Grupo internacional para la conservación del Diablotín

Comité international pour la conservation du Pétrel diablotin

International Black-capped Petrel Conservation Group

UPDATE ON ACTIVITIES
April 2018

The work to conserve the Black-capped Petrel can be very simply summarized as:

- Finding the petrel
- Understanding the petrel and its threats
- Securing the petrel by addressing threats

Some notable advances were made on all three fronts in the last year. This update reviews activities since the February 2017 newsletter, so it is a long one. Consider it an annual report!

FINDING THE PETREL

FIRST NEST FOUND IN VALLE NUEVO, DOMINICAN REPUBLIC

With the discovery of an active burrow in Valle Nuevo by field team members José Luis Castillo and Gersón Feliz in May 2017, Grupo Jaragua confirmed another nesting location for the Diablotin on Hispaniola! The nest, occupied by a downy chick with sprouting feathers, was found on a steep hillside approximately 2000 m above sea level, thickly vegetated with fern thickets in a secondary forest of dispersed pines and broadleaved trees. Valle Nuevo, located in the Cordillera Central range of the Dominican Republic, is the easternmost known nesting location for petrels on the island.

The Mother's Day discovery of the first nest in Valle Nuevo, Cordillera Central, Dominican Republic can be credited to the well-trained noses of these men, who followed the Diablotin scent to the burrow entrance – as well as excellent songmeter data. Credit: Grupo Jaragua

The discovery was hard-won and based on several years of effort including radar surveys in 2014 and acoustic surveys in 2015/2016 and 2016/2017, and complementary ground searches funded by multiple entities including Disney Foundation and U.S. Fish and Wildlife Service. The heavy vegetation makes ground searches very difficult and despite additional days of intensive searchers following the discovery of the first nest, no others were found. However, seven sound meters are back in place in Valle Nuevo for the 2017/2018 season, two camera traps in place to monitor the known nest, and searchers are determined to keep looking for nests nearby!

STILL SEEKING PETRELS ON GUADELOUPE

Guadeloupe historically hosted Black-capped Petrels and there is hope that petrels still breed in the nation's remote, high mountains. An impressive effort was made to locate breeding petrels there during the 2016/2017 breeding season, and though no petrels were detected, a strong foundation for future attempts was laid. A report by Antoine Chabrolle detailed the work undertaken by Association des Mateurs Amicaux des Z'Oiseaux et de la Nature aux Antilles (AMAZONA) and Association pour l'Etude et la protection des Vertébrés et végétaux des petites Antilles (AEVA), supported by Parc National de la Guadeloupe.

Volunteers conducted nighttime outings to petrel-favorable, accessible locations in Guadeloupe. Credit: Antoine Charbrolle

The project identified 22 favorable sites based on the following criteria: altitude above 800 meters; cliffs or steep slopes greater than 45 °; and suitable nature of vegetation and presence of boulders, cavities and scree. Night outings were taken to the most accessible of these locations to directly listen for nocturnal vocalizations between December 2016 and April 2017. Acoustic recorders were deployed for 120 nights at seven inaccessible sites considered very favorable for petrels.

Alas, no petrels were detected during the field reconnaissance nor by the manual analysis of the recordings. The only indication of petrels was a report from a hiker who reported hearing a petrel's call one night in February 2016 on massif Soufrière. The teams did detect signs of rats, racoons and mongoose, whose introduction was presumably a significant contributor to the disappearance of petrels in the late 1800s.

Despite lack of detections, the presence of petrels is not ruled out. Collaborators are eager to use raise funds to collect more soundmeter data, and most ideally, bring in marine radar to survey the night skies above Basse Terre's most promising locations.

TECHNICAL EXCHANGE HELD, BUT FIELD WORK IN DOMINICA DELAYED DUE TO HURRICANES

In late April 2017, the second half of an island-to-island technical exchange funded largely by National Fish and Wildlife Foundation took place when staff at the Dominica's Forestry, Wildlife and Parks Division traveled to Hispaniola in order to strengthen their knowledge on Black-capped Petrel field methodologies. The team from Dominica was hosted by Grupo Jaragua, and joined by Hannah Nevins with American Bird Conservancy. They met with representatives of the Dominican Republic's Ministry of Environment, accomplished training at two nesting sites and made a visit to the community of Boucan Chat, Haiti. Much time was spent in the forest looking at active nest sites and the time spent together fostered relationships that will facilitate coordination. The Dominican team returned home eager to put their new skills to work to find petrels. This included the continued collection of sound meter data; unfortunately, no petrels were detected in recordings collected in spring of 2016 or 2017.

