

## Final Evaluation Report

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Your Details	
<b>Full Name</b>	Hugo Miguel Venceslau Carvalho e Silva
<b>Project Title</b>	Assessment of the distribution of two sympatric rail species in relation to habitat composition and disturbance on Santa Cruz Island, Galapagos
<b>Application ID</b>	36065-1
<b>Date of this Report</b>	10/12/2022

**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
Estimate Galápagos rail ( <i>Laterallus spilonota</i> ) population status.				For Media Luna site and comparing with 2007, we found a significant increase in Galápagos rail detection as well as on its abundance.
Assessment of vegetation influence in Galápagos rail distribution.				We found a positive correlation between rail abundance and vegetation density. However, we cannot predict which factors affect the species distribution and abundance.
First insights of the possible interaction between Galápagos rail and paint-billed crane ( <i>Mustelirallus erythropus</i> ).				We cannot predict the abundance of both species based only on vegetation variables with our statistical models. However, we can say Galápagos rail seems to be restricted to highland habitats with native and dense vegetation and paint-billed crane seems to be less dependent on native or dense vegetation and less impacted by alien species.
Long-term monitoring plan of Galápagos rail, proposed by Gibbs <i>et al.</i> , 2003,				We designed a long-term monitoring plan for 10 years, which will be translated in Spanish and delivered to Charles Darwin Foundation and continued to be implemented in 2023.

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

The update of the Galápagos rail's population status was a very important outcome of our project as no studies on this endemic species had been carried out since 2007. Our data confirm that the vegetation management done by Galapagos National Park Directorate was very efficient and led to a stabilisation of the Galápagos rail population. Our data also showed that vegetation management needs to be continued and showed the potential threat of another invasive plant, blackberry, which has increased alarmingly in the habitat of the Galapagos rail. We also created a long-term monitoring plan that will ensure future monitoring of the species in the next 10 years. Finally, the first insights about the possible interactions between the Galápagos rail and the paint-billed crane were the first step to understand in a comprehensive way which factors affect both species distribution, helping the development of proper management plans in the future.

We had a knowledge gap on the Galápagos rail population status and with this work it was possible to understand how the population has changed over the last 15 years. It showed that previous management was successful and showed the importance of continuing habitat management in this area.

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

Everything on the project went as we planned.

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

Local volunteers participated in the fieldwork, learning about the species and the methods we used to study it. This experience allowed them to better understand this endemic species and the importance of monitoring plans to assess the evolution of the bird populations on the islands. We shared information about the species with local farmers, helping them to understand which species are on their farms and how can they help in the conservation of the Galápagos rail.

**5. Are there any plans to continue this work?**

A long-term monitoring programme was started and described in the final thesis with the aim to evaluate the species over the next 10 years. This plan will be implemented by the Landbird Conservation Program of the Charles Darwin Foundation, but it requires funds, researchers and volunteers which are only guaranteed for the following year.

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

The results obtained during field work are part of the main researcher thesis, which was presented in November 2022. We are also preparing a paper with the data collected of both species, to publish during 2023. During this project, and together with the communication department of the Charles Darwin Foundation, we created a flyer about the Galápagos rail, and we shared it with the local community and tourists.

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

Implement the long-term monitoring programme over the next 10 years to follow the population trends and put in action conservation measures if a strong decrease in population is detected.

Start a new control programme of the invasive, red-barked quinine tree due to the presence of saplings on Media Luna Study site.

Control the expanding invasive hill blackberry before it spreads even more in the Miconia zone, as it might impact the Galápagos rail's population and the

Galapagos petrel population. Evaluate if this invasive species has impact on the species.

Develop studies about the biology, ecology, phylogeny, vocal behaviour, and territorial interactions of the species.

Finally, share the information about both species among the local community as they are not very well known for the people.

**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 a small report we did in February, in a flyer prepared by the communication team of the Charles Darwin Foundation and in the final thesis of the main researcher. The main researcher shared information about The Rufford Foundation on its personal Facebook profile and the University of Évora also shared it on its social networks.

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

**Hugo Silva** – main researcher of the project. Responsible for the field work, methods developing, data treatment and reports about the project.

**Birgit Fessl** – Coordinator of main researcher's thesis, guiding every detail about the project.

**João Eduardo Rabaça** - Coordinator of main researcher's thesis, helping with bureaucracy between the Charles Darwin Foundation and the University of Évora

**10. Any other comments?**

