

Summary of Black-capped Petrel (*Pterodroma hasitata*) Nesting Activity during the 2011/2012 Nesting Season at Loma del Toro and Morne Vincent, Hispaniola

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Introduction and Methods

During the 2012 season, our Dominican-Haitian team monitored nesting activities of the Black-capped Petrel at Morne Vincent, Haiti and Loma del Toro, Dominican Republic. Both sites belong to a ridge that extends along the northern reaches of the Sierra de Bahoruco mountain range on the Island of Hispaniola.

Monitoring activities started in January, when flight corridors and possible nesting areas of the species were identified using radar and thermal imaging cameras. During the following months an intensive on- the-ground search was conducted. Possible nest were inspected with a burrow scope to detect adults and/or chicks present and to document the development of chicks and their final departure. Nests were marked and their coordinates recorded with GPS. The successful departure of chicks was verified by inspection of the entrance and surrounding area of the nest for down shed by chicks. Also camera traps were placed at the entrance of 7 nests on the Dominican Republic side and one on Haitian site to document the activities of the adults and also the departure of the fledglings. One camera trap was put inside a nest to document the behavior of the chick and its interaction with its parents.

Results

Nesting success

A total of 30 active nests were found, 15 on Morne Vincent, Haiti and 15 on Loma del Toro, Dominican Republic (see table 1). 76.67% of nests successfully fledged chicks (Table 1).

On the Haitian side 13 birds fledged successfully and two nests failed. One of the two had also failed the year before. In both years, the adults had been incubating, but a living chick was never found. The nest is situated within a dry creek subject to flooding during rain, a possible cause of the failures. In the other unsuccessful nest an egg with a completely developed, but dead, chick was found. The reason for the death of the chick is not known.

On the Dominican side 10 nests fledged young and 5 nests failed. In two cases, an abandoned egg was found at the end of the incubation period. Both eggs did not show any sign of an embryo. In a third case, although the adults were present during incubation, no egg or chick was found at the end of this period. In a fourth case we detected a chick on our first visit after incubation, but it was not seen again

on subsequent occasions. The final case was a nest with an incubating adult detected. During the feeding period an adult was photographed on one occasion by a camera trap as it entered the nest, but in the end no successful fledgling could be confirmed.

Type of nests

The nests encountered varied greatly in location, depth, and substrate. The most well-known nest, originally found in January 2002 by Simmons et al. (2002) is located in the wall of the cliff that extends along the northern part of Loma del Toro. At time the nest was discovered, there was adult activity, and based on the discovery of egg shell fragments in the nest material, they concluded that it had been used previously. This year we were able to confirm fledging from this nest, indicating that this nest has been active, although perhaps not continuously, for at least 12 years. The second previously known nest is one we found last year located within a small cave on Morne Vincent, Haiti. It also fledged a chick this year. The rest of the nests in Haiti are concentrated on the steep hill side below and at the side of the cliff. The nests are within crevices in the ground consisting of shallow soil over the limestone rock (Figure 1). On the Dominican side some nests are also placed in crevices within the ground, but in addition nests are also found simply dug into thick layers of pine needles (Figure 2). Nesting habitat seems to be concentrated on open pine forest with good broadleaf undergrowth. Forest fires have a severe negative impact on this undergrowth and can destroy it completely. At Morne Vincent a fire passed through the nesting area about two weeks after the departure of the fledglings. We will see if this event will affect nesting success next year now that most of the undergrowth is destroyed.

Banding

A total of 6 chicks were banded with bands 1633-02647 – 52 (Figure 3). Also an adult bird, which we found with a flesh wound on its left wing on 28 February, received band number 163302601. We treated the wound of the bird with an antibiotic cream and it was successfully released.

Approximate Nesting Phenology

Based on the camera trap data and visual inspections of the nests, the following preliminary nesting schedule can be deduced:

Mid-November to mid-December - adults return from the sea to inspect and prepare nest sites

Mid-January - Heavy flight activity (Juveniles, Males?) along the ridge

Last week of January to first week of February - start of incubation period

Last week of March to first week of April – hatching of eggs and start of chick provisioning

Last week of June to second week of July – fledging (Figure 4)

Predators

Regarding possible predators, camera traps showed a high rate of visitation by rats (*Rattus rattus*), but they do not seem to disturb the adults or chicks (Figure 5).

Based on the visual inspections and camera trap photos, only one, possibly two chicks disappeared, but predation could not be confirmed.

Apart from rats no other possible predators have been spotted on camera trap photos during incubation and chick provisioning, with the exception of a domestic dog in the cave on Morne Vincent. The dog may have been there because it was following a path used frequently by people from Boukan Chat, the nearby village, which passes right by the cave (Figure 6). The dog was photographed within the cave on several occasions, but never entered the nest.

Other important species

Camera traps also commonly detected La Selle Thrush (*Turdus swalesi*) in the habitat of the Black-capped Petrel nests.

Community Outreach

During the nesting season we made contacts and began establishing relationships in the community of Boukan Chat on the Haitian side of the border. This is a farming village, and the fields where the people cultivate vegetables lie just downslope from the petrel nests we monitored. Madame Nodsilyls is our chief contact and a well-respected member of the Boukan Chat community. We first met her in October 2011, when she and members of her family were harvesting beans and potatoes while we were trying (secretly) to install a camera trap in the cave.

We made a courtesy visit to Ms. Nodsilyls and her family February 2012 (Figure 7). In our first trips to Boukan Chat our aim was to build strong personal relationships before broaching our concerns about potential threats posed to the petrels by human activities. Subsequently we began to formalize our presence by meeting with the top official of the region (kasek), and explaining our work and the conservation needs of the petrel. In return, we were informed of the situation and problems of the communities of the region. We also met representatives of two local NGOs that work on environmental issues and may be interested in including information about the petrels in their educational programs. One of Madame Nodsilyls' sons has now been integrated into our monitoring activities in the cave with the nest.

During our visits to Boukan Chat, we have also been interviewing people (showing them pictures and playing the sounds of the birds) to find out about their knowledge of local birds in general, including the petrel (although we did not specifically mention the petrel, in order to avoid leading our interviewees). Most persons interviewed had heard of the petrel, and some were able to give a detailed description. The bird is known under the name “cana mawon” in creol, which simply means “wild duck”. We also learned that birds are being searched for and hunted with dogs.

The nests at Morne Vincent are directly threatened by agricultural activities of people from Boukan Chat. The village’s fields are situated right below the majority of the nests and might be reached by these activities at any point of time. We have started to investigate who actually is working the fields, so that we can reach out to them in an effort to avoid further encroachment of agriculture on petrel nesting habitat.

Table 1: Nesting results

| Site | Active nests verified | Birds fledged | Nests failed |
|----------------|-----------------------|---------------|--------------|
| Morne Vincent | 15 | 13 | 2 |
| Loma del Toro | 15 | 10 | 5 |
| Total | 30 | 23 | 7 |
| Percentage (%) | 100 | 76.67 | 23.33 |

Figure 1. Nest in limestone at Morne Vincent, Haiti.



Figure 2. Nest excavated in pine needle litter at Loma del Toro, Dominican Republic.



Figure 3. Esteban Garrido holding a banded chick.



Figure 4. Black-capped Petrel chick exercises its wings prior to fledging.



Figure 5. Rat visiting nest site pictured above.



Figure 6. Haitian village of Boukan Chat.



Figure 7. Black-capped Petrel team in Boukan Chat at Madam Nodsily's house.

