



MID-YEAR UPDATE ON CURRENT ACTIVITIES

June 2014

WORK ON HISPANIOLA

Information from Ernst Rupp, Grupo Jaragua and Jim Goetz, Cornell & VCE:

Field Investigations 2013/2014

Grupo Jaragua continues its key role as the on-the-ground, go-to partner for Diablotin field investigations on Hispaniola. Activities and accomplishments of the recent field season are briefly described below. A complete report will be produced later in the year.

- One of the Grupo Jaragua team's chief activities is locating nests via painstaking systematic search. Petrels nest in burrows that they have excavated, or in small crevices and caves where the highly fractured limestone bedrock is exposed. Finding nests entails combing large areas of rugged, often steep terrain for nest burrows. Successful nest finding demands determination, sharp eyes, a sense for attractive nest sites, and, remarkably, a good nose. Searchers actually find some burrows by catching a whiff of the characteristic odor associated with active nests. The presence of these olfactory clues is nearly enough to confirm current nest activity, but searchers use an endoscope to fully verify that nests are active, and to determine nesting stage.
- In February of this year, the team with Jim Goetz conducted the first intensive nest searching at La Visite National Park. Consistent with surveys in 2008-2010 suggesting that this area has far greater breeding densities than other sites, searchers found the highest nest density known, with as many as a half dozen active nests in a 100m² area. In all, the team found over 30 nests in just three days, not far short of the combined total of about 50 nests found in three field seasons at other sites.
- The team returns to the breeding sites each month to monitor nests to determine nest success rates. This research activity provides vital information on petrel breeding success, timing causes of nest failure and nesting density. Grupo Jaragua's searchers currently monitor approximately 40 nests, some with automatic cameras.
- The team collaborated with international partners to conduct radar surveys, deploy songmeters, and fit three satellite transmitters on breeding petrels (see full details below). Also, throughout the field season, GJ continued to encourage technical exchange on Hispaniola by inviting Haitian and other biologists to accompany field expeditions to search for and monitor nests.

Threat of Tower Collisions

Collisions with communications towers had been a theoretical threat for Black-capped Petrels until February 2013, when researchers documented several fatal and non-fatal petrel strikes at a site in Haiti.

The team conducting radar surveys in La Visite National Park, at a mountain pass that featured two cell phone towers, found one petrel on the ground in the light flooding the base of the single-mast tower. Soon after, researchers realized to their dismay that they could actually hear birds striking the guy cables of the other unlit tower several times an hour. Systematic searches throughout the evening revealed three more live grounded birds from that night and the remains of two that had been killed earlier in the season, so apparently not all birds that struck the cables were grounded – at least not within the search radius. However, the rate of groundings extrapolated over a breeding season suggests collisions are a significant threat.

The researchers concluded - and radar confirmed - that birds were circling the giant dome of light created by the security floodlamp shining at the base of the tower in the fog, only to collide with the 3m security fence of that tower or the 15 steel cables of the other. On a second night of observations two more birds were grounded before the floodlamp was extinguished. After the light was out, no more birds were found grounded.

A return visit to the site in 2014 found that the tower owner (Digicel) has continued operations without the security floodlamp, and happily, no strikes were heard or detected with radar on the one night the site was surveyed. This was in clear conditions, so more surveys are warranted, especially in conditions of fog. Moreover, other tower sites exist, so a Quisqueya University (Haiti) student is collaborating to document tower locations and conditions throughout Massif de la Selle, in which La Visite is located. Combined with emerging understanding of flyways, this map should allow better assessment of collision occurrence.

Ultimately, working with companies and agencies that place and maintain communication towers throughout Hispaniola and providing bird-friendly tower options is a critical step in the conservation of petrels.



Credit: J. Goetz

Grounded Diablotin in February 2013.

Threat from Fires

Fires in and near breeding sites can be a fatal danger for petrels. First, fires destroy forest habitat at nest sites and if intense in enough, could kill adults and chicks inside burrows. Second, as with others sources of bright light, fires burning at night attract petrels. On 22 March 2014 a fire near the top of La Visite escarpment burned through the night before the park's Surveillance Corps controlled it. A Corps leader brought Jim Goetz (who resides in the park) the charred bodies of two birds as evidence of mortality, and reported that locals had salvaged another 15-20 dead petrels for consumption. The Corps leader explained that the birds "hate fire and attempt to put it out with their wings, but perish in the attempt."



Credit: J. Goetz

Black-capped Petrels killed by fire, March 2014

The unfortunate attraction of Black-capped Petrels to fire is reliable enough that in his 1964 article in *The Auk*, David Wingate observed and described a local method of harvesting petrels of building bonfires on the ridgeline at night and waiting for the birds to fly in. Given this historic and recent evidence, control of fire is a strategy that should be pursued in the campaign to conserve the Diablotin.