In September 2017, Dominica was dealt devasting blows by Hurricanes Irma and especially, Maria, precluding any field work on petrels in the 2017/2018 breeding season. Thankfully, Dominica's Forestry, Wildlife and Parks Division staff was not physically harmed, but experienced much loss of personal property and saw their office and equipment damaged or destroyed. The division is rebuilding their capacity with the assistance of international organizations and attending to relief and recovery issues as they are able. The specific damages to petrel-suitable

areas like Mt. Diablotin, has not been described, but certainly the vegetation was greatly affected. The eye of Maria passed through the upper levels of Mt. Diablotin and likely brought sustained winds around 200 mph. Ideally, the radar surveys conducted on the island in 2015 will be repeated in coming years to provide insights into effects on petrel activity.

FINDING PETRELS IN FAR OFF PLACES

Though not particularly significant to conservation, the following sightings are of natural history interest. Petrels and other pelagic seabirds are capable of traveling great distances over open ocean, and the Simons, Lee and Haney 2013 monograph published in Marine Ornithology details sightings in marine waters off western Europe and northwest Africa. In October 2017, Dutch Birding published an article on the first sighting of *Pterodroma hasitata* in Morocco waters that took place in March 2013 (see http://www.go-south.org/?p=4853). Then, recently, an individual Black-capped Petrel was caught by mistnet in a **Fea's petrel** (*Pterodroma feae*) courtship area. Teresa Militão and her team are preparing a note for Dutch Birding.

UNDERSTANDING THE PETREL

CONTINUING FIELD RESEARCH IN HISPANIOLA

Rat caught on camera near the entrance of a petrel burrow. Credit: Grupo Jaragua.

Grupo Jaragua continues to monitor nests to learn about the natural history of the Diablotin and the threats in the nesting areas. From February to June 2017, about 40 nests in the border region from Morne Vincent, Haiti to Loma del Toro, Dominican Republic were visited. The monitoring results were similar to the results of former years: most known nests are occupied every year with a high percentage of fledging. Monitoring is again underway in 2018 in the border region, as well as in Valle Nuevo (as noted above).

In addition to visual examination and acoustic monitoring by sound meter, several nests are monitored by camera traps to determine nest activity by petrels as well as any other animals to burrows, including potential predators. In 2017, rats (*Rattus rattus*) were detected at all five of the monitored nests, from early night to early morning hours. Except for one occasion, when one individual rat entered a nest for a few seconds, rats did not investigate burrows or engage with petrels. No presence of mongooses, feral cats, or any other introduced predator species was captured at the study site in 2017; 2018 results are pending.

ADDITIONAL PETREL TRACKING AND DIET STUDIES

Thanks to funding from the Neotropical Bird Club, USGS South Carolina Cooperative Research Unit and BirdsCaribbean, Grupo Jaragua is hosting Yvan Satgé, a Clemson University graduate student working under Pat Jodice, in the Dominican Republic this month. Yvan will oversee the fitting and collection of data loggers on adult petrels visiting burrows to provision their chicks. Additionally, fecal material will be collected at nest sites for DNA analysis to determine diet composition and comparing those results to at-sea habitat use. The results will be used to inform at-sea petrel conservation strategies. Stay tuned for results!

NEW RESEARCH PROGRAM LAUNCHED AT LA VISITE

The nesting area at La Visite is estimated to hold 80%-90% of the world's Black-capped Petrel. Monitoring and conservation activities in the area are challenged by its remoteness. Now, thanks to funding from Disney Foundation, Anderson Jean, now affiliated with a newly-formed NGO, Societe Ecologique d'Haiti, will make multiple visits to La Visite to monitor nests and undertake community outreach. Survey activities are envisioned at a pilot level, and Anderson will be assisted by Grupo Jaragua's Haiti Field Officers, René Jeune and Tinio Louis. Anderson is also tasked with undertaking outreach activities in La Visite, in order to build awareness and relationships in the community.

Research team led by Anderson Jean in La Visite, Haiti, February 2018. Credit: Francoise Benjamin

RADAR SURVEYS REPEATED ON HISPANIOLA

During February 2017, EPIC led radar surveys at the five highest populated flyways on Hispaniola, based on previous years' surveys (2012 and 2013). Comparison across years is an indicator of overall trend of Diablotin populations on the island. Surveys began at sunset and ran for five hours, with a radar operator collecting data on time, direction of flight (to the nearest degree), flight behavior (e.g. straight, erratic), velocity (to the nearest 5 km/hr), and if known, noted species and number of individuals detected. The results were as follows:

Cordillera Central:
Valle Nuevo National Park: 2013 had 84 targets, 2017 had 71.
Sierra de Bahoruco:
Loma del Toro: 2012 had 114 targets, 2013 had 99, 2017 had 71.
Eastern Bahoruco: 2013 had 320 targets, 2017 had 104.
Massif de la Selle:
Savanne Zombie: 2013 had 633 targets, 2017 had 160 (figures are for first 75 minutes for both years).
Tet Kay Jak: 2013 had 457 targets, 2017 had 569.

