

Final Evaluation Report

Your Details	
Full Name	Wawa Juvey Mavéric
Project Title	Contribution of mycological data to assess the conservation value of the National Nouabale-Ndoki Park (NNNP) and its surroundings.
Application ID	40270-1
Date of this Report	01 July 2024

1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Collecting mycological data that will contribute documenting macrofungal diversity				In-depth field research has been conducted - 777 specimens were collected in three localities (Bomassa, Makao and Thanry) and National Nouabale Ndoki Park. In total, 777 specimens of macromycetes were identified and belong to 28 families, 61 genera and 80 species. The first Congo mushroom checklist was produced containing 80 species of fungi. A preliminary list of rare mushrooms was generated
Safeguard traditional knowledge of this study area				The outcome of such future work will be the production of an article and guide on edible wild mushrooms and endogenous knowledge of indigenous people of the Republic of Congo

2. Describe the three most important outcomes of your project.

- a) Collection of a species that was recently described as a new species by Ndolo and Buyck 2020 (*Cantharellus xanthocyaneus* holotype). We are the second to have collected and described this species.
- b) Collection of a species *Cantharellus* whose provisional name is *Cantharellus bifurcatus*. Species not yet published.
- c). Production of preliminary data that can be used in species conservation assessment for IUCN and KBA.

A first for the status of fungal species of the Republic of Congo candidates on the Red List resulting from the collection of fungal material collected in various habitats, in particular National Nouabale-Ndoki Park and these peripheral villages (Bomassa, Makao and Thanry) and their identification. In total, 18 fungal species were identified belonging to seven families and eight genera which are as follows: 12 extremely rare species, seven very rare and four rare (see table 1). Species assessment was done according to IUCN criteria in accordance with the quality requirements for the Red List. For this study, criteria 2 used to know: the species has a geographically restricted distribution globally (single – to few countries) and is declining (the B criteria). Potential KBA of Congo mushrooms were also identified for the first time. They were proposed by developing criteria dependent on the presence of species and threats, the richness and importance of mycology of the habitat, then applied to the proposed sites (see different maps below).

Table 1: Macrofungi from National Ndoki-Nouabale Park and surroundings

Macrofungi	Status	Ecological group
<i>Amanita fulvopulverulenta</i>	Extremely rare	Symbiotic (ectomycorrhizal)
<i>Amanita griseostrobilacea</i>	Extremely rare	Symbiotic (ectomycorrhizal)
<i>Amanita luteolamellata</i>	Very rare	Symbiotic (ectomycorrhizal)
<i>Amanita mafingensis</i>	Very rare	Symbiotic (ectomycorrhizal)
<i>Amanita</i> sp	Extremely rare	Symbiotic (ectomycorrhizal)
<i>Amanita strobilaceovolvata</i>	Very rare	Symbiotic (ectomycorrhizal)
<i>Boletus alliaceus</i>	Rare	Symbiotic (ectomycorrhizal)
<i>Cantharellus addaiensis</i>	Extremely rare	Symbiotic (ectomycorrhizal)
<i>Cantharellus bifurcatus</i> nom.prov	Extremely rare	Symbiotic (ectomycorrhizal)
<i>Cantharellus goossensiae</i>	Rare	Symbiotic (ectomycorrhizal)
<i>Cantharellus longisporus</i>	Very are	Symbiotic (ectomycorrhizal)
<i>Cantharellus luteopunctatus</i>	Extremely rare	Symbiotic (ectomycorrhizal)
<i>Cantharellus microcibarius</i>	Extremely rare	Symbiotic (ectomycorrhizal)
<i>Cantharellus xanthocyaneus</i>	Extremely rare	Symbiotic

		(ectomycorrhizal)
<i>Cortinarius</i> sp1	Extremely rare	Symbiotic (ectomycorrhizal)
<i>Cortinarius</i> sp2	Extremely rare	Symbiotic (ectomycorrhizal)
<i>Craterellus cornucopioides</i>	Rare	Symbiotic (ectomycorrhizal)
<i>Hygrocybe</i> sp	Extremely rare	Saprotrophic
<i>Lactarius longipes</i>	Extremely rare	Symbiotic (ectomycorrhizal)
<i>Lactarius</i> sp	Very rare	Symbiotic (ectomycorrhizal)
<i>Termitomyces entolomoides</i>	Very rare	Symbiotic with termites
<i>Termitomyces fuliginosus</i>	Rare	Symbiotic with termites
<i>Termitomyces robustus</i>	Very rare	Symbiotic with termites

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

Refusal to transport oil necessary for the drying of Brazzaville specimens from a public transport bus to the destination. Hoping that there was a shortage of fuel, unfortunately, that in the village there was a shortage. To remedy this difficulty, we contacted a former colleague who was in Ouesso, a city that is more than 100 miles from where we were looking for and if he found to buy it from us. Then we negotiate with a personal vehicle which on the way or passing through the village where we were for the transport costs. This is how the shipment was made, and we received the fuel. The other difficulty encountered was the availability of drinking water which was very far from the village. For this purpose, we had decided to buy the drinking water which should be used for drinking and to fetch no-drinking water in the wells for washing and dishes.

