



**Black-capped Petrel (Diablotin) Working Group meeting  
SCSCB regional meeting, Grenada  
28 July, 2013, 19:30-21:00**

**Facilitators/Note takers:**

Jennifer Wheeler, U.S. Fish and Wildlife Service  
Holly Freifeld, American Bird Conservancy

**Attending:**

Ernst Rupp – Grupo Jaragua (on Skype)  
Esteban Garrido – Grupo Jaragua (on Skype)  
Jennifer Wheeler – U.S. Fish and Wildlife Service (USFWS)  
Justin Proctor – Cornell University  
Holly Freifeld – ABC Seabird Program  
Jason Townsend – University of California, Davis  
Greg Butcher – U.S. Forest Service  
Chris Rimmer – Vermont Center for Ecostudies  
Kirsty Swinnerton – Island Conservation  
Scott Johnston – USFWS  
Anderson Jean – Société Audubon Haiti  
Eduardo Iñigo – Cornell University  
David Wege – BirdLife International  
Adam Brown – Environmental Protection in the Caribbean (EPIC)  
Brian Watts – Center for Conservation Biology  
Will Mackin – SCSCB

**Proposed Agenda:**

- Review objectives and actions table from Action Plan (attached)
- Update group on current projects
- Brainstorm refinements to table [NOTE: we did not get this far]

**Discussion Notes:**

Questions on 2012-2013 nest searches and monitoring

Adam Brown presented on behalf of Grupo Jaragua earlier in the day, describing the findings of the 2012-2013 season. Ernst and Esteban fielded questions via Skype.

*Question:* “How would you rank the threats? Nesting success was so high; so what is limiting the population?”

*Response:* “Biggest threat is fires – forest fires destroy the habitat and kills birds during breeding season. Also the encroachment of agriculture which involves clearing with fire. There were fires just below Loma del Toro in

2008 which may have destroyed nesting areas. There was a fire on Haitian side of the border two weeks after the last nestling left. Fires in Bahoruco are manmade and natural. There were two big fires this year.”

*Question:* “Have the camera images revealed predation, and if so, what species of predator?” *Response:* “In 2011, saw a cat during the off season, but not any other times. No mongoose seen. Just see rats, which are very common. There is likely human predation on Morne de Selle, where agricultural fields are close to nest sites. No camera documentation, but at the second nest ever found, humans had been digging around for yams, the entrance looked tampered with, and the chick was gone.”

*Question:* “Was it possible that the humans attracted rats to the nest, and the rats took the chick?” *Response:* “Rats don’t seem to kill nestlings. Don’t really go inside. No evidence of predation. Chicks do defend themselves; i.e., chomp on investigator’s fingers.”

*Question:* “What are Grupo Jaragua’s plans for next year?” *Response:* “Continue the monitoring of known nests using burrow probes in Loma del Toro. Extend searches into the Cordillera Central. Extending search will require more effort as there is less infrastructure and more difficult terrain. Initial forays found that the terrain did not seem ideal for petrels, so planning to do some more exploration to look for favorable habitat. Also intensify community outreach to village of Boukan Chat. There were difficulties this year with crossing the border.”

*Question:* “Are there plans to employ more acoustic monitoring to detect birds in difficult places?” *Response:* “GJ will need a bit more training on that.”

*Question:* “Has broadcast of vocalizations been tried to find nests?” *Response:* “No, as it is extremely hard to get close enough to hear a response; the terrain is very rough.”

*Question:* “Is the search exhausted in Loma del Toro? Or did the group run out of time?” *Response:* “The latter. Got as far as they could along the ridge; want to keep looking along ridge for more sites and nests.”

#### Collision Threat

The group then moved to discussion of the threat posed by collisions with Communication Towers. Adam answered most questions.

*Question:* “Has anyone surveyed all the towers?” *Response:* “The interaction with Digicel included an attempt to get a tower map. There are towers all along ridge.” Not clear if map actually obtained.

*Question:* Who are the players? Which are the holding/parent companies for towers on Hispaniola? *Response:* Only Digicel identified; the environmental group Fundacion Segun has a good relationship with them.