The results appear to show that the overall population trend on Hispaniola is moving downward. In the Dominican Republic, data show a slight downward trend in the Cordillera Central with more pronounced downward trends in both the eastern and western Sierra de Bahoruco. In Haiti, there was a substantial decline in the eastern Massif de la Selle, but robust upward trends in the western Massif de la Selle.

SECURING THE PETREL

NEW TRANSBOUNDARY BIOSPHERE RESERVE

As of June 2017, all petrel nesting sites located in the Massif de la Selle and Sierra de Bahoruco are now part of a new reserve designated by UNESCO: the La Selle - Jaragua-Bahoruco-Enriquillo Transboundary Biosphere Reserve, which spans the Haiti/Dominican Republic border. Although this transboundary reserve brings together existing biosphere reserves -- La Selle Reserve in Haiti, designated in 2012, and Jaragua-Bahoruco Reserve in the Dominican Republic, designated in 2002 – it appears that this new transboundary reserve has garnered more political and public attention, perhaps because there are only about 20 transboundary biosphere reserves in the world. The recent designation involved government agencies in elaborate planning that included consideration of petrel habitat, and it is hoped will attract more environmental management attention for the region. See **https://en.unesco.org/news/23-new-sites-added-unesco-s-world-network-biosphere-reserves.**

CONSERVATION STRATEGIES IN BOUCAN CHAT

The program to engage farmers and other community members in the Haitian border town Boucan Chat for the benefit of petrels has seen considerable success since its launch in 2016. The strategies described below are based on the premise that in the area of Boucan Chat, the threat of agricultural encroachment into forested areas, and the overharvesting of forest products, is driven by failure of crops on current farming land. Failure can be brought on by drought or flood conditions and decreasing yields from loss of soil quality and erosion. Helping farming families to implement sustainable farming practices and diversify their crops reduces the threats to nearby nesting petrels.

The US-based, Christian nonprofit, Plant With Purpose (PWP) has worked in the border region for some time, orienting their activities around system-level socioeconomic and environmental goals. PWP's goal is to improve the quality of the lives of people living in extreme rural poverty, using a transformational development approach that brings together environmental restoration, economic empowerment, and spiritual renewal. PWP began focusing Boucan Chat's efforts on implications for petrel conservation following interactions with EPIC.

Highlights of PWP's work over the last year include:

- Farmer education programs emphasizing water, soil and plant conservation, involving both classroom presentations and field demonstrations. Lessons instruct farmers in land management actions and retention systems that stabilize soil and support water conservation within the soil. Measurable results to date include 6750 linear meters of anti-erosive barriers installed, 1200 linear meters of gullies controlled, and 520 compost piles created.

- Plant conservation lessons involve stabilization and buffering of farm plots with trees, either food-bearing or native pines, and the identification of conservation areas with high priority native habitat (and petrel nests). The inclusion of coffee and avocado has been encouraged. Measurable results for this activity include 1,450 trees and 120 coffee bushes planted.

Soil and water retention system being built into a hillside in Boucan Chat. Credit: EPIC

- To incentivize farmer involvement and to provide farmers with access to capital to invest in new endeavors, technical assistance has been provided to groups to create business plans and set up Village Savings and Loan Associations (VSLAs). Since 2016, sixteen VSLA groups, representing 409 families (totaling more than 2,600 adults and children) have been formed. In total, these VSLAs have saved 3,545,600 Haitian gourdes (converts to $56,280 USD).

Grupo Jaragua, drawing on support from the German government's international aid organization (GIZ), EPIC, and elsewhere, has ongoing community engagement in Boucan Chat through its field officers, Tinio Louis and René Jeune. Their outreach work has concentrated on two aspects: education of school children on environmental and biodiversity issues with a special focus on the Diablotin and the production of plant material in the newly built nursery.

