

## A RE-EVALUATION OF THE STATUS OF THE ENDANGERED BLACK-CAPPED PETREL, *PTERODROMA HASITATA*, IN CUBA

David S. Lee<sup>1</sup> & Nicasio Vina<sup>2</sup>

<sup>1</sup>North Carolina State Museum of Natural Sciences, P.O. Box 27647, Raleigh, NC 27611.

<sup>2</sup>Institute of Geography, The University of Oriente, Santiago de Cuba, Cuba.

*Key words:* *Pterodroma hasitata*, *Black-capped Petrel*, *Cuba*.

The Black-capped Petrel, *Pterodroma hasitata*, is the only extant gadfly petrel known to breed in the West Indies region. Now seriously threatened or endangered, breeding populations are known on only one of the five historically documented breeding islands (the extinct *Pterodroma* of Jamaica is considered a separate species; Mike Imber, pers. comm.). The extant breeding populations on the island of Hispaniola (Dominican Republic and Haiti) are small, fragmented, and currently believed to be declining, although the exact sizes, locations, and detailed chronologies of the breeding colonies remain poorly-studied. Nesting sites are now limited to open-canopy highland forest on inaccessible cliff faces. In addition to direct exploitation by colonists in previous centuries and recent declines in breeding habitat due to deforestation, introduced predators may have played a role in the species' decline. In the late 1970's the reported discovery of a nesting population in a remote area in Cuba (see below) suggested that the species had at least one additional nesting area and that this one was relatively stable.

In his 22nd Supplement to the Birds of the West Indies Bond (1978) wrote concerning *Pterodroma hasitata*: "I am grateful to Orlando H. Garrido for sending me an article with clear photographs of *P. h. hasitata* that evidently breeds on a coastal mountain called 'La Bruja' between Uvero and Ocuja in the Sierra Maestra (Bohemia 1977, pp. 88–89). Dr. Nicasio Vina Bayes, accompanied by two companions, collected a male and three females on January 29, 1977, when these petrels were highly vociferous."

Subsequently Bond (1985) and others stated that these petrels nest in the Sierra Maestra

(A.O.U. 1983, van Halewyn & Norton 1984, Haney 1987). In January 1992 we had the opportunity to visit "La Bruja". Based on that visit, original observations made in 1977, and interviews with long term local residents, we felt that it was necessary to reassess the published record.

The original observations were never formally reported but found their way into the current literature through the popular Bohemia magazine article provided to Bond by Garrido. A more detailed newspaper account appeared in "Sierra Maestra" (27 February 1977, xix-No 48; photocopies of the latter are filed at the US National Museum, the Philadelphia Academy of Sciences and the NC State Museum of Natural Sciences). Vina collected four specimens on 28 January 1977 and two more shortly thereafter, all at sea approximately 1–2 km from the coast.

In 1977 Vina visited the area in an attempt to learn the cause of the local concern over witches or "spirits" in the La Bruja area. He was encouraged to do this by Orlando H. Garrido of the Cuban National Museum. Garrido had heard stories of the "spirits" and guessed that they were petrels. Vina concluded that the nocturnal cries of Black-capped Petrels were the basis for stories of witches (brujas) in the local folk lore. The point of land closest to the area at sea where the birds concentrate was named "La Bruja" after the witches. Later, a village inland from this place and a mountain were named after the coastal site. Although Vina attempted to find out when the places were named he was unable to track them down. Based on topographic maps, these place names are certainly pre-1950 and may be from the 1800's. During our visit in January 1992 we interviewed several people from the now aban-

doned village of La Bruja and spent a considerable amount of time in mountains in the immediate area. Local residents stated that the "spirits" were heard only at the coast although one person said that occasionally they were heard inland. Those who fished locally said that the sounds were heard only at coastal La Bruja and occasionally the "spirits" would swoop at the fishermen's torches. Wingate (1964) previously reported that *Pterodroma hasitata* was attracted to fire in Haiti.

Cries of Black-capped Petrels can be heard from November to March at this one point off the southeastern Cuban coast. Local fishermen interviewed in January 1992 stated that the sounds occurred every night during the winter. This season generally corresponds with the period in which these petrels are believed to nest. During our visit and Vina's previous observations the birds could be heard only after dark (the first we heard was at 18:35 h on 20 January 1992) with the increase in number of vocalizing birds suggesting that birds continued to arrive for several hours. The birds vocalized throughout the night and ended just before dawn (05:30). No birds were seen at dawn or dusk or at night even though we watched during a full moon (Lee has heard these petrels vocalizing at sea off the North Carolina coast in December).

After listening from a sea cliff on the night of 20–21 January 1992 we concluded that the birds were coming in close to the coast at night to feed. There was no indication that they flew into the mountains. The petrels appeared to come in from far out at sea. Those collected at dusk in 1977 all had empty stomachs. On our January 1992 visit no birds were seen or heard over land or even within a few hundred m of the coast.

