Bulwer's Petrel off the North Carolina Coast



Bulwer's Petrel, about 72 km southeast of Oregon Inlet, North Carolina. These photographs show the long-winged and long-tailed aspect of this species in flight, as well as the broad, long buffy "carpal bar" of the upperwing. Note too the relatively small head and bill. Photographs/Mary Gustafson

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The first week of August 1998 along the coast of North Carolina was characterized by strong northeasterly winds, owing to one or two cold fronts that pushed southward into the state. Such "back-door" cold fronts—dropping down from New England rather than coming from the west or northwest—are rather rare in summer, and few are strong enough to weather out pelagic trips. However, five pelagic trips scheduled off Oregon Inlet and off Hatteras between the first and third of August were cancelled because of heavy seas. Winds remained strong out of the northeast through the seventh but were predicted to lessen by the weekend of August 8 to 9.

Because of the frustrations of the previous weekend—and the potential to finally get offshore following winds that might help concentrate seabirds in the Gulf Stream—there was considerable anticipation when 22 birders joined the three of us aboard the *Country Girl* in Manteo on August 8. The winds on that day were light and southeasterly and the seas glassy calm, excellent conditions for finding large numbers of birds. Skies were mostly sunny and temperatures high, making for sweltering conditions.

By mid-morning, we had seen several dozen each of the three common shearwaters—Cory's *(Calonectris diomedea),* Greater *(Puffinus gravis),* and Audubon's *(P. lherminieri)*—most of these resting on the becalmed water. These three species are dark above and whitish below. Thus, when we saw a medium-sized, all-dark bird flush from a group of resting shearwaters, we immediately focused on this unfamiliar species. Even at a considerable distance, perhaps 500 m, we were able to observe pale carpal bars, such as those found on many storm-petrel species. Seabirds that typically lack pale carpal bars in fresh plumage—such as dark-morph Herald or Trinidade Petrel *(Pterodroma [a.] arminjoniana),* dark-morph Parasitic Jaeger *(Stercorarius parasiticus),* and immature Sooty Tern *(Sterna fuscata)*—as well as noddy terns *(Anous* spp.) were species we considered briefly as we studied this bird, but it soon became apparent that it was smaller than a gadfly petrel or jaeger but clearly a tubenose, not one of the terns, which have long, thin bills. LeGrand tentatively identified the bird as a Bulwer's Petrel *(Bulweria bulwerii)* upon seeing the carpal bars, but we asked Captain Allan Foreman to chase the bird to make sure of the identity. We caught up to the bird and were able to parallel it with the boat for a few minutes. Gustafson, along with Sandy Komito, took several photographs for documentation.

The location of the sighting was approximately 72 km south-southeast of Oregon Inlet, at about 35° 15′ N, 75° 05′ W. The depth of the ocean was approximately 300 fathoms (600 m). We did not obtain a water temperature reading, but the location was in the inshore portion of the Gulf Stream, well west of the western wall of the Gulf Stream, not in the truly warm Stream waters.

DESCRIPTION

The bird was a sooty-brown overall with wide buffy carpal bars that widened toward the carpal joint (or "wrist"). The wings were very long, pointed, and angled at the wrist. The tail was long and pointed and appeared to be an extension of the body; it was never fanned in flight. The head appeared fairly small, and the bill was small and dark.

The size of the bird was slightly smaller than an Audubon's Shearwater, which was present for comparison in flight. In bulk, it was clearly slimmer than the shearwater, but in wing length and body length it approached the shearwater. In fact, when the bird was seen without other species for size comparison, it gave the impression of a larger species, perhaps the apparent size of a small jaeger or a Bridled Tern *(S. anaethetus).* This size discrepancy was likely due to

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the very long wings of the Bulwer's Petrel and to its much larger size than storm-petrels that occur locally.

The flight of the bird was somewhat like that of a Leach's Storm-Petrel *(Oceanodroma leucorhoa)* or a Common Nighthawk *(Chordeiles minor)*. The Bulwer's Petrel has the lowest wingloading of any tubenose (Enticott and Tipling 1997), and, in fact, the bird's flight was very buoyant and "bouncy," with the wings always being bent and bowed at the wrist. After each wing-beat, the bird tended to twist or roll slightly from side to side. After several wing-beats, the bird glided with wings distinctly bowed and bent at the wrist. The bird stayed within approximately one meter of the water, and it did not rise and fall or arc over the water. Its flight was moderately fast, perhaps close to 25 knots, but the boat was able to overtake the bird such that the observers were able to view the petrel for several minutes.

DISCUSSION

Similar Species. Bulwer's Petrel should be confusable with very few other species, as it is neither a storm-petrel nor a gadfly petrel *(Pterodroma)*. The species most similar is the much larger Jouanin's Petrel *(B. fallax)*, which lacks or has poorly demarcated carpal bars and possesses a graduated tail rather than a pointed tail. It is also limited to the Indian Ocean.

The many species of all-dark storm-petrels (i.e., those without white rumps) have forked or squared tails, and the only such storm-petrel known from the North Atlantic Ocean is the very rare Swinhoe's Storm-Petrel *(Oceanodroma monorhis)*, which is much smaller than Bulwer's Petrel. Bulwer's might be most reminiscent (to North American birders) of Black Storm-Petrel *(O. melania)*, which is somewhat similar in size, flight style, and overall coloration; however, that species does not have a