

## Interim Report: USFWS Agreement F11AC00825 / Black-Capped Petrel Conservation 2011-2012. April 2012.

Jessica Hardesty Norris, American Bird Conservancy ([jhardesty@abcbirds.org](mailto:jhardesty@abcbirds.org))  
Ernst Rupp, Grupo Jaragua ([ernstrupp@alice.de](mailto:ernstrupp@alice.de))

### Summary of Activities

1. Collaborated with the US Fish and Wildlife Service to bring together input from an international team of conservationists and publish the *Conservation Action Plan for the Black-capped Petrel*, currently in translation to Spanish.
2. Used radar, thermal imaging, and aural survey to greatly revise the estimate of active birds at one of three known nesting sites, at Loma del Toro on the DR/Haiti border. Proved the concept of using radar and thermal imaging to track the birds and quantify their activity, and created lasting international partnerships and local capacity to work with these technologies.
3. Discovered 12 new Black-capped Petrel (BCPE) nests, 2 with chicks already present, at Morne Vincent, Haiti. This remarkable achievement, a first-ever for the species, was made possible because of the use of radar and thermal imaging technologies, and will allow us to learn critical demographic information about nesting success and the threats faced on the colonies.
4. Established contact with Haitian community near the nesting sites
5. For the first time ever, we have documented a collision injury in the BCPE. In March 2012, we found an injured bird under a cell tower on Loma del Toro and re-released it after two days. Further discoveries about light attraction in the species could have wide additional implications for its conservation.
6. Documented, for the second year, the breeding activities of a petrel pair on Morne Vincent. We deployed a camera trap at the known nest in October 2011, and a petrel pair arrived on 11/14/2011. After a month of activity of the pair entering and leaving the nest, which also included a visit from a rat, a cat and a pair of Barn Owls, the two birds disappeared for one and a half months. On February 5 the pair reentered the nest and started breeding activities. At the beginning of April the second successful hatching of a chick was documented for the nest.

### **Timeline**

October 2011: Deployed Camera trap at known nest on Haitian side of Loma del Toro, near Bahoruco National Park.

November 2011: Secured Permits for January expedition

January 2012: Published Conservation Action Plan for the Black-capped Petrel; Toured coastal flyways in the DR, near Pedernales, and high elevation sites in Sierra de Bahoruco National Park, near the Haitian border with radar and thermal imaging gear

March 2012: Revisited Loma del Toro, on both sides of the border, and discovered 12 active nests on the Haiti side (Morne Vincent), 2 with chicks

Current: Deploying camera traps, searching and monitoring more nests on both sides of the border and continuing outreach to local community in Haiti

## Study Area

Most of the activities have been focused on Loma del Toro, a ridge which spans the border between Haiti and DR. Each expedition has included some activity on each side of the border. The radar was only used on the DR side of the border, but most of the petrel nests we have found so far are just across the border in Haiti. The DR side of the nesting area is protected, but the Haitian side is not.



Image of petrel exiting the nest on Loma del Toro, which apparently failed in December.

**Camera Trap:** In October, we deployed a camera trap at the nest that was discovered last breeding season by the Grupo Jaragua team, and retrieved over 7000 images in January. There was activity by cats, rats and Barn Owls in the burrow, and the nest apparently failed. We have 5 additional camera traps to deploy at the newly discovered nests.

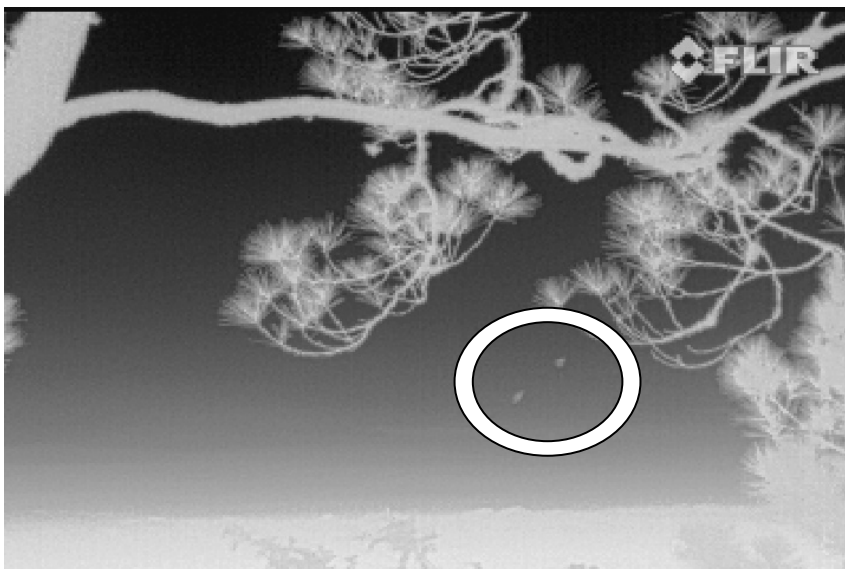
**Aural Surveys** In late January, we made some observations without the radar or thermal imaging camera- using the “old fashioned” strategies of aural surveys. These nights had more activity than several previous expeditions to the area. See table below.