Holly noted two aspects of the issue: 1) Implementing best practices for tower siting, construction, lighting, etc., and 2) determining in what particular places adult mortality is significant. Probably not homogenous. Efforts to implement best practices should be prioritized where problem for petrels is worst. Another note: Song-meters deployed on Kauai are documenting bird strikes under unlit power lines. Resolving lights may not fix the collision problem.

#### Socioeconomic context for Diablotin conservation

Group acknowledged the significant human issues related to petrel conservation. We noted that Jim Goetz is spearheading a study of Payment for Ecosystem Services in another part of Haiti, but was unable to make the meeting. The challenges of uncertain land ownership was mentioned.

Anderson noted that even when private ownership is established, it is hard to enforce restrictions on land use (i.e., neighbors trespass).

Ernst noted that one solution for Boukan Chat is supplying cooking fuel to reduce pressure on forest. Their goal is to work with the people, especially where people are right below nest sites. Unfortunately, engagement in Haiti has been a struggle lately, with GJ unable to bring vehicles across the border. However, since many different international groups working along the border, there is a meeting soon ( 6 August) to improve interchange across the border. This kind of work quite critical.

#### Individual Tracking/Reconnaissance on Other Islands

Holly reported on the one expedition to attempt to catch birds at sea last August. Much was learned, but birds didn't get close. ABC is putting that idea on hold for now and suggests it would be more efficient to go directly to likely islands and use the new technologies (radar, ARUs). ABC has the three satellite transmitters in hand, which will be deployed on nesting petrels on Hispaniola next season.

Adam noted the many logistical issues of getting radar around. The existing unit should not leave Hispaniola because it's very costly and complicated to bring it back. Need a second, "traveling" radar. EPIC is very confident in the utility of radar to find petrels, and has sites already scoped out on Dominica and Cuba. Single instances of sightings create place to start.

A priority location to search is Cuba, but it is too hard to get the radar unit into the country. Dominica or Jamaica would be next priorities. Adam noted that much more searching remains to be done in Hispaniola, though (e.g., Massif de la Hotte, the rest of Cordillera Central, a program of annual monitoring.)

Kirsty noted that Island Conservation would consider installing ARUs on islands where pre-eradication monitoring is starting.

#### Cross-training

Ernst noted that GJ is trying to bring in as many local cooperators as possible. He emphasized the need for the coarse direction offered by radar to find nests, then the need for burrow probes to see into nests deep in crevices, and sometimes climbing equipment for steep cliffs. Unskilled searches aren't likely to be effective, but the value of citizen reports (e.g., downed birds, reports of calling) is acknowledged.

Anderson wondered about engaging a particular local group (name?) and Ernst hoped to do so in the future.

#### Other Activities

Listing on U.S. Endangered Species Act. BCPE is in review for listing under US Endangered Species Act. Important for this group to provide comments on a proposed listing rule, when one is published.

The long-awaited monograph is available! 2013. Diablotin *Pterodroma hasitata*: a biography of the endangered Black-capped Petrel. Marine Ornithology Vol 41 (special issue ISSN 1018-3337): S3-S43. T. Simons, D. S. Lee and J. C. Haney. See <http://www.marineornithology.org>

Also out: 2013. Mitochondrial DNA analysis reveals substantial population structure within the endangered Black-capped Petrel (*Pterodroma hasitata*). Waterbirds 36(2): 228-233. B. Manly, B. Arbogast, D. S. Lee and M. van Tuinen

"Save the Devil" Film. Noting that local community engagement and donor support for conservation based on socioeconomic solutions is critical, EPIC is working on a documentary film to tell the story of parallel lives... petrels living in a cave, humans living in Bouken Chat. Two families with a similar struggle for survival. A trailer for a documentary film "Save the Devil" is under development; the trailer will be used to help raise the big funds needed for the full film (\$50K pledged of \$100K needed so far). The goal is to develop a tool that all in the working group can use.

## UPDATING THE ACTION PLAN -- REQUEST TO GROUP

The table on the following pages is based on Table 2 in the *Conservation Action Plan for the Black-capped Petrel* (Goetz *et al.* 2012).