Petrel carcass in ashes of La Visite fire. Credit: J. Goetz



Information from Adam Brown, EPIC:

Research Overview

The objectives of the third year of radar work on Hispaniola was to continue to locate flyways and nesting locations of Black-capped Petrels, specifically returning to high density sites in Haiti as well as within areas that have not previously been surveyed. As in previous years, methods include using marine radar, night vision, and conventional listening techniques. Known or potential flyways in the lowland valleys leading to the Cordillera Central, Sierra de Neiba, Sierra de Bahoruco (all in DR), Massif de La Selle and Massif de La Hotte (both in Haiti) were surveyed. Findings included:

- In the large valleys on the west slope of the Cordillera Central, petrel activity was not detected with radar, despite these corridors leading towards Valle Nuevo National Park.
- Following up on detections of petrel activity on the Bahoruco ridge during 2013, valleys that feed the ridge from the north side were radar surveyed in 2014. Petrels were detected using these valleys, indicating that petrels are flying inland towards Lago Enriquillo, then up the northern valleys into the Bahorucos.
- The Sierra de Neiba has very little forested habitat remaining on its slopes, but there is one small patch of intact pine forest on the western edge of the range. The large drainage on the southwestern edge of the range was radar surveyed and numerous petrels were detected accessing the Neibas from this drainage. This is the first detection of petrels in this mountain range.
- In Massif de La Selle, petrels near the nesting colonies at Boukan Chat and Tet Kay Jak in La Visite National Park were radar surveyed. As was expected, petrels were detected flying towards and away from the nest colonies; numbers of petrels in the hundreds were recorded at Tet Kay Jak. Petrel vocalizations could also be heard by ear.
- In Massif de La Hotte, located in southeast Haiti and home to Macaya National Park, radar was used to survey for petrels in all of the main river valleys that feed to the nesting habitat along the high ridge. Additionally, surveys were conducted in the saddle that separates Pic Macaya and Pic Formon. Low densities of petrels were detected in most of the drainages; the highest concentration of petrels was detected along the drainages on the north slope of the range.

In short, radar work in 2014 revealed petrels in new places including detecting flights into Sierra de Neiba and the north slope of Sierra de Bahoruco. Petrel use was confirmed in Massif de la Hotte with the abundance of petrels in this range equal to or less than in the Sierra de Bahoruco. The Massif de La Selle range still site of greatest petrel abundance.

In January 2015, the radar team will be off to the island of Dominica to search for petrels in the heavily forested ranges of that island.

Outreach Activities

The Black-capped Petrel themed activity book, “Who is the bird Diablotin?” was created by EPIC in partnership with Grupo Jaragua and Societe Audubon Haiti.

Three hundred copies of the book -- 150 copies in Spanish and 150 copies in Creole -- were taken to Hispaniola in 2014 by EPIC. These were distributed by EPIC, as well as boxes of crayons, to communities throughout Hispaniola. Grupo Jaragua has Spanish copies of the book and will be incorporating those into their successful outreach programs. Societe Audubon Haiti has copies in Creole and will be using those within their outreach programs in Haiti.

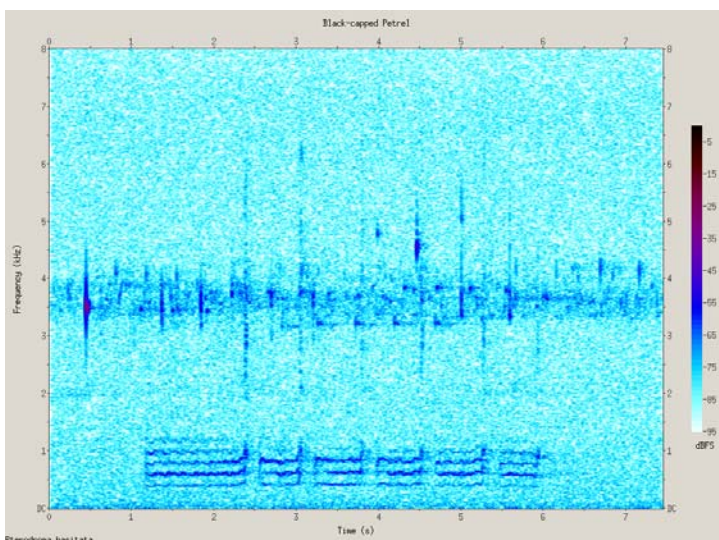
In addition, EPIC distributed PDF copies to numerous non-profit agencies throughout Haiti that requested them for use in their outreach programs. If you are interested in obtaining a PDF copy of the book, please write directly to the author Adam Brown at abrown@epicislands.org



Information from Matthew McKown, Conservation Metrics Inc:

Acoustic Monitoring

During the 2012/2013 breeding season, sensors were deployed at two sites, Loma del Toro and Hoyo del Diablo, both in the Sierra de Batoruco on Hispaniola. A total of 1,857 hours of recording revealed that Diablotin vocalizations can be detected successfully with automated classification software despite the complex natural soundscapes found at survey sites. Some initial conclusions about time of day for peak vocalizations, as well as relative rates of activity at survey sites were drawn, though interpretation was limited by differences in how the acoustic sensors were programmed.



