

Final Evaluation Report

Your Details	
Full Name	Markus André Roesch
Project Title	Upscaling efforts for the long-term monitoring and conservation of the Critically Endangered Seychelles giant bronze gecko
Application ID	41346-1
Date of this Report	07/03/2025

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
Identify optimal survey method for <i>Ailuronyx trachygaster</i>			X	<p>This objective was achieved through Activity 1 (Trialling survey methods and expanding monitoring area). Involving the SIF Praslin research team, we tested three different survey methods in Vallée de Mai: distance transects, area searches, and path transects. We evaluated detections of <i>A. trachygaster</i> to determine the optimal survey method balancing detection effectiveness and effort. Detection rates were 0.13, 0.83, and 0.98 geckos/hour, respectively. We found that path transect surveys were the most effective. This approach also required no special setup, making it the easiest to use. As a result, we adopted path transects as the optimal method for the long-term monitoring.</p>
Initiate long-term monitoring of <i>Ailuronyx trachygaster</i>			X	<p>This objective was achieved through Activity 2 (initiating long-term monitoring) and Activity 4 (Boosting capacity for long-term monitoring). Building on the path transect survey, we implemented monitoring in all three SIF managed sites, Fond Ferdinand, Fond Peper, and Vallée de Mai, collecting seasonal data on <i>A. trachygaster</i> and other arboreal</p>

				lizards. We also provided hands-on training for 12 SIF Praslin research staff, enhancing survey techniques, species identification, and data accuracy, particularly for distinguishing Seychelles' three bronze gecko species, <i>A. seychellensis</i> , <i>A. tachyscopaeus</i> and <i>A. trachygaster</i> .
PIT-tagging of geckos			X	This objective was achieved through Activity 3 (PIT-tagging of geckos) and Activity 4 (boosting capacity for long-term monitoring). A total of 133 geckos were PIT-tagged across the three sites. Notably, two individuals first tagged in 2014 were recaptured, showing minimal growth over 10 years, confirming the species' longevity. Newly tagged juveniles will provide crucial growth rate and lifespan data. The SIF Praslin research team was trained in gecko handling, morphometric measurements, tissue sampling, and PIT-tagging, ensuring capacity for long-term demographic studies.
Raise awareness on <i>Ailuronyx trachygaster</i> status and conservation			X	This objective was achieved through Activity 5 (raising awareness on <i>A. trachygaster</i> status and conservation). We promoted <i>A. trachygaster</i> conservation through three social media posts (Facebook/Instagram) and three newsletter articles shared to the wider public by project partner SIF. Preliminary results of the project were presented to the SIF board, Seychelles Ministry of Environment and at the Seychelles Endemic Amphibian and Reptile Symposium (January 2025), latter event launched IUCN Red and Green List assessments

				for Seychelles endemic herpetofauna, where we contributed to all assessments. The research results are currently being written up and will make up one chapter of my PhD thesis.
--	--	--	--	--

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

a). Kickstarting long-term monitoring of *Ailuronyx trachygaster*. We successfully implemented a new, efficient monitoring method for *A. trachygaster*, allowing for standardised, repeatable surveys across multiple sites. By adopting path transect surveys, we improved detection rates and data collection efficiency, ensuring reliable long-term monitoring of this rare gecko. This approach will help track population trends, habitat preferences, and seasonal variations, providing crucial insights for conservation planning.

b). Building strong capacity for local conservationists. A key achievement was training 12 SIF Praslin research staff in the new path transect monitoring technique, species identification, and data collection. Hands-on training in PIT-tagging, morphometric measurements, and tissue sampling has equipped the team with essential skills for long-term studies on Seychelles' endemic reptiles. By strengthening local expertise, we have ensured that conservation efforts can continue independently and sustainably.

c). Seychelles endemic amphibian and reptile symposium and IUCN Red/Green assessment workshop. Our research played an integral role in the Seychelles Endemic Amphibian and Reptile Symposium (January 2025), where we shared our findings with scientists, conservationists, and policymakers. This event also launched new IUCN Red and Green List assessments for Seychelles' reptiles and amphibians. Our project provided critical data on *A. trachygaster* and other species, helping to guide future conservation priorities for these endemic reptiles.