4. Describe the involvement of local communities and how they have benefitted from the project.

Local communities participated in this project as informants and guides to guide us through their forest. Finally, a student in a course internship had also participated as an assistant and trainee for initiation to research and the collection of scientific data. Then we made available to her a part of the data that made it possible to write and support under the supervision Dr Ndolo Ebika S.T and my supervision. She had received a certificate that will improve her curriculum vitae. Apart from this certificate, all members involved in the activities of the field and laboratory benefited from a daily allowance to compensate for their time and energy devoted to the project.

5. Are there any plans to continue this work?

Given the climatic and ecological disturbances could influence the natural production of fungi, we plan to study the influence of biotic and abiotic parameters on the productivity of forest fungi for sustainable management of natural resources in our country. Thus, the impact of anthropogenic activities on fungi and their habitat. The in-depth documentation of this new species of *Cantharellus*.

6. How do you plan to share the results of your work with others?

The list of rare mushrooms and production of preliminary data that can be used in species conservation assessment for IUCN and KBA will be made available to the authorities in charge of conservation and the relevant programmes, such as the Ministry of Forest Economy and Environment as well as the international community. An article will be produced from the results of this project. The article will deal with the taxonomy of a species belonging to the genus *Cantharellus* sp collected in this mission assumed to be a new species. Another article on endangered fungi and their habitat. Mycotaxon will be targeted for submission of it.

7. Looking ahead, what do you feel are the important next steps?

The next important step will concern the expansion of this throughout the country for the knowledge of fungal diversity, especially in the rainy season which is the most favourable period for collecting fungi to obtain additional data to compile a preliminary red list of fungi harmonised with IUCN categories and criteria based on the presence of rare and threatened species richness, and mycological importance of habitat. As well as to propose important fungal areas in Republic of Congo. The second step will be the popularisation of the preliminary red list of fungi and awareness of the preservation of these rare fungi and their habitat.

8. Did you use The Rufford Foundation logo in any materials produced in relation to this project?? Did the Foundation receive any publicity during the course of your work?

The Rufford Foundation logo was used in LIKIBI MAKASSA Maelle's Jupcie end of training report to obtain her professional degree in forest science and technology and during her defense before the committee responsible for examining her scientific work. Likewise on the celebration of the International Day of Women and Girls of Science, edition 2024 which had as the theme days of sharing experiences and promoting the research achievements of young women scientists in Brazzaville (Prospectus).

9. Provide a full list of all the members of your team and their role in the project.

Full name	Function in the project	Locality	Role in the project
Juvey Mavéric WAWA	Principal Investigator	Brazzaville	Planning and supervision of the activities, training, execution of fieldwork in Park, Bomassa, Makao, Thanry and Brazzaville
Sydney Thony Ndolo Ebika	Supervisor	Brazzaville	Supervision of the activities, and training on Brahms and in laboratory
Maëlle Jupcie LIKIBI MAKASSA	Intern student	Brazzaville	Execution of fieldwork in Makao and Thanry
Christopha Atikani	Research assistant	Brazzaville	Updating data in Brahms
Gaston Loya	Informant and guide	Makao	Guide in the field
Essouka Mambaleme	Informant and guide	Makao	Guide in the field
Samedi Mossembo	Informant and guide	Makao	Guide in the field
Heritier Dzeka	Informant and guide	Makao	Guide in the field
Junior Mombale	Informant and guide	Makao	Guide in the field
Giscard Diambengo	Informant and guide	Makao	Guide in the field
Pierre Bote	Informant and guide	Makao	Guide in the field
Jean Mokata	Informant and guide	Makao	Guide in the field
Albert Makindo	Informant and guide	Makao	Guide in the field
Massimo	Informant and guide	Makao	Guide in the field

10. Any other comments?

On behalf of all the members who participated in this project, I would like to thank The Rufford Foundation for the invaluable and generous financial support for this first project. After the first application rejected in 2021 (36765-1) and finally in 2023 the grant was granted to us. This grant allowed us to visit some localities, collecting

mycological data that will contribute documenting macrofungal diversity and safeguard traditional knowledge of this study area. I will not be able to end without specifically thanking Jane Raymond for her availability for judicious discussions during this project via e-mails. It was an honor and real pleasure to have been financed by The Rufford Foundation and that through this background have also benefited from a positive experience. And I can't wait to continue in the next step.