

REPORT

Taxonomic Training & Access to Collections in Belgium (Projects executed between 1 April 2010 and 31 March 2012)

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:	BERRIO CARDENAS
First name(s):	Claudia Isabel
Nationality:	Colombian
Date of arrival and departure in / from Belgium	May 3, 2011-May 21, 2011
Number of training days:	14
Type of visit	<input checked="" type="checkbox"/> Mainly training in taxonomy and collection management <input type="checkbox"/> Mainly access to collections <input checked="" type="checkbox"/> Other, <i>specify</i> I had access to taxonomic literature, access to Belgium-based Oligochaeta collections, access to Belgium-based freshwater Oligochaeta taxonomist.
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"/> National Botanic Garden of Belgium, Meise <input type="checkbox"/> Other, <i>specify</i>

PART II - GENERAL INFORMATION

Describe concisely how you have learned about the Belgian GTI Project	I learned about the Project while searching the internet for grants/ funding for taxonomists from Third World countries. I found it along with the plans of the Convention on Biological Diversity CBD, and the network of partners (CHM, Clearing House Mechanism), which includes the Belgian GTI Project.
Describe concisely how you have learned about this specific call for proposals	I found it on the webpage www.taxonomy.be and in the webpage of CHM, www.cbd.int .
If this was your first study visit financed via the Belgian GTI National Focal Point, describe concisely why you needed capacity building in taxonomy and collection management	Taxonomic Identification of freshwater Oligochaeta requires specialized dissecting, fixation, mounting, and preservation techniques, along with the analysis of internal morphology. There are no experts in freshwater Oligochaeta in Colombia. Neither there is a collection. I have been surveying the freshwater Oligochaeta of Antioquia, Colombia since several years ago. I realized the need to build up my professional capacity to overcome limited training in technical skills and theoretical gaps, in my knowledge of taxonomic identification techniques and collection management, a big obstacles in achieving my objectives: to increase taxonomic expertise and knowledge of freshwater Oligochaeta occurring in Colombia, to improve the knowledge of biogeographic aspects of these Annelida and of the habitats in which they may be find in Colombia.
If this was not your first study visit financed via the Belgian GTI National Focal Point, describe concisely why you needed further support	

<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 specialized training in sampling, fixation and preservation methods for specimens; dissection techniques, preparation of permanent slides and analysis of the internal anatomy of freshwater Oligochaeta. I had access to collections and specialized literature, and I learned how to build a taxonomic key. The skills received are critical for doing successful work as a researcher and taxonomist of Oligochaeta.</p>
<p>Describe concisely how your gained capacity will help you in your professional duties</p>	<p>The capacity obtained through this training will allow me to improve the efficiency, the minuteness, and the accuracy of the sampling process, and to perform the fixation, processing and preservation of specimens. Moreover, the achieved “know-how”, will enable me to describe correctly the collected specimens, in order to organize and improve the knowledge about freshwater Oligochaeta in Colombia.</p>
<p>Describe concisely how your gained capacity will be implemented in your institution</p>	<p>Through the training of students at the undergraduate and graduate levels; by setting up and managing a collection of freshwater Oligochaeta at the University of Antioquia; by designing projects about the taxonomy of these annelids as a part of surveys on biodiversity and ecology; consulting projects in environmental assessments, impacts of hydroelectric dams, mining and oil extraction; research projects on bioaccumulation and bioremediation in partnership with University of Antioquia.</p>
<p>Describe concisely what other support you eventually would need</p>	<p>Access to literature related to freshwater Oligochaeta Taxonomy, Systematics, Ecology and Biogeography. Taxonomic evaluation of specimens by an expert based at Royal Belgian Institute of Natural Sciences, Brussels. Assistance with publications from experts in RBINS, and training of students and assessment of dissertations at the undergraduate and graduate levels.</p>
<p>Describe concisely what infrastructural and human resources you and your institution eventually still need to become fully functional</p>	<p>A Nomarski DIC microscope, groundwater Oligochaeta sampling equipment, and special equipment for collecting specimens and preserving samples, We will also need additional training and visits to museums to compare collected specimens to samples in these collections.</p>
<p>Describe concisely how you think the Belgian GTI National Focal Point could further construct capacity for you and your institution</p>	<p>By assisting in the creation of research groups working on the taxonomy, systematics, ecology and biogeography of Oligochaeta and by training students at the undergraduate and graduate levels in these subjects. By helping create formal relationships and consulting networks with other groups and institutions in North America and Europe.</p>

