

# Survey of *Amazona imperialis* on the Island of Dominica

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## ABSTRACT:

Dominica is home to two extant, endemic parrot species, the Imperial or Sisserou Parrot (*Amazona imperialis*) and the Red-necked or Jaco Parrot (*Amazona arausiaca*). Surveys are currently underway to examine the Imperial's population status. Two trips were taken to collect GPS points and note the locations that Imperial Parrots were heard and/or spotted. On the first trip 5 points were marked with 4 parrots vocalizing and spotting 2. On the second trip there were 3 points marked with 4 vocalizations and 1 sighting. Surveys will continue to be performed in order to determine the status of Imperial Parrots on Dominica.

## INTRODUCTION:

Six parrots of the genus *Amazona* inhabit the eastern Caribbean with four species in the Lesser Antilles, each occupying a single island (Evans, 1991). Dominica, also known as the Nature Island of the Caribbean, is home to two extant, endemic parrots, the Imperial or Sisserou Parrot (*Amazona imperialis*) and the Red-necked or Jaco Parrot (*Amazona arausiaca*). Rare Species Conservation Foundation (RSCF) has partnered with the Government of Dominica to help create the Morne Diablotin National Park, built specifically around the Dominica's National Bird, the Imperial Parrot (Forestry, Wildlife and Parks Division, Dominica, 2009). The rainforest on the northern most slope of Morne Diablotin in Dominica is now the last refuge of the Imperial parrot (Collar & Juniper, Unknown).

Locally, the Imperial is known as the Sisserou and is the largest member of the genus *Amazona*, growing to be about 45 centimeters (Minarcik, 2010). They have very distinct coloration with a deep green back, purple head, neck and under-parts. The call is

moderate and sounds similar to a trumpet. Imperials are the most rare species in *Amazona* due to significant habitat loss or damage. They live in mature forests at an elevation of 2,000 to 4,000 feet (Forestry, Wildlife and Parks Division, Dominica, 2009). Currently they are distributed in the central area of the Morne Diablotin National Park (Durand, 2013).

The Red-necked, or locally known Jaco Parrot, Dominica's smaller endemic species, only grows to 40 centimeters (Minarcik, 2010). The Jaco has mainly bright green plumage with a bluish head, and distinctive red areas on the neck and upper breast and a scarlet wing patch. Red-Necked parrots have a high-pitched squawk, and can be distinguished in flight by their green tail and shallow wing beats (Evans, 1991). The distribution of the Red-necked parrot is broader. They are also in the Morne Diablotin National Park, but have also spread to the Northern and Southern Coastal areas due to their ability to tolerate humans and because of their aggressive behavior to other birds.

Both species were decimated during hurricane David in 1979; however, currently the Island's main focus is the Imperial Parrot. There are a number of reasons the Dominican Government is focusing more towards the Imperial. Because Jaco parrots are more tolerant to humans, they take advantage of the high elevation farm patches for fruits where their habitat overlaps farmland. The Imperial generally inhabits higher elevations and avoids citrus plantations (Reillo & Durand, 2008). Another reason is due to fledgling numbers, based on field observations. Imperial parrots generally only have one fledgling every other year (Forestry, Wildlife and Parks Division, Dominica, 2009). The available nesting area is also a major factor. Jaco parrots are smaller, but they are also more aggressive to competing bird species, while the Imperial parrot tends to be more competitive within their species (Durand, 2013).

In summary, the Jaco population seems to be increasing steadily, while the future of the Imperial is uncertain. With the recent grant provided to the Dominican Forestry and Wildlife Department (FWD), survey work on the Imperials will be done to determine their locations and numbers in the wild, specifically in the Morne Diablotin area.