Date	Place	Start	End	Total calls	Total time	Calls/min
01/22/12	Fire Outlook Tower	08:30 PM	09:46 PM	254	76 min.	3.3
01/23/12	Cliff below Tower	08:47 PM	09:45 PM	431	58 min.	7.4
01/24/12	Road below Loma del Toro	08:49 PM	09:10 PM	3	21 min.	0.1

### Radar Work/ARUs

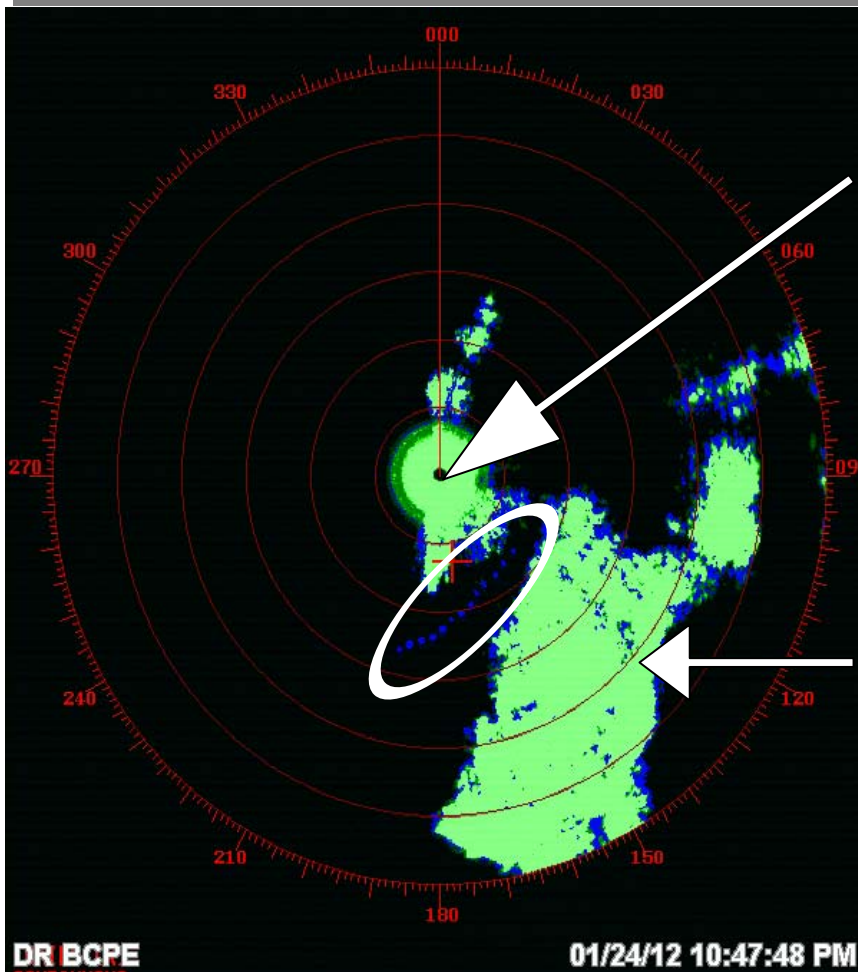
Radar work started finally on January 20 and was carried out daily until the 26<sup>th</sup>. We conducted radar surveys from two sites, one at the base of a drainage near Pedernales, at the coast line, and the other up in the vicinity of the known breeding area near Loma del Toro. At the Pedernales site, about 8 birds were seen moving inland just after dark. On the ridge top, the night's activity started at dusk, with birds silently leaving the burrows and heading down the drainages, most via Haiti, but some towards the DR side. After about an hour, activity picked up and became very noisy for a couple of hours, with lots of circling and calling. It is hard to draw firm conclusions, but a reasonable hypothesis is that the breeding adults are on the nests all day, and switch out or leave to forage at dusk, and the juveniles or other non- breeders come in from sea at dusk, and display with each other for while before quieting down. The Grupo Jaragua team was given an introductory course in radar use and interpretation of radar data by Adam Brown of EPIC and Peter Sanzenbacher of ABR.

