Rwanda Environmental Management Authority (REMA) and local communities. I am currently working on two manuscripts (A preliminary check list of terrestrial gastropod of Rwanda and Reporting the first record ever of an introduced land snail species in Rwanda). The two publications in preparation together with many more of our planned publications on land snails' studies in Rwanda and Kahuzi-Biega NP all data will be published in peer reviewed journals.</p>
<p>Describe how your taxonomic work helps improving the status of biodiversity in your country</p>	<p>With my work, I want to contribute information beneficial to the successful management of conservation areas in the Albertine Rift, 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. Terrestrial gastropod investigation in Rwanda will help us to provide biodiversity status (species richness, endemic and introduced species).</p>

<p>Describe how your project could help reduce poverty in your country</p>	<p>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. After deep investigation for the introduced species. The result and literature may prove it as invasive species. Once confirmed, I and my research team we can provide advises for its prevention and control. Therefore, a lot of money which was going to be spent for its control, prevention and other related activities. Can be used for other developmental projects like road, school, hospital constructions, distribute electricity and pipeline in different places countrywide, etc.</p>
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