

Final Project Evaluation Report

Your Details	
Full Name	Markéta Swiacká
Project Title	Market survey and population characteristics of three species of pangolins (Pholidota) in the Republic of the Congo
Application ID	24093-1
Grant Amount	£2800
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Date of this Report	24.7. 2019

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
Village survey around the Odzala-Kokoua NP (hunters, village dwellers)				In 2018, 387 questionnaires conducted within 65 villages.
Market survey around the Odzala-Kokoua NP (market traders)				In 2019, 50 questionnaires conducted within six towns (13 bushmeat markets visited and monitored in total).
Identification of population characteristics of the encountered pangolins in the study area				Altogether, we recorded 17 pangolins during the two data collection periods. On the basis of the limited number of the sampled pangolins, further research is recommended to carry out.
Collection of the pangolin samples and further genetic analysis				The first set of the samples was transported to the Czech Republic and analysis has started to be undertaken. Due to the delay in obtaining the CITES permissions, the second set of the samples will be transported in the upcoming weeks to the laboratory in the Czech Republic.
Increasing awareness about pangolins in the study area				The following activities were realized: spreading informative leaflets and pangolin stickers, movie projection, holding discussions.

2. Please explain any unforeseen difficulties that arose during the project and how these were tackled.

In 2018, the first data collection was postponed for several weeks due to the administrative problems with getting the research permission. Moreover, instead of the usage of a motorbike for transport among the villages situated around the Odzala-Kokoua NP, most of the time, we travelled by our own bicycles that were taken from the Czech Republic. Logistically, the area around the Odzala-Kokoua NP is remote with limited and expensive transport possibilities. That is why a combination of the bicycles and occasionally buses, taxis and motorbikes was the right decision at the end.

In 2019, the second data collection was challenging because of an unpredictable situation in the park caused by the conflict with the local communities. Based on it,

the villages located in the western periphery of the park could not be visited, and we collected data only from the eastern and northern periphery of the park. Additionally, this time, we have not obtained the CITES export permission to transport the pangolin samples to the Czech Republic and therefore, the samples will be taken to the laboratory in the upcoming weeks.

3. Briefly describe the three most important outcomes of your project.

A) The baseline information about three species of pangolins living in the region (*Phataginus tricuspis*, *Phataginus tetradactyla*, *Smutsia gigantea*) were established in terms of the general awareness of local people towards pangolins (species presence, prices of pangolins, etc.), hunting practices, identification of the trade with pangolins and perception of local communities to pangolins (related with the pangolin utilization in traditional African medicine, etc.) with regards to the independent factors (gender, age, ethnicity, education level and other characteristics of the respondents) that have strongly influenced the results of the research.

B) The main conservation threats were identified (traditional medicine, high bushmeat consumption, perception of local communities, illegal trade) together with the enforcement implementations.

C) Our findings proved the importance of the community-based research in the monitoring of pangolin populations. Indeed, the questionnaire survey was an effective and inexpensive strategy in providing the information about pangolin presence, trade dynamics, and hunting frequencies and supposed to be always the first step to demonstrate the occurrence of pangolins in the study area before using other research techniques.

All in-depth results may be found in the master's thesis "Market survey and population characteristics of three species of pangolins (*Pholidota*) in the Republic of the Congo" (Swiacká 2019).

4. Briefly describe the involvement of local communities and how they have benefited from the project.

Two local forestry students were directly involved in the running of the research. Their participation was a crucial element for the research since their responsibilities were predominantly dedicated to communication and establishment the trust with respondents. Furthermore, we conducted the education sessions with local communities consisting of the informative pangolin handouts and stickers distribution and projecting of movies to show to the village dwellers the importance of pangolins for the ecosystem.

5. Are there any plans to continue this work?

At the moment, the project coordinator, Markéta Swiacká, has just successfully ended the master's programme and now wants to start her PhD studies focused on the further market and community-based research of pangolins located to the other

Central African countries to target the illegal trade with pangolins in this whole region.

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

The research results have been continuously shared with several stakeholders. Firstly, the regular reporting of the results was performed to the management of the Odzala-Kokoua NP to target the best conservation efforts for the pangolin species. Secondly, the outcomes of the project have been shared and discussed with the members of the IUCN Pangolin Specialist Group. Additionally, the results were also shared with the other conservation organisations running mainly in the Congo, for example, Wildlife Conservation Society and PALF, or CITES office in the Czech Republic. And finally, the findings were used for the setting up of the master's thesis and several academic presentations, and furthermore, a few scientific articles will be produced in the near future based on the research results.

7. Timescale: Over what period was the grant used? How does this compare to the anticipated or actual length of the project?

The obtained grant has been used mainly during the fieldwork activities carried out between January and March 2019 (20.1.-9.3.2019), meaning the second data collection that was focused particularly on the market survey of pangolins (+ collection of samples, identification of population characteristics, education programme). The first fieldwork was conducted between May and June 2018 (3.5.-3.7. 2018.) thanks to the other co-funding.

