
The world's largest rewilded tortoise herd and its island ecosystem: The Frégate Island experience

Richard Baxter*^{2,1}

²Fregate Island Private (FIP) – Fregate Island Private, Seychelles, Seychelles

¹University of Zürich (UZH) – Rämistrasse 71CH-8006 Zürich, Switzerland

Abstract

Megaherbivore reintroductions are high in risk and uncertainty. Environmental managers are expected to mitigate against these through scientific research, and adaptive management of project goals and expectations. Often, ecosystems requiring restoration are on private land with established human activities. I present how an initially small reintroduction project with Aldabra giant tortoises (*Aldabrachelys gigantea*) on Frégate Island, a 220 hectare private eco-resort island in the Seychelles, has grown into the world's largest rewilded tortoise herd. I present and discuss the impact of the tortoises on the island's ecosystem, the challenges that are associated with managing the herd, and how to maximise the impact of the herd in ongoing habitat restoration projects. From a small founder population of 40 individuals, Frégate Island now boasts more than 3500 free roaming Aldabra giant tortoises. This was achieved through habitat restoration, protection from human influence, and additional tortoise reintroductions. The activities of the self-sustaining, free-roaming tortoise herd have created heterogeneous habitats over large areas of the island, creating a wilder ecosystem and reinforcing key ecosystem functions, such as seed dispersal and nutrient cycling, which directly supports a number of endemic Seychelles bird and insect species. However, this key component of rewilding projects, is carried out within the boundaries of balancing business operation requirements. On the island, human influence is limited, but allowing resort guests to interact with the tortoises in a wild ecosystem is providing an excellent opportunity to demonstrate rewilding initiatives and restoration outcomes important for managing stakeholder expectations. On Frégate Island, the rewilded tortoise herd is low-risk, cost effective, with minimal social challenges, although the current high density of the tortoise herd requires active management through translocations to other rewilding projects. These projects benefit from understanding the long-term impacts of island rewilding with tortoises as observed on Frégate Island.

Keywords: conservation, giant tortoise, island, restoration, rewilding

*Speaker