PART III – TAXON SPECIFIC INFORMATION

What is your taxon of interest	Oligochaeta (Annelida: Clitellata)
Describe concisely the different methodologies for collecting your taxon.	<p>The methodologies depend on the objective of the collection activity:</p> <p>Qualitative sampling: can be performed by hand, in littoral areas and shallow waters, using small nets, small aquarium nets, tea strainers, kitchen basters, hand shovels, and forceps, and by rinsing aquatic plants and debris.</p> <p>Quantitative sampling: Includes the use of different kinds of grabs, core samplers, Surber stream sampler, and D-nets.</p> <p>Collecting sexually mature specimens is essential for a taxonomic accurate work. Ecological and geographic data must to be recorded also.</p> <p>If unprocessed samples must be transported back to the lab, they must to be packaged in sealed bags, with water, debris and the macrophytes of the habitat, and then placed in containers with dry ice, take care that the samples do not be crushed.</p>
Describe concisely how to best preserve collected specimens of your taxon for taxonomic purposes	<p>Specimens intended for taxonomic purposes should be allowed to relax, prior to the fixation by immersion in a solution of buffered formalin (7-10%). This must be done immediately after collection for at least 48 hours. Specimens can be rinsed with water, drained and transferred to ethanol (70-80%) for long term storage in a cold environment. For permanent slides, specimens are stained in Paracarmine solution (Meyer); dehydrated in ethanol series: acidic ethanol 70%, ethanol 70%, ethanol 96%, ethanol absolute; cleared in xylene/toluene, then xylene; genital organs dissection is needed for description/identification of new taxa; specimens are mounted in Canada Balsam; with a cover slip on the top; dried in an oven at 37 degrees Celsius for some days. Specimens are kept in special boxes, slides must to be lettered: Date Collected (D/M/Y), Slide Number, Station ID., Country, Municipality, Habitat, Taxonomic group, Collector's name.</p> <p>Whole specimens, the tails or their fragments, intended for DNA extraction in order to perform bar coding methodology, must be transferred after fixation in formalin to vials containing absolute ethanol (95-100%), for long term storage and must to be kept at -20 ° Celsius.</p>
Describe concisely the best practice in the management of a collection of your taxon	<p>The vials containing specimens in ethanol 70-80% must to be kept permanently in a cold environment (below 10 degrees Celsius). Every container must to be lettered inside and outside, with labels and waterproof inks, with next data: Date Collected (D/M/Y), Vial Number, Station ID., Country, Municipality, Habitat, Taxonomic group, Collector's name. Slides must to be keep in special boxes, every slide must to be lettered (twice is ideal): Date Collected (D/M/Y), Slide Number, Station ID., Country, Municipality, Habitat, Taxonomic group, Collector's name. If possible, it is better to store slides in horizontal special cardboard trays. Samples for molecular analysis must be kept in absolute ethanol and at -20 degrees Celsius.</p>

<p>Describe concisely how you intend to make your taxonomic data available to other colleagues</p>	<p>Through publication in data bases of lists of species and their distribution in the region, and through including in the web page of the research group Limnabase U.de A. (and others in the future); through papers in scientific journals about Oligochaeta in Colombia, chapters in books, and publication of taxonomic keys for Naididae y Pristinidae of Colombia. Giving some informative speech to undergraduate and graduate students of Biology about freshwater Oligochaeta. Through participacion as a speaker in academic events, such as the Congreso Nacional de Limnología in Medellín, Colombia in June 2012 and the XII International Symposium on Aquatic Oligochaeta Biology in Fremantle, Australia in September 2012.</p>
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<p>Have you been briefed on the aims, scope and contents of the journal <i>AbcTaxa</i>?</p>	<p>Yes, I have.</p>
<p>Do you think you have enough capacity to make a contribution to <i>Abc Taxa</i>?</p>	<p> <input type="checkbox"/> No, I still lack capacity <input checked="" type="checkbox"/> Yes, if I get adequate guidance and support from my tutors <input type="checkbox"/> Yes, I feel able to do this autonomously <input type="checkbox"/> Other, <i>specify</i> </p>
<p>If you feel capable to contribute meaningfully to <i>Abc Taxa</i>, are you willing to do so</p>	<p> <input type="checkbox"/> No <input type="checkbox"/> No, I have no time to develop such a capacity building manual <input checked="" type="checkbox"/> Yes, I will send a proposal along the lines stipulated on the website </p>

Brussels, 30 January 2010



Belgian National Focal Point to the
Global Taxonomy Initiative