

## Darwin Fellowship - Interim Report

*(Please check guidance for submission deadlines, max 3 pages.)*

Darwin Main Project Ref No	DI15-011/ EIDPS032
Darwin Project Title	Building capacity for forest inventory in the Republic of Congo.
Name of Darwin Fellow	Sydney Thony NDOLO EBIKA
UK Organisation	Royal Botanic Garden Edinburgh
Your Organisation(s)	Wildlife Conservation Society-Congo
Your role within your Organisation	Botanist
Start/end date of Fellowship	July 2013- June 2014
Location	Edinburgh
Darwin fellowship funding (£)	£20,700
Type of work (eg research, training, other, please specify)	Research training.
Main contact in UK Organisation	David Harris
Author(s), date	Sydney Thony NDOLO EBIKA, first draft Dec 2013, report completed 4 June 2014

### 1. Background

- Briefly describe your involvement in the Darwin project before the start of your fellowship.

I started to be involved in the Darwin project in August 2006. As part of the Capacity Building of the Darwin Initiative for the Republic of Congo (Brazzaville), a botanical training was organised by Dr Harris, D.J. (from the Royal Botanic Garden Edinburgh and initiator of the project) and his collaborator Dr Moutsamboté, J.-M. (Marien Ngouabi University) in Kobo. I attended that training as a trainee where I learnt about botanical inventories and plant identification. Then, in 2008 I had a second opportunity to do a fieldwork on tree identification in plots. In 2009, Dr Harris obtained a post-project Darwin grant that allowed me to come to the United Kingdom to learn English and do an MSc in Biodiversity and Plants taxonomy at the University of Edinburgh.

- Describe aim and objectives of the Fellowship, and programme of work

The main aim of the Fellowship was to allow me to: increase my skills in plant identification and publication of scientific papers; and so gain skills and competences on topics that I didn't have before.

The objectives the Fellowship were: (1) to identify botanical specimens collected by me in and around the Nouabalé-Ndoki National Park (NNNP); (2) to design, write and submit two papers; (3) to design and create a web output of biological information; (4) to attend academic training.

- Briefly describe the roles of the UK and Fellow's institutions

The Royal Botanic Garden Edinburgh served as a host institute for me in the UK. The institute played an important role in supervising the activities and establishing contacts with organisers of different training.

The Wildlife Conservation Society-Congo is my employer and served as field station where I carried out all my field activities. The society is working in collaboration with the Congolese government to manage the Nouabalé-Ndoki National Park and carry out research on forest elephants, chimpanzees, gorillas and others.

## 2. Progress

- Provide a brief account of your work since the start of your fellowship, showing progress against the programme of work.

**Specimens' identification:** three hundred and thirteen plant vouchers collected in the Republic of Congo were brought to the Royal Botanic Garden Edinburgh for identification. Of the 313 specimens, 244 were identified at the species level, 34 at the genus level, 30 at the family level and five (5) unknown. Some species such as *Triaspis emarginata* De Wild. (Malpighiaceae) were recorded for the first time in northern Congo. In addition, species of *Ficus* and their specimens will be used in the two manuscripts that will be written.

**Training and conference in Belgium:** The training in Belgium focused on learning techniques for identifying specimens of macrofungi. Mycology is a neglected field in the Republic of Congo despite the high diversity of species found in the forest and their importance as a source of food and income for local people in Congo-Brazzaville. This training allowed me to identify specimens of edible mushrooms and present the results as a poster during an International Conference on Nutrition and Food Production in Belgium. The link to the poster is [http://www.kaowarsom.be/documents/Conference\\_Posters/Ebika.pdf](http://www.kaowarsom.be/documents/Conference_Posters/Ebika.pdf)

**Training in UK:** I attended two training (phylogenetics and statistics) in Edinburgh. The phylogenetics training was held at the Royal Botanic Garden Edinburgh and was very important for my career to understand molecular approaches used in almost every scientific papers being published nowadays. This will also help me in the future to answer some of my research questions (e.g. the molecular approach can help solving issues on some *Ficus* species that show a considerable variation). The training on basic statistics was organised by the Biomathematics and Statistics Scotland. This training enabled me to know what I should do before planning any research and to consult a statistician before carrying out research.

**Design and creation of a web output:** a website is one of the best way of sharing information. In the Republic of Congo, information on biological diversity in general and plants and fungi in particular is rarely available online. This led me to creating a website on plants and macrofungi using the Scratchpad managed by the Biodiversity Informatics Group of The Natural History Museum London. The website that I created is called *Initiative des Champignons et des Plantes du Congo* (Initiative for Mushrooms and Plants of Congo): <http://icpc-congo.myspecies.info/>

**Draft of the first manuscript.** This first manuscript will mainly deal with ecological aspects of *Ficus* species based on data that I collected in 2010 and 2013. The title of the manuscript will be: "*Hemi-epiphytic Ficus in a Congolese forest*". Writing this manuscript will be my first ever experience in writing a scientific article. By completing and submitting this manuscript, I will be prepared to start my second my manuscript and I hope to finish and submit the second paper before the end of the fellowship.

#### **A short trip to Congo:**

In November I was offered the opportunity to travel to an area adjacent to Nouabalé-Ndoki National Park in the Republic of Congo and work with David Harris and a colleague from the Smithsonian Tropical Research Institute in Panama. During this visit I was able to continue to expand my knowledge of plant taxonomy and use new techniques for the inventory of forest plant biodiversity.

- Provide an account of any problems encountered and how you have or are planning to overcome them.

No special problems were encountered so far.

- Are there any issues you would like to raise? No special issue.

### **3. Achievements and Outcomes**

- What have been the main achievements and outcomes to date, and how do they relate to the overall aim and objectives of the Fellowship.

Two main activities have been achieved to date: (1) identification of botanical and mycological specimens and (2) design of the website. Information resulting from the identification of the specimens was shared with other researchers during the Conference in Belgium and were made available on the website.

### **4. Next Steps**

- Briefly describe forthcoming activities, events, milestones

The main tasks for the next coming months will be: (1) to finish and submit the first manuscript, (2) to write a report for the Moabi Foundation, (3) to attend training on scientific writing and Molecular Laboratory training, (4) to draft, finish and submit the second manuscript.