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

The project start was delayed due to administrative issues in obtaining a work permit for fieldwork. To compensate for lost time, we had to limit the survey methodology trials to a single site, Vallée de Mai, rather than testing across all three locations as initially planned. This allowed us to still gather valuable data while ensuring the project remained on track. Despite this challenge, we successfully identified the most efficient survey method, which has since been expanded to additional sites.

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

A key aspect of the project was training 12 SIF Praslin research staff in the new survey methodology and species identification. These conservationists are now equipped to independently conduct reptile surveys, collect high-quality data, and train others,

ensuring long-term benefits beyond this project. Their improved field skills contribute to better monitoring of Seychelles' endemic reptiles, strengthening local conservation efforts.

5. Are there any plans to continue this work?

Yes, SIF has committed to continuing the new survey method across all three sites, Vallée de Mai, Fond Ferdinand, and Fond Peper, as part of a long-term monitoring programme for arboreal lizards, including *A. trachygaster*. This will provide ongoing data to assess population trends, habitat use, and conservation needs.

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

We have already presented preliminary findings to key stakeholders, including the SIF Board, the Seychelles Ministry of Environment, and at the Seychelles Endemic Amphibian and Reptile Symposium. We are now conducting a detailed data analysis and aim to publish our results in a peer-reviewed scientific journal. Once published, we will further share the findings with government agencies, conservation organizations, and other researchers to support informed decision-making.

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

- Expanding long-term monitoring: Ensuring the continuation of surveys at all three sites to track population changes and habitat dynamics.
- Initiating Species Action Plan: Ensuring the contribution of our data for the SAP for *A. trachygaster*.

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?

Yes, the Rufford Foundation logo was used in all our presentations, and the Foundation was acknowledged in our SIF Newsletter articles.

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

James Harris – Thesis supervisor. Assisted with funding acquisition. Assisted with permit acquisition. Assisted with the analysis and write-up of results.

Nancy Bunbury – Thesis co-supervisor. Director of research and conservation at SIF. Assisted with funding acquisition. Assisted with permit acquisition. Assisted with the analysis and write-up of results.

Christopher Kaiser-Bunbury – Thesis co-supervisor. Assisted with funding acquisition. Assisted with permit acquisition. Assisted with the analysis and write-up of results.

Frauke Fleischer-Dogley – CEO at SIF. Assisted with logistics related to fieldwork. Assisted with funding acquisition. Assisted with permit acquisition.

Annabelle Constance – Head of research and conservation at SIF. Assisted with logistics related to fieldwork.

Marc Jean-Baptiste – Praslin Site Manager. Assisted with logistics related to fieldwork.

Jessica Constance – Praslin research coordinator. Assisted with logistics related to fieldwork.

Maria Monthy – Assistant Praslin research coordinator. Assisted with logistics related to fieldwork. Assisted with the fieldwork activities.

Christian Laporte – Conservation ranger. Assisted with the fieldwork activities.

Ella Nancy – Conservation officer. Assisted with the fieldwork activities.

Eltina Dorizo – Conservation ranger. Assisted with the fieldwork activities.

Gilbert Laure – Conservation ranger. Assisted with the fieldwork activities.

Monica Griffith – Conservation officer. Assisted with fieldwork planning and design.

Terance Payet – Conservation officer. Assisted with the fieldwork activities.

Walter Brutus – Conservation ranger. Assisted with the fieldwork activities.

Berno Nourrice – Conservation ranger. Assisted with the fieldwork activities.

Clarisha Duval – Conservation ranger. Assisted with the fieldwork activities.

Shanone Hibonne – Conservation officer. Assisted with the fieldwork activities.

Jasmine Kahn – Conservation officer. Assisted with the fieldwork activities.

Ricardo Valmont – Conservation ranger. Assisted with the fieldwork activities.

10. Any other comments?

Seychelles Islands Foundation Newsletter January 2024: <https://mailchi.mp/sif.sc/sif-newsletter-january-17632833?e=6b85f28bfa>

Seychelles Islands Foundation Newsletter August 2024: <https://mailchi.mp/sif.sc/sif-newsletter-august-17779234?e=6b85f28bfa>

Seychelles Islands Foundation Newsletter Highlights 2024: <https://mailchi.mp/sif.sc/sif-highlights24-18251314?e=6b85f28bfa>

Seychelles Islands Foundation Newsletter January 2025: <https://mailchi.mp/sif.sc/sif-newsletter-january-18252326?e=6b85f28bfa>