

Community-Led Monitoring of Threatened Species in The Dominican Republic

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Introduction

- Since 1996, Grupo Jaragua (GJ) has been conducting wildlife monitoring studies, first in Jaragua National Park, and later expanding to the Jaragua-Enriquillo Biosphere Reserve (which includes Jaragua NP).
- The Reserve is a refuge of many threatened species included in the IUCN Red List and now the Dominican Republic's Red List, many suffering important threats.
- However, basic biological information on distribution range, threats, seasonality of reproduction and reproductive success were lacking for adequate management.
- Most of the species were sporadically monitored or on the short term by authorities or foreign researchers / projects.
- Lack of systematization or consistency in studies.
- Little local capacity building.



Figure 1. Map showing the study area, Jaragua-Bahoruco-Enriquillo UNESCO Biosphere Reserve (orange line) and its core areas (green line)

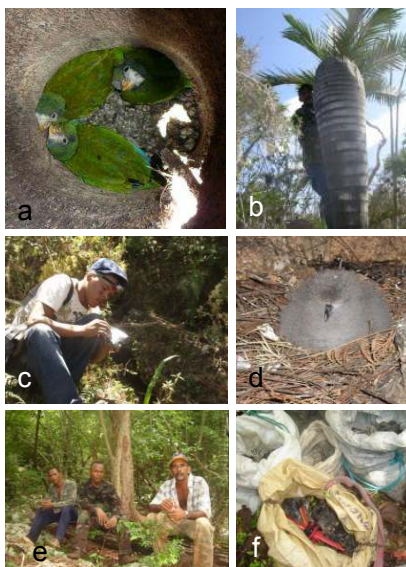


Figure 2. Views of bird monitoring work involving locals: a) and b) Hispaniolan parrot (*Amazona ventralis*), c and d) Black capped petrel (*Pterodroma hatitata*) nests, e and f) White crowned pigeon (*Patagioenas leucocephala*).

Methods

Sea turtles

The first of the community monitoring programs was started in 1996 to monitor hawksbill turtles (*Eretmochelys imbricata*, critically endangered) and green turtles (*Chelonia mydas*, endangered) in high density feeding areas discovered in Western Jaragua National park. Turtles are captured by experienced skin divers (local fishers), measured, tagged, and released. In 2006 this program was expanded to include sea turtle nesting areas of Jaragua NP (and in 2007 Saona Island, in del Este National Park). Each week during the peak nesting season, park rangers and community volunteers verify and count nests, as well as the success of hatched nests. Some nests are relocated to safer sites (due to human predation).

Ricord's iguana

The program to define the distribution range and critical nesting areas of Ricord's iguana (*Cyclura ricordi*, critically endangered) was established in 2003 in the Los Olivares area near Pedernales, in Jaragua NP. Since 2004 the main nesting areas there have been monitored with the help of locals. This includes nest counts, location and success. In 2009, the work was expanded to the south area of Enriquillo Lake, involving local youths from Duvergé and Vengón a Ver. These volunteers monitor forest cuts (for charcoal making), iguana traps, and direct take of iguanas from their dens. In 2010, community volunteers of OJAA (youth organisation from Anse a Pitres, Haiti) were also involved with Ricord's iguana monitoring there.

Rhinoceros iguana

In 2010, with the help of local assistants, we started a program on telemetry of rhinoceros iguana (*Cyclura cornuta*, vulnerable) hatchlings, to study their dispersal, behaviour, and predation.

Hispaniolan hutia and Solenodon

Since 2004, local field assistants have helped in defining the distribution areas for these two endangered mammals (*Solenodon paradoxus* and *Plagiodontia aedium*) and setting up infrared, motion activated camera traps at their den entrances. This has served to study their activity patterns, interactions with other animals, and their threats in the area of Fondo Paradi, Jaragua NP.

White-crowned pigeon

The vulnerable White-crowned pigeon makes nesting aggregations that are targeted by hunters and local persons for food (for humans and pigs). During the nesting season in July, since 2007 we have been monitoring with local assistants the location and threats of these aggregations in Jaragua NP and nearby areas.

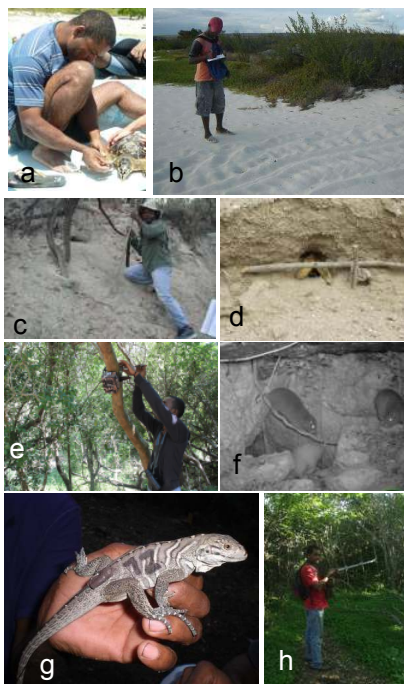


Figure 3. Views of monitoring work of various threatened species involving local communities. A) and b) sea turtles in feeding and nesting areas; c and d) Ricord's iguana dens and trap removal, e and f) Camera trapping for terrestrial mammals (*Solenodon paradoxus* and *Plagiodontia aedium*) and g) and h) Telemetry studies of Rhinoceros iguana (*Cyclura cornuta*)

Results and Discussion

• Grupo Jaragua's community-led monitoring programs include some of the longest running and most successful species monitoring programs in the Dominican Republic.

• The key to their success has been the high motivation of Grupo Jaraguas staff and local assistants, and a good monitoring design, with realistic goals, and appropriate technology.

• After an initial training phase, residents have become expert in the biology of certain species and the use of different monitoring technologies and techniques.

• The continued presence of locals in the general areas where these species occur, has helped to mitigate and understand threats.

• Also, costs have been reduced by having well-trained assistants nearby the study area.

• The mere presence of observers in many sites where predation pressure is high, has helped reduced this pressure (for example in leatherback and iguana nests, see Figure 4).

• However, this presence has not proven effective in protecting highly valued species (particularly the Hispaniolan parrot) which may require the involvement of authorities, as their market value is very high.

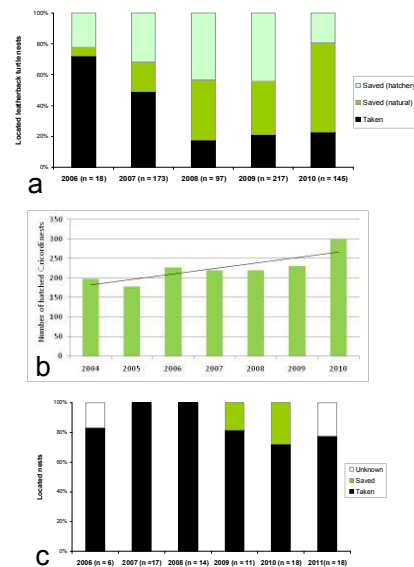


Figure 4. Measuring success of community monitoring in Jaragua NP: a) on predation of leatherback nests, b) number of hatched Ricord's iguana nests in Los Olivares, and c) Hispaniolan parrot nests in Sabana de Algodón.

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