The purposes of this document are to

1. track the current progress of ongoing conservation projects in the context of the Conservation Action Plan, and
2. provide a platform for our brainstorming session tonight to identify additional actions, partners, and resources for conservation

The table needs to be revisited. For example, information on predation (or lack thereof) raises question of need for predator control. The recent genetic work raises question of multiple species, which in turn would affect the prioritization of searching. Findings in the field have generated a wealth of new information.

All working group members are asked to comment on the Table. Mark it up with updates and suggestions for additional needs or steps, or indicate which actions are no longer warranted. Holly ([hfreifeld@abcbirds.org](mailto:hfreifeld@abcbirds.org)) has offered to compile suggestions. When this is completed, the Working Group should meet (likely via Internet) to do some focused prioritizing for fund-raising.

Although the table is focused on projects specifically relating to diabloteín, we should continue to consider institutional capacity-building and broader habitat conservation projects, both of which are critical to BCPE conservation in the long run.

**Requested Deadline: In September.**

ACTION (from Conservation Action Plan) <b>Bold = Actions Underway in 2013</b>	BRIEF NOTES on Current Projects
<b>Objective I. Conservation of critical breeding locations, identification and mitigation of land-based threats, and discovery of additional breeding locations</b>	
<p>I.A.i. Maintain existing forest cover at known sites; incorporate petrel conservation into existing reforestation projects</p> <p>I.A.ii. Assess which towers pose mortality threat; prioritize actions in accordance with assessment; develop mitigation measures such as reduced lighting, re-locating, and co-locating on existing towers to reduce number of structures</p> <p>I.A.iii. <b>Monitor nest sites to identify key predators and other threats;</b> prioritize sites and predators; reduce predator impact on BCPE with traps or other predator control methods</p> <p>I.A.iv. Increase fire-control measures, and increase vigilance and enforcement</p>	<ul style="list-style-type: none"> <li>• Active nest(s) around Loma del Toro were monitored for breeding success and predators again in 2013; radar and thermal imagery being used to track flight activity near towers.</li> <li>• Cell towers along escarpment at La Visite (notably at Tet Kay Jak) documented to kill petrels in 2013</li> <li>• An inventory and assessment of development projects was completed to characterize potential impacts to BCPE habitat.</li> </ul>
<p>I.B.i. <b>Conduct social research to understand human dependency and impact on BCPE forest habitat as well as potential direct impacts on BCPE populations</b></p> <p>I. B.ii. Create participatory management plans for sites with human impacts</p> <p>I.B.iii. <b>Work with communities</b> to manage land-use and hunting pressures and/or predation</p>	<ul style="list-style-type: none"> <li>• Jim Goetz's research is a relevant example of social research.</li> <li>• Grupo Jaragua has been conducting community outreach near Loma del Toro. Complicated by new border restrictions.</li> </ul>
<p>I.C.i. Develop habitat model that accurately characterizes known nesting sites (e.g. with satellite images and spatially explicit modeling that accounts for slope and vegetation cover)</p> <p>I.C.i. Identify potential nesting and restoration sites based on life history characteristics and ecology.</p> <p>I.C.ii. Compare historical and potential BCPE nesting sites on Cuba, Dominica, Guadeloupe, Hispaniola, Jamaica, Navassa, etc. to known BCPE nesting characteristics, and survey sites with most potential</p> <p>I.C.iii. <b>Develop and refine search methodologies for individual nests and nesting areas, e.g. radar,</b> search dogs, transmitters on birds caught at sea</p> <p>- Conduct reconnaissance surveys on other islands; follow up on possible petrel sighting on Dominica.</p>	<ul style="list-style-type: none"> <li>• New surveys with radar were conducted in 2013 to locate petrel flight paths and areas of suspected breeding activity in DR &amp; Haiti.</li> <li>• On-the-ground follow-up in DR has not so far discovered new nesting areas.</li> </ul>
<p>I.D.i. Understand limiting factors and mortality drivers: quantify population vital rates and create a demographic model, conduct Population Viability Analysis</p> <p>I.D.ii. Determine whether BCPE is nest-site limited through investigation of intra-specific and inter-specific competition at nest sites</p> <p>I.D.iii. Investigate current and historical population structure using genetic studies, esp. to determine unique populations</p> <p>I.D.iv. Assess prevalence and impact of parasites and/or disease</p>	
<p>I.E.i. Ensure that protected-area boundaries are defined legally and marked on the ground</p> <p>I.E.ii. Where they do not exist, develop and circulate area management plans in appropriate languages</p> <p>I.E.iii. Implement long-term protection measures for expanded breeding areas by elevating protected status or securing conservation concessions</p> <p>I.E.iv. Explore national legal protections for the species, provide international technical support for the process</p> <p>I.E.v. Explore international legal protections/recognition for the species, e.g. inclusion in CMS (see Appendix A of Plan), potential emblem or flagship for the Caribbean Biological Corridor.</p>	<ul style="list-style-type: none"> <li>• KBAs in Haiti redefined/ refined in context of development of the National System of Protected Areas. Specifically, Massif de la Selle formally proposed as a Biosphere Reserve.</li> <li>• The USFWS is currently conducting a status review to determine whether listing the species under the Endangered Species Act is warranted.</li> </ul>