8. Budget: Provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used. It is important that you retain the management accounts and all paid invoices relating to the project for at least 2 years as these may be required for inspection at our discretion.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Education programme	50	113	+63	Additional education materials produced – pangolin stickers, leaflets.
Permissions	65	0	-65	The CITES permissions supposed to be solved and paid in the upcoming weeks.
Research material	800	1,330	+530	Additional fieldwork materials had to be bought (a fieldwork computer for the education programme, bicycle equipment, etc.)

Donation to the park	100	0	-100	Instead of the donation to the park, I left my bicycle as a gift to the park for the uses of the park's management.
Research assistant	350	640	+290	Due to the demanding character of the data collection and requirement to have an English-speaking assistant in the research, the salary had to be raised (+ bonus included).
Medicine	70	50	-20	
Accommodation, food and transport	1,200	1,135	-65	Fewer days spent in the field because of the reasons beyond our control.
Visa	165	184	+19	Higher traveling costs to Berlin.
TOTAL	2,800	3,452	+652	

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

It is an important step to continue the market survey and investigations of illegal activities to tackle the broader scope. There is a need for the long-term and in-depth monitoring of bushmeat markets, evaluating of pangolin supply and customer demand. Continuing in data collection of population variables and genetic samples is a matter of course. In addition, standard monitoring techniques may be applied in the Odzala Kokoua NP as well for example, camera trapping and linear transects with the utilization of the traditional knowledge of local hunters.

The success of education activities should be monitored and thoroughly evaluated. In my opinion, explanatory educative programmes would be of great importance in the study area. Understanding of the biology of the species and general ecosystem principles would be beneficial for the whole wildlife community and animal species.

Apart from the law reinforcement and further in-depth investigations, the other alternative sources of proteins must be developed. As pangolin meat is favoured and considered a delicacy by the local communities, this bushmeat consumption is a big threat for the pangolin populations. Therefore, a clear understanding of the consumers and their preferences must be directed, and alternative agriculture and livelihood sources developed.

10. 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?

So far, the logo has been used in all fieldwork reports that were conducted for the management of the Odzala-Kokoua NP and development and defence of the master's thesis at the Faculty of Tropical AgriSciences, Czech University of Life Sciences Prague. Moreover, the Rufford Foundation has been mentioned within the

acknowledgment part of the presentations for the International Pangolin Symposium in Chicago 2018 and the Global Biodiversity Conservation Conference in Prague 2018, and within the university articles. The Rufford Foundation logo has been also presented on printed leaflets that were produced for the fieldwork activities to increase awareness about pangolins in the study region.

11. Please provide a full list of all the members of your team and briefly what was their role in the project.

Ing. Markéta Swiacká	Project coordinator
Dr. Torsten Bohm	Fieldwork consultant, research manager of the Odzala-Kokoua NP
Ing. Darcy Bkindou	Fieldwork assistant (first data collection in 2018), Marien Ngouabi University in Brazzaville
Ing. Vitel Loubassou	Fieldwork assistant (second data collection in 2019), Marien Ngouabi University in Brazzaville
Dr. Karolína Brandlová	Thesis supervisor, Faculty of Tropical AgriSciences
Dr. Francisco Ceacero Herrador	Thesis consultant, Faculty of Tropical AgriSciences
Dr. Barbora Černá Bolfíková	Genetic consultant, Faculty of Tropical AgriSciences
BSc. Iva Bernáthová	Master's student responsible for the genetic analysis of the samples, Faculty of Tropical AgriSciences

12. Any other comments?

I would like to express huge gratitude to the Rufford Foundation for generously providing me the funding support. Without it, I would not be able to conduct most of this work and achieve the results that I believe will be crucial in the ongoing conservation activities of the pangolin populations in the Republic of the Congo as well as in other parts of the world.

Market survey and population characteristics of three species of pangolins (*Pholidota*) in the Republic of the Congo

Author: Markét Swiacká



Figure 1. Scales of the white-bellied pangolin (*Phataginus tricuspis*) offered at the traditional medicine stall in Brazzaville (21.1.2019)



Figure 2. A female of the white-bellied pangolin (*Phataginus tricuspis*) offered at the bushmeat market in Ouesso (3.2.)



Figure 3. Taking measurements of the white-bellied pangolin (*Phataginus tricuspis*) at the port market in Ouesso (4.2.)



Figure 4. A male of the white-bellied pangolin (*Phataginus tricuspis*) offered at the bushmeat market in Ouesso (18.2.)



Figure 5. Increasing awareness about pangolins in Mileleké (20.2.)



Figure 6. Getting scales of the white-bellied pangolin (*Phataginus tricuspis*) in Ibonga (21.2.)



Figure 7. Increasing awareness about pangolins in DVD (22.2.)



Figure 8. Projecting videos about pangolins in Goa (26.2.)



Figure 9. Projecting videos about pangolins in Batekock (28.2.)



Figure 10. Increasing awareness about pangolins in Dibedjil (1.3.)



Figure 11. Obtaining genetic sample of the white-bellied pangolin (*Phataginus tricuspis*) in Sangha (2.3.)



Figure 12. Increasing awareness about pangolins in Zoulaboth (2.3.)



Figure 13. Scales of the three species of pangolins (*Phataginus tricuspis*, *Phataginus tetradactyla*, *Smutsia gigantea*) in the Republic of the Congo (8.3.)



Figure 14. Research team in the end of the fieldwork in Brazzaville (8.3.)