

# Capturing Black-capped Petrels at Sea: Report from the August 2012 Expeditions

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The Black-capped Petrel (BCPE, *Pterodroma hasitata*) historically nested at many sites throughout the Caribbean, but deforestation, human hunting pressure and predation have reduced the distribution to three remote sites on Hispaniola. The current global population may be as few as 5,000 birds, but the large numbers sometimes seen at sea off the eastern coast of the United States (200-300 per day in relatively small areas) suggest that other nesting areas probably exist. With the population apparently declining and no obvious threats to the birds at sea, threats on the breeding grounds are suspected to be driving population declines. However, protecting them on the breeding grounds is difficult when knowledge of the exact locations of nesting areas is so poor. The Conservation Action Plan for the Black-capped Petrel (2012) identifies the discovery of new nesting sites as the top conservation research priority for the bird. Nesting is suspected on Cuba, Jamaica, and Dominica, and additional nest sites may also exist in Haiti and the Dominican Republic where they are already known to occur. However, since BCPEs only visit their nest sites at night under cover of darkness and they nest on high, steep mountain slopes, detecting their presence and estimating the population is extremely difficult. Birds captured at sea and fitted with satellite transmitters could lead conservationists to new nesting locations where conservation measures could be put into place.

The goal of our project is to capture BCPEs at sea, affix satellite transmitters, and track the birds to their nesting grounds. We will attempt to capture birds off the coast of North Carolina near Cape Hatteras. This is an area where the continental shelf comes relatively close to land. BCPEs are frequently seen here along the western margin of the Gulf Stream during pelagic birding trips. This is a brief account of our first two expeditions.

Our team consisted of George Wallace (ABC's Vice President for Oceans and Islands), Pat Jodice (South Carolina Cooperative Fish & Wildlife Research Unit-Clemson), Dustin Meatty (Biodiversity Research Institute), and Lisa Eggert (formerly Biodiversity Research Institute and co-worker of Pat's). Our vessel was the 61' Stormy Petrel II, skippered by Brian Patteson with mate Kate Sutherland. Brian has run pelagic birding trips out of Hatteras since 1995 and is a highly regarded expert on the identification of seabirds. He has extensive knowledge of the distribution and behavior of BCPE and other seabirds in these waters. Brian and Kate were excellent to work with, know the birds really well and how to attract them, and were a big help with our gear.

We elected first to do a day trip to see the Black-capped Petrels (BCPE) and try out some of our equipment in day light. We left at about 6:15 am on Tuesday 28 August 2012 and headed ESE from

Hatteras Inlet out to 30-32 miles in 1,000-3,000 feet of water in the Gulf Stream and just east of the Continental Shelf break. We encountered a total of 16 BCPE. The birds were attracted to chum, but stayed well away from the boat. Two birds approached briefly to approximately 50+ yards. Other species, such as Greater Shearwater and Wilson's Storm-Petrel approached very closely, right to the stern in the case of the shearwater. Other species seen offshore included Cory's Shearwater, the most common seabird encountered, Audubon's Shearwater, Sooty, Bridled, and Black Tern, and Pomarine Jaeger. A single Spotted Dolphin rode the bow for a few minutes.

We tested a floating mist net. Floating nets have been used in more shallow bay waters to trap sea ducks and murrelets. In these settings, nets can be anchored to the bottom and/or the shore. On the open ocean, the net must be designed so that rigid cross members maintain the distance between the net poles. This adds to the weight of the net. We had tested the net on fresh water prior to departing, but we had lingering questions about our ability to deploy it at sea. Unfortunately, it was not possible to deploy the net, although we tried hard. It would need significant modifications in order to make it possible to get it into the water and to recover it. Even then, the net can only be used under the calmest of conditions, and we are left with the issue of how to get birds out of the net if we do catch any. An added strike against the net is that, it is, like any mist net, an indiscriminant method in that anything can get caught in it, and BCPE are not the most common species present. So, we are much more likely to spend time extracting species other than BCPE from the net. Conditions were good for trying this and we felt like we worked hard to make it happen. However, we do not plan to invest more effort in this technique. No BCPE came within range of our net guns.

On Thursday 30 August, we headed out at 5:20 PM for an overnight trip. Our route was similar to our day trip in that we headed out past the shelf break to approximately 32-34 miles offshore, this time more to the south of our day-trip area so that we could drift northward on the Gulf Stream overnight without ending up far north of Hatteras Inlet. The conditions were flat calm with only occasional light and variable winds. Skies were clear with a bright full moon. These were not the conditions we might have chosen. The dates of our first canceled trip in mid-July would have occurred around a new moon and would have been much darker. We were interested in these conditions because we know that related species of petrels are very attracted to lights and most fall-out due to light attraction happens around the new moon when there is less competing light. However, with Brian Patteson committed to other surveys during the rest of September farther north, we felt we needed to get on the water and at least try or risk waiting another month.

Sundown was at about 7:30 PM. By then we had not seen any BCPE and we could see Cory's Shearwaters and Wilson's Storm-petrels settling on the water, apparently to roost. Throughout the night we ran a generator to power two banks of two 500 w flood lights, put out lots of chum (menhaden, shark liver, and menhaden oil), so that we always had a good slick behind and around us. We alternated dead drifts with short movements of a few miles after which we would drift again and continue chumming. During 11 PM – 4 AM, we also played BCPE breeding calls for 5 min with 20 min breaks when we were not underway between drifts. In all we played the calls for 8 periods. We scanned for birds with binoculars all night. We did not attract any birds of any species to the boat throughout the night.

Starting at 4 am, we began cruising slowly and looking for roosting groups of birds and approaching as close as we could to put lights on them for identification and hopefully a shot with the net gun. Unfortunately, we only found groups of Cory's Shearwaters. By 6:20 AM, it was effectively daylight and it was only after then that we saw any BCPEs when they and other birds got up and started moving around. We recorded 9 birds before we headed for port at 7:30 AM.

Certainly, this outcome was disappointing, but we do feel like we learned a lot by getting out there and seeing the birds in action. We failed to catch birds under a very specific set of conditions and we do not believe we know how birds might behave under different conditions, such as with less moonlight and more breeze. So, it is certainly too early to conclude that BCPEs cannot be caught at sea. As noted above, we had bright moon light to compete with. The light wind conditions did little to carry the scent of our chum and we also know that windless conditions are not preferred by Procellariiformes. We may also find that birds are more responsive to calls nearer to the petrel breeding season. We plan to try again when Brian Patteson is available from October onward.