Diablotin vocalizations from two individuals recorded at the Hoyo del Diablo survey site. Credit: CMI

Building on the pilot year and extensive consultation with partners to design standardized survey protocols and parameters, acoustic monitoring was again conducted on Hispaniola during the 2013/2014 season. Ideally, acoustic monitoring will provide for a cost-effective means of tracking activity at known breeding sites, detecting hitherto unknown breeding sites, exploring relationships between activity rates and the relative abundance of diablotin burrows, measuring collisions at man-made structures.

Acoustic data recovery from the sensors is taking place this month and data analysis will be will be overseen by Matthew McKown of Conservation Metrics Inc.

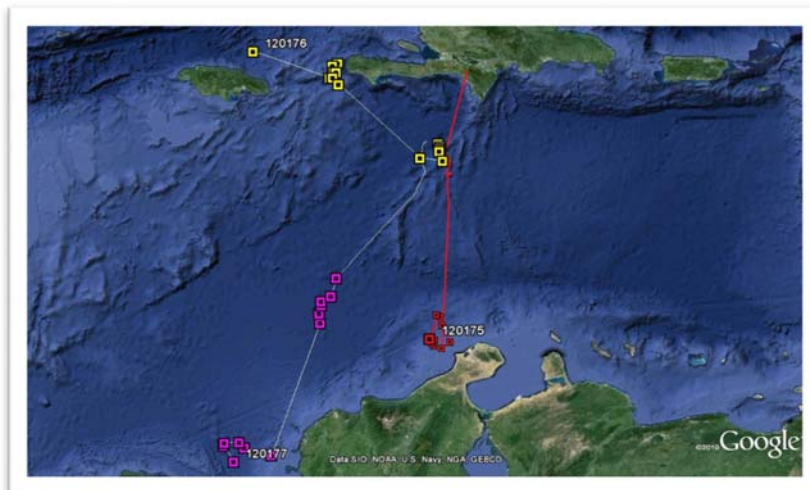
AT SEA

Information from Patrick Jodice, USGS-Clemson:

Satellite tags on breeding Black-capped Petrels were deployed for the first time in 2014. Under the tutelage of Rob Ronconi, the Grupo Jaragua field team fitted three birds with satellite transmitters on April 8 and 9; daily locations and foraging trip destinations have been tracked by Pat Jodice since then. The tags weigh approximately 10 grams, are solar-powered, and run for eight hours at a time before turning off for the next 24 hours to conserve power and to recharge. Locations are accurate to approximately 100–1,000 meters depending on the satellite coverage. Among the wide variety of tracking technologies, satellite transmitters yield some of the highest-resolution location data which, in spite of the very small numbers of individuals tracked, may provide extremely valuable information that may direct the design of future tracking and management efforts.

The three tracked birds are from established pairs that are raising chicks in burrows high in the mountains of the Sierra de Bahoruco. Once the transmitters were affixed, the birds were returned to their burrows. By April 12, all three birds had left their burrows and headed out to sea to forage. To date, the birds' locations range from the northern coast of South America to the waters of the South Atlantic Bight off North America. The birds appear to be returning to Hispaniola, and as of mid-May, the chicks of these tracked birds seemed to be alive and well, indicating that tracked parents continued to provision them. Analysis of camera data collected at the burrows will complete the picture of adult movements.

Current, daily maps are posted at <http://www.atlanticseabirds.org/index#/black-capped-petrel/>.



Movements of
satellite-tracked
petrels from April
13, days after being
fitted with devices.
Credit: P. Jodice

“SAVE THE DEVIL” MOVIE UPDATE

During the 2013/2014 field season, the film team working on a Diablotin documentary accompanied partners in the field and accumulated masses of footage and interviews. One result is a new trailer for SAVE THE DEVIL film.

PLEASE VISIT www.savethedevil.net (click the flag) to view the trailer and learn about the project. If you like what you see please follow SAVE THE DEVIL on Facebook and share the trailer with others.

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.

Coordination: A fond farewell to Holly Freifeld, who served as ABC's Seabird Officer and helped to coordinate and manage planning and projects for the Diablotin from July 2012 until recently (her last day was June 13, 2013). Holly has moved into a position with the U.S. Fish and Wildlife Service's national team dedicated to status assessment and conservation of Sage Grouse in the United States. We wish her the best but will miss her significant contributions to the International Black-capped Petrel Conservation Group. Her interest and dedication were a significant boon to the conservation of the species.

George Wallace (gwallace@abcbirds.org) will act in Holly's stead until a replacement is found



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