Vina collected his 6 birds in 1977 offshore from a small boat. He did not see or hear any birds until dusk when he saw several flying in from further out at sea. They flew low around his boat. He noted at least three types of vocalizations. The loudest and most common cry was a low "growl". The other sounds were described as a "bark" and a "purr". The only sounds we could hear from land in 1992 were the "growls" and "barks".

It is not possible to estimate the number of Black-capped Petrels off "La Bruja" at night. We do not know how frequently individual birds

vocalize, how long they remain in the area or the width of the area they use. Based on the cries we heard in January 1992 there were at least several hundred birds present at any one time.

A close study of the sea's surface in January 1992 indicated that there was a strong area of upwelling ca. 5 km off the coast at La Bruja. Several White-tailed Tropicbirds (*Phaethon lepturus*) and terns (*Sterna* spp.) were seen feeding above the upwelling. The zone of upwelling was so strong that the swelled sea surface there could be seen with binoculars from shore. This upwelling was quite localized, extending only 1.5 km to the east and 2 km to the west of La Bruja. This corresponds to the area delineated by Vina in 1977 as the only area along the coast where the Black-capped Petrels could be heard. The waters off the southeastern coast of Cuba are quite deep with one area off La Bruja in the adjacent Cayman trench 7241 m below sea level. One kilometer from shore the sea floor drops to 500 m. We assume that the *Pterodroma* were attracted to prey that concentrate in the deep upwelling. We believe these birds are from the breeding colonies in Haiti (about 500 km SE straight line distance).

Measurements and plumage coloration of four of the six Cuban specimens examined by Lee are consistent with specimens from Hispaniola, North American storm-driven birds, and ones collected in offshore waters of the southeastern United States. The other two Cuban specimens still exist but were not available for study. Of the four birds collected by Vina on 28 January 1977 three were adult females and one was a male. Two others collected later that month were not sexed.

While it is not possible to emphatically state that Black-capped Petrels do not nest in the Sierra Maestra or elsewhere in Cuba, there is no indication that they do or ever have, and the published statements concerning their breeding in Cuba have no basis. Unlike Haiti, which has extensive cave fossil deposits of *Pterodroma* (Florida State Museum collections), there is no known *Pterodroma* material from Cuban caves despite intensive cave surveys.

The nesting colonies discovered by Wingate (1964) in Hispaniola are the only ones known to be extant. This species was subsequently discovered nesting in the Dominican Republic in 1971

(Ottenwalder & Vargas 1979) just over the border from, and in the same mountain range, as Wingate's Haiti populations but this colony is small and apparently declining (roughly 5 pairs January 1990; Lee and J. C. Haney, pers. obser.). The population in Haiti was originally estimated to be 2000–20000 pairs (Wingate 1964). While the present population size is unknown, because of current land use practices, combined with the fact that breeding adult petrels are eaten by local people, it is certain that the Haiti populations are declining. Woods & Ottaweter (1983) revisited several of Wingate's colonies and noted a decline in the number of birds at one colony and in the number of active colonies. Because of the uncertainty of the size of the supposed Cuban population it was difficult to assess the conservation status of this Caribbean endemic. Without evidence of nesting in Cuba it is likely that Hispaniola and perhaps Dominica (van Halewyn & Norton 1984) support the only breeding colonies. The small size of the known populations, combined with conservation problems in Haiti demand that this species is in need of protection. We believe that *Pterodroma hasitata* is endangered on a global basis and recommend that it receive this status formally.

#### ACKNOWLEDGEMENTS

We thank Orlando H. Garrido for encouragement of this study and Robert W. Dickerman, J. Chris Haney, and N. Vina Bayes for help with

various aspects of the field work. Mark Robbins supplied photocopies of key references. The Cuban Academy of Sciences was most cooperative and provided necessary field support in 1992. Mary Kay Clark made helpful suggestions in the wording of the text.

#### REFERENCES

- American Ornithologist's Union. 1983. Checklist of North American Birds. 6th edition. Washington, D.C.
- Bond, J. 1978. Twenty-second supplement to the checklist of birds of the West Indies (1956). The Academy of Natural Sciences of Philadelphia.
- Bond, J. 1985. Birds of the West Indies. 5th edition. Boston.
- Haney, C. 1987. Aspects of the pelagic ecology and behavior of the Black-capped Petrel (*Pterodroma hasitata*). Wilson Bull. 99: 153–168.
- Ottenwalder, J. A., & T. Vargas M. 1979. Nueva localidad para el Diablotin en la Republica Dominicana. Naturalista Postal 36/79: 185–186.
- Van Halewyn, R., & R. L. Norton. 1984. The status and conservation of seabirds in the Caribbean. Pp. 169–222 in Croxall, J. P., P. G. H. Evans & R. W. Schreiber (eds.). Status and conservation of the world's seabirds. ICBP Technical Publication No. 2.
- Wingate, D. B. 1964. Discovery of breeding Black-capped Petrels on Hispaniola. Auk 81: 147–159.
- Woods, C., & J. Ottenwalder. 1983. The montane avifauna of Haiti. Pp. 607–622 in Proceedings Jean Delacour/IFCB Symposium.

Accepted 3 June 1993.