Highlights from Grupo Jaragua's field officers in Boucan Chat in the past year include:

René Jeune speaks to a group of summer camp participants in Boucan Chat, Haiti. Credit: Grupo Jaragua

- Visits by the two educators to six schools in the Boucan Chat region, twice monthly each, reaching approximately 3,600 students over 2017. They also organized a four-day summer camp in August. The schools are mixed age, all between ages of 5 and 15. The children completed hands-on activities that built on one another and were connected to the soil, water and plant conservation lessons taught to adults in the village.

- Completion of a Boucan Chat nursery in January 2017, now managed by the local youth group "Association de Jeunes pour le Développement Boucan Chatte – Fond Verettes" (AJDBV) under the leadership of its president Marie Chantal with Tinio Louis and René Jeune acting as consultants.

The focus of the nursery is to supply the farmers of Boucan Chat with planting material to establish sustainable perennial agroforestry systems and replace short-term cash crop production, which has a high input of pesticides and is very prone to heavy soil erosion. By August 2017, 750 avocado saplings had produced and 3000 coffee saplings were in production.

The Boucan Chat nursery hosted a a group of university students and professors from the Université Saint Francois d´Àssise d`Haiti (at which Tinio is working towards a degree) in January 2018. The group heard about the work of the nursery and agroforestry activities in the region, as well as Diablotin research, monitoring and conservation. The group will be back in April to participate in reforestation activities.

ADDRESSING STRIKES AND STRANDINGS

A review paper in the October 2017 journal Conservation Biology, "Seabird mortality induced by land-based artificial lights" (lead author Airam Rodríguez) describes how artificial lights at night pose a significant threat to seabirds, especially species of Procellariiformes. The small amount of data on Black-capped Petrel strandings is included in the paper. Activities to address this threat on Hispaniola include a study on communication towers, outreach to tower managers/owners, and public outreach on how to rescue downed birds.

Françoise Benjamin, a Haitian graduate student who received support via a crowd-funding platform, began field research in February of this year with a visit to La Visite ridge. She collected data from eight antenna sites and interviewed 27 people, including antenna guards and local farmers. The ultimate goal is to map and characterize communication towers in flyways and colony areas and study bird collisions through personal observations and interviews. The findings will be detailed in a report to telecommunications managers (CONATEL).

Françoise Benjamin speaks with the guardian of an antenna in Massif La Selle. Credit: unknown.

On the Dominican Republic side, Grupo Jaragua coordinated and worked closely with the park administration of the Sierra de Bahoruco National Park to address strandings. Park guards at Loma del Toro were well instructed in the monitoring and revision of the

area around the communication towers for downed birds. During the 2016/2017 nesting season, three birds were detected by park guards, one of which was successfully released.

Additionally, Grupo Jaragua reported that there is progress towards removing the guy-wires on the antennas on Loma del Toro in the Dominican Republic; this long-time request to the government may have been honored due to the outreach to officials during the Dominica-Dominican Republic Technical Exchange in April 2017. Information and education can cause change!

Outreach on downed birds is now also integrated into the community of Boucan Chat, with the flyer on handling and release of stranded BCPEs available in Haitian Creole. A local resident, Victor Renozier (Titet) serves as focal point for any information regarding petrel strandings and contacts Grupo Jaragua staff immediately about any downed birds. A bird which was found on the ground in the foot hills of Morne Vincent in March 2017 was brought to Titet and successfully released by Grupo Jaragua. Apparently, the man who found the bird knew to come to Titet because of the artwork of petrels on his water system – an example of successful outreach!

A stranded petrel is released from Boucan Chat. Credit: Grupo Jaragua

In May 2017, René Jeune distributed the flyer on petrel handling and release to participants of a workshop on water management in Jakmel, Haiti. Jakmel and the surrounding coastal towns lie below the petrel nesting areas of the Massif de la Selle. The distribution had the intended effect: Tinio Louis was contacted about a stranded juvenile petrel in July by a person in nearby town of Marigot, who had received a flyer. Unfortunately, the bird was very weak and release failed, but Tinio made contacts and gathered information on other strandings that had occurred in the area in the past.

WORKING GROUP CONSIDERATIONS

Listserv: Group members can stay in touch with one another using the Diablotin@yahoogroups.com list. All interested parties are invited to join. Go to http://groups.yahoo.com, search under “Diablotin” and sign up. You need not have a Yahoo account.

Website: The website for the working group is hosted by BirdsCaribbean and includes a library of unpublished documents related to the Black-capped Petrel project. The website library now includes the presentations made at the BirdsCaribbean International Conference, July in Cuba as well as reports from which the information in this newsletter was extracted. Please visit www.BirdsCaribbean.org, and search under “Petrel”.

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