Figure 1: Imperial (Left) and Red-necked (Right)

#### METHODS AND MATERIALS:

The information and data composed for this project are collected observations from the field and communication with specialists. Since Imperials live high in the mountains, in seclusion, through dense forest is required. Two separate occasions were organized for me to travel into the field with a group from the FWD (as described below). A GPS device, paper and a writing utensil for additional observations were the only materials required. While trekking through the forest the group listens and looks out for Imperials. As soon as one is heard, and/or spotted, the GPS device is used to mark the location. Most GPS devices

are very similar and only require a few steps in order to mark the location. First step is to click "Mark", next using the arrow keys, move the cursor to the name section and rename it to specify the location and the number which correlates with the bird (the first parrot marked is 1, the second is 2, and so on). After it is renamed select "OK" to accept the name, and "OK" again to save the marked point. This process is repeated every time a parrot is located either by the call, sighting, or both. On top of the GPS marking Mr. Stephen Durand, one of the FWD staff members, would write down the type of vegetation we were in, elevation, weather conditions, if it sounded like there were multiple parrots, if they were flying, and any other information that would provide all specifications for future study.

## RESULTS:

### GPS SURVEYING AND OBSERVATIONS

*May 30, 2013*

The first day in the field the team consisted of Stephen Durand, Matthew Maximea, Randolph Winston and myself. The hike started at Morne Apion in the heights of Salisbury continuing north to the Eastern front hills of Mosquito Mountain. There were 5 points marked with the GPS device. At 10:52 a.m. one flying imperial was noted by sound. At 11:56 a.m. another point was marked, it sounded like 2 parrots very close by in a tree. At 1:04 p.m. the third parrot was heard, about 3 minutes later it was spotted taking off no more than 200 meters away. At 2:11 p.m. the fourth point was marked after hearing a parrot. Finally, at 2:46 p.m. the fifth point was marked after spotting a parrot in flight and hearing it.

*June 4, 2013*

The same team went out the second day with the exception of Ronnie being replaced with Roy Paul. The hike was more rigorous, starting at the trailhead of Syndicate Trail, and veering off into unmarked rainforest, lower montane, and montane forest. A total of 3 GPS points were marked. At the first point 2 vocalizing parrots were marked at 10:49 am., at the second point 2 more parrots were noted vocalizing at 11:17 a.m., and the third point a parrot was heard in flight, but not seen at 12:06 p.m.

#### CURRENT CONSERVATION PROGRAMS

There are many organizations focused on parrot conservation. The Rare Species Conservatory Foundation (RSCF) and the Dominican Government have put together numerous projects in order to protect the Imperial Parrot. The programs are very complex, trying to extend the legal protection to all forests surrounding Morne Diablotin, developing management and conservation strategies, and coordinating support for ongoing research, education programs with public zoological facilities, non-profit organizations, etcetera. Dominican's government-driven parrot program serves many functions, including monitoring parrot populations, collecting and analyzing nature and life history information on the parrots and other wildlife, and forest habitat, as well as simplifying strategies for wildlife and habitat protection (Reillo & Durand, 2008). Intra-cavity research methods have been developed and tested to allow researchers to examine the inside of parrot nests, providing the first video recordings of Imperial rearing and fledging, and quantitative analyses of bi-parental care and recruitment in both species (Reillo & Durand, 2008).

Besides the survey work, the FWD tries to maintain a good relationship with local farmers in order to gather information about the surrounding areas. Some farmers are willing to come forward with information about destructive human behavior to parrot

habitat, while others do not share information that they believe might compromise their farm operations (Reillo & Durand, 2008).

#### DISCUSSION AND CONCLUSION:

Progress is being made to understand everything about the Imperial parrots. There is still much unknown, however surveying their locations will allow the opportunity to expand this knowledge. The new Morne Diablotin National Park was officially declared on January 21, 2000, which provides an area of 9,000 acres of protected forest for both the Imperial and Red-necked parrot to nest and is a great example of the conservation efforts being put forth. The population has been increasing significantly since the hurricane season in 1979 to 1980 increasing the number of Imperial parrots from around 60 to almost 500 now in 2013. New ideas for research on the Imperial parrots are continuing to present themselves in order to expand information that will allow their population to further expand.

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Figure 2: Day 1 FWD team from left to right, Matthew Maximea, Ronnie Winston, Stephen Durand.



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