In January, we also deployed one autonomous recording unit (ARU) west of Loma del Toro below a cliff. The ARU was attached to a pine tree about 2 m above ground. In March we deployed a second ARU, directly above the cliffs of Loma del Toro according to the recommendations of James Goetz (Cornell Lab of Ornithology), and downloaded the data from the first one. We are working on processing the recordings.



**FLIR Thermal imaging cameras allow detection of petrels as they fly by, even if they are silent.**

Please note that we had intended to bring along two employees of Haiti Audubon in this work, but they were unavailable, and though we are still exploring the possibilities of a technical exchange this year, it may have to wait until the next breeding season.



## SAMPLE RADAR IMAGE

“Dead Zone” directly above the truck upon which the radar is mounted.

Signal from a single BCPE individual in white circle.

Topographical features (a facing ridge), which allow the technicians to reference the position of their email.

## New Nests

After the January expedition, the field team made it back out to the ridges near Loma del Toro in mid-March, and discovered 12 additional nests just over the border in Haiti, using labor-intensive searches in the area where the petrels were seen going to ground. Two nests had chicks already. The team is currently (April 1-5; trying to do another survey before Easter holidays) making a follow-up expedition to deploy camera traps.

The team also reached out to local community members in Haiti, although we are approaching the issue very slowly and carefully. We have devised a data sheet with photos of the petrel which can be used to interview people about whether they have observed it and any knowledge they may have of the bird. Two farmers seemed interested in the project, and said they would tell the team if they found any additional nests (and leave them undisturbed!).

## Cell Tower Collision

Also on the mid-March trip, there was a BCPE downed by collision with the guy wires on a cell tower on top of Loma del Toro.. They kept it and let it rest a couple of days, released it on the second morning. They released it from ½ way up the tower, but it seemed to remember how to fly and zoomed over to circle the nesting grounds, presumably orienting itself, then flew down the drainage to the sea.

## Next Actions

Throughout the rest of this breeding season, we intend to maintain our efforts to locate, assess threats, and protect nesting sites at Loma del Toro, and continue to lay the ground work for protecting the nests with the community at Boucan Chatte, the nearby Haitian town. We are proceeding cautiously with these efforts, to establish solid relationships and protect the specific whereabouts of the nesting sites. In addition, we are planning a pilot expedition in July 2012 to capture petrels at sea.

To date, Black-capped Petrel nesting colonies have been discovered in highly threatened parts of Haiti and the Dominican Republic, though nesting is also suspected elsewhere – including in Cuba, Jamaica, and Dominica. The largest currently known colony at La Visite in Haiti faces imminent peril as it is rapidly being degraded. Furthermore, up to 300 sightings are sometimes possible in a single day off of Hatteras, NC, which is out of proportion with the number of known colonies and their sizes. Though it is conceivable that the western edge of the Gulf Stream hosts the entire world population in a small area, it is more likely that additional, yet-undiscovered nesting colonies exist.

As we develop and implement conservation to protect known colonies, ABC also proposes to attempt to confirm the locations of additional, more easily protectable colonies by capturing Black-capped Petrels at sea off the coast of North Carolina and satellite tracking them back to their colonies (Action Item 1.C.iii in the Action Plan). If just one bird leads us to a new colony, it will be a game-changing event for the conservation of the species.

In order to capture birds at sea, ABC will charter a vessel out of Cape Hatteras for seven days during the peak Black-capped Petrel foraging period and use chum and light attraction and mist nets and/or net guns that have previously been successfully used to capture storm-petrels and other birds at sea. We will aim to capture and tag seven petrels and release them to return to their colonies.

ABC currently has \$5,000 from a private donor, and an additional donor has agreed to finance a 2-3 day exploratory trip in May 2012. We also have a likely grant request to a private foundation for \$20,000 to support this work.

## Additional Materials

See our press release at [www.abcbirds.org/newsandreports/releases/120319.html](http://www.abcbirds.org/newsandreports/releases/120319.html)

and the action plan at [www.fws.gov/birds/waterbirds/petrel/pdfs/PlanFinal.pdf](http://www.fws.gov/birds/waterbirds/petrel/pdfs/PlanFinal.pdf)