ACTION (from Conservation Action Plan) Bold = Actions Underway in 2013	BRIEF NOTES on Current Projects
<b>Objective 2. Management of critical at sea foraging locations, identification and mitigation of at-sea threats</b>	
2.A.i. Place transmitters on birds at nesting sites to understand at-sea movements; investigate differences in at-sea range in the breeding and non-breeding season 2.A.ii. Continue compilation of at-sea sightings by U.S. Geological Survey and update other databases such as eBird; identify data gaps, e.g., winter surveys off Cape Hatteras 2.A.iii. Collect information on at-sea sightings between Cuba and Jamaica 2.A.iv. Recruit fishermen, sailors, etc. to report sightings	<ul style="list-style-type: none"> <li>• ABC has several satellite transmitters that may be used for deployment during the breeding season; would need archival tags to compare breeding/non-breeding distribution.</li> </ul>
2.B.i. Identify prey and dynamics of prey base 2.B.ii. Investigate and if warranted, reduce fishery impacts on mortality 2.B.iii. Investigate marine lighting as a source of mortality, e.g. map locations of relevant platforms; develop mitigation for identified threats 2.B.iv. Assess risk posed by wind development in Caribbean areas and SE coast of U.S.	
<b>Objective 3. Develop methods to increase size and number of breeding locations</b>	
3.A.i. Assess potential for habitat restoration to expand suitable habitat at Macaya, La Visite, and Loma del Toro 3.A.ii. Implement habitat restoration projects at the three locations 3.A.iii. Monitor the regeneration and restoration of forest areas 3.A.iv. Use artificial nest burrows, playback attraction and/or translocation to enhance or create BCPE colonies in fully protected habitat.	<ul style="list-style-type: none"> <li>• Field investigations in Massif de la Hotte??</li> <li>• Projects inventory and assessment is a precursor to developing a strategic approach to forest protection in and around the La Visite nesting colony.</li> </ul>
3.B.i. Identify new locations suitable for BCPE breeding (near existing breeding sites, or in completely new areas) 3.B.ii. Assess the feasibility of securing suitable habitat and establishing breeding sites in new locations 3.B.iii. Secure suitable habitat (managing and mitigating for threats) and implement long-term protection measures 3.B.iv. Install artificial nest burrows in the new areas and attract birds to nest 3.B.v. Carry out late-season provisioning studies at known nests to acquire data necessary for translocation applications	
3.C.i. Set in place long-term protection for nesting areas; develop area management plans if needed 3.C.ii. Manage land cover appropriately at each new colony, e.g. assess feasibility of tree planting or restoration to consolidate and expand habitat 3.C.iii. Manage for habitat and invasive predator threats at new and expanded breeding locations	<ul style="list-style-type: none"> <li>• Field investigations and KBA evaluation in Haiti are planning steps for habitat protection (but restoration not actually underway)</li> </ul>

