Final Evaluation Report

We ask all grant recipients to complete a project evaluation, which helps us gauge the success of your project. This must be sent in **MS Word and not PDF format**. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please DO NOT fill in and submit this form until the project has been completed.

Complete the form in English. Note that the information may be edited before posting on our website.

Please email this report to jane@rufford.org.

Your Details	
Full Name	Daudi Onesphory Damas
Project Title	A study on the ecological aspect of the Pemba Green-pigeon (*Treron pembaensis*) in the Northern Pemba Island, Zanzibar.
Application ID	42464-1
Date of this Report	11th November 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
Inception meeting at the government level, Department of Forest and Natural Resources, Zanzibar, and the Village level.				Permits and full support from the government, Forest management and villages. The meetings to introduce the project were conducted at the government level of forest management (ie. Ngezi Nature Forest Reserve-NNFR and Msitu Mkuu forest reserve-MMFR) and the village level
Data collection on the ecological aspects of the Pemba green pigeon				All expected data were collected. Point count locations overlapped with the vegetation sampling plot, enabling concurrent collection of bird and vegetation data for enhanced comparability. A total of 60-point counts for birds were conducted in NNFR, 29 points within the forest and 31 points outside the forest, while 32 points were conducted in MMFR, with 15 inside the forest and 17 outside. Vegetation data were collected from 44 plots (29 in NNFR, 15 in MMFR), each measuring 20 × 20 m for large trees and subplots within each plot measuring 2 × 5 m for shrubs and young trees. Parameters recorded include canopy cover, tree density, tree

				height, diameter at breast height (DBH), and density of known feeding and perching tree species. Plots outside reserves were excluded from quantitative vegetation analysis due to severe degradation and irregular tree distribution. However, the feeding and perching trees encountered outside the forest were recorded. A total of 68 individual pigeons were recorded during the study. Vegetation surveys documented 55 plant species, of which nine were identified as feeding or perching trees, including five previously undocumented feeding plant species. I conducted a basic threat assessment, which identified illegal tree cutting for timber, charcoal production, and firewood. Encroachment and vegetation clearing for agricultural activities were also observed, with cultivation occurring within and along the forest edges. In addition, heavy rock extraction was noted along the edge of Msitu Mkuu Forest Reserve.
Publishing the work on the ecology of the Pemba Green Pigeon				The information on data collection activities was successfully published in the Kolokolo newsletter (issue No. 17) through the Nature Tanzania website. A draft manuscript has been prepared and is being examined by all authors before it is submitted

		[redacted]		later this month to the Ostrich: African Journal of Ornithology A poster presenting the results of the study will be showcased at the 15th TAWIRI-International Scientific Conference in December 2025.

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

a) The project generated new ecological knowledge on the Pemba Green Pigeon (*Treron pembaensis*), including the identification of previously unreported feeding plant species (Five species) and perching plant species (three species) that are critical for its survival. This new information enhances the understanding of the species' habitat requirements and feeding ecology, which had previously been poorly documented.

b) The findings confirmed the strong dependency of the Pemba Green Pigeon on the forest habitats and the availability of key feeding plants. The species showed higher abundance in undisturbed forest areas with dense canopies and mature trees, highlighting the need for effective habitat protection and restoration as a central component of conservation and management strategies.

c) The study established a baseline for long-term monitoring of habitat quality and pigeon population trends on Pemba Island. The data and analytical framework developed, linking vegetation structure, plant diversity, and pigeon abundance, will serve as a reference point for future ecological assessments, population monitoring, and conservation planning for this endemic and threatened species.

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

A few unforeseen challenges arose during the project. Occasional unexpected rainfall disrupted field activities by limiting access to certain sampling sites. To mitigate this, the team rescheduled fieldwork and used alternative routes, ensuring that data collection continued smoothly without compromising data quality. Additionally, there was a delay in obtaining the research permit from the government; however, the issue was resolved and the permit was successfully secured.

Financial adjustments were also necessary. The original budget did not include costs for hiring motorcycles and vehicles, fuel expenses, the 10% institutional overhead for the receiving organization, or bank charges. Following the earlier recommendation to reduce the equipment budget and considering that essential field equipment

was later provided through the Ideal Wild Grant (Grant ID: DAMATANZ1124-00) the reallocated funds were used to cover these logistical and operational costs, as well as to accommodate the increased number of team members involved in the project.

