

Bonaire: BEST project Roi Sango

By Roos van Rijen (Echo)

Dry forests are among the most threatened ecosystems on the earth today and yet they receive little to no protection and remain poorly understood, largely due to a lack of research. Yet, they account for about half of the world's forests (CIFOR, 2014). The degradation of dry forest habitats has far reaching implications. The loss of large, mature trees means less rainfall will be retained in the environment. Drier, more compacted topsoil causes surface water run-off, which leads to erosion and the loss of nutrients on land and which increases the amount of sediment and nutrients running off into the sea, stressing and killing surrounding coral reefs. All of these factors lead to decreased biodiversity and lowered ecosystem productivity and value.

On Bonaire, the dry forest habitat has undergone dramatic changes over the last two and a half centuries (De Freitas et al. 2005). The impact of historic tree felling and introduced invasive herbivores (donkeys and goats) have prevented the regeneration of many native plant species (Coblentz 1980; Coolen 2015). Today, most of Bonaire's dry forest ecosystem is dominated by just three to five species of tree. These forests are home to threatened and endangered plants and animals and even endemics like the Yellow-shouldered Amazon parrot (*Amazona barbadensis*).

Forest degradation is believed to be one of the factors driving Yellow-shouldered Amazon parrots (IUCN-Vulnerable) to forage food in urban areas, which leads to conflict with local fruit growers and reduces survival (Williams 2009). In order to protect and restore critical dry forest environments it is necessary to first exclude the herbivores and then reintroduce through selective planting of native trees which could be expected to be found in those areas.

Starting in 2016, Echo – a small nonprofit conservation organization dedicated to protecting the Yellow-shouldered Amazon parrot – has been working to restore parts of Bonaire's dry forest including a site with a unique canyon and part of a large watershed called Roi Sango, which is an important natural heritage site, recognized for its biodiversity value. This work is being funded by the EU BEST 2.0 Programme. Roi Sango was first fenced and all free-roaming herbivores were removed before Echo began planting reintroduced native trees. This project will provide an important link within a corridor of reforestation areas that Echo is creating with the support and funding of the Bonaire government. This site also contains a walking trail established through another local government- funded rural-development project known as "POP" (agricultural development plan) and it will connect to other walking trails.

Echo is committed to the conservation and restoration of dry forests on Bonaire through protection of these fragile ecosystems and watersheds and by promoting visitation to dry forests as important bird areas and unique landscapes. By planting a total of 1.000 rare native tree species and extending the walking trails at Roi Sango, Echo hopes to restore the dry forest ecosystem and offer the possibility for everyone to participate in these reforestation efforts. Ultimately reforestation is all about providing an environment where the island's growing population of the Yellow-shouldered Amazon parrot (*Amazona barbadensis*) can thrive on Bonaire.



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