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

Local communities played an active role in the project, primarily through their engagement as field local guides and by providing transportation services (motorbikes and vehicles) during data collection activities. Their participation not only generated direct economic benefits through service payments but also enhanced their awareness and appreciation of local biodiversity. Many community members expressed surprise upon learning that their area supports several endemic bird species, including the Pemba Green Pigeon. This increased awareness to those involved has fostered a sense of pride and responsibility toward conserving their natural heritage.

5. Are there any plans to continue this work?

Yes. There are plans to continue this work in response to the observed threats and the urgent need to conserve critical habitats that support the Pemba Green Pigeon and other endemic species on the island. The continuation will focus on habitat restoration, assessing the whole population and range of the species in Pemba (to establish baseline information for monitoring their population trend), strengthening community-based conservation initiatives and awareness raising.

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

The project results will be disseminated through multiple platforms. A newsletter will be shared via Nature Tanzania's communication channels to reach local and national stakeholders. In addition, a scientific manuscript has been prepared for submission to the Ostrich Journal of African Ornithology. The study findings will also be presented at the Tanzania Wildlife Research Institute (TAWIRI) International Scientific Conference in December 2025, ensuring wide visibility among researchers, policymakers and conservation practitioners. Following publication of the manuscript, a final report will be submitted to the forest management (submission of the final report is mandatory, as it is a requirement of the research permit issued).

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

The key next steps include:

i. Expanding the study area to cover the entire Pemba Island to establish the full distribution range and habitat use of the Pemba Green Pigeon. (The baseline information is really lacking in the literature.)

ii. Enhancing community awareness to promote understanding of the ecological uniqueness of Pemba and the importance of conserving its habitats.
iii. Promoting alternative livelihood initiatives such as beekeeping to reduce dependence on forest resources and mitigate human pressure on natural habitats.
iv. Implementing tree planting campaigns in village lands and forest areas, with a focus on native feeding and perching plant species, to restore degraded habitats and enhance landscape connectivity. (**Note:** the island has other forests, such as the Ras Kiuyu proposed forest Reserve and 13 Community forests)

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 on a project poster produced for the inception meeting, which highlighted the study objectives and the known population trends of the Pemba Green Pigeon. Additionally, the Foundation received further visibility through the Kolokolo newsletter, published by Nature Tanzania, where project activities and acknowledgments were shared with a wider audience**.** The logo will also be used in the poster that will be showcased at the TAWIRI international scientific conference.

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

- Daudi Onesphory Damas – Project Leader; coordinated all project activities, supervised fieldwork, and led data analysis and report preparation.
- Hijja Khamis Mohammed – Student trainee; participated in field data collection and learned ecological data collection techniques.
- Raymond Lembusel – Botanist from the University of Dar es Salaam; assisted in identifying plant species and contributed to vegetation data collection.
- Juma Hamis Khammad – Local guide; provided expertise on Pemba Green Pigeon habitats and assisted in locating key observation sites.
- Kombo Hamad Kombo (Tourism Officer, Ngezi Nature Forest Reserve) – Supported field activities and contributed knowledge on local flora and fauna, particularly feeding and perching tree identification.
- Edwin Kamugisha and Edigar Apolinary, experienced field assistants from Nature Tanzania, contributed to bird identification, data collection (both birds and vegetation), data entry, and preliminary analysis.
- Khatibu Hamadi – Driver; provided logistical support and facilitated transport during field operations.
- Dr. Jasson John – Project supervisor and scientific advisor; provided guidance throughout data collection, analysis, and manuscript preparation.

10. Any other comments?

Although the project primarily focused on the ecological aspects of the Pemba Green Pigeon, additional data were also collected for other endemic bird species, including the Pemba Sunbird and the Pemba White-eye. These data will be analyzed and published separately. The collection of this supplementary information did not affect the primary objectives of the project but rather added value by broadening the ecological understanding of Pemba's endemic avifauna.

ANNEX – Financial Report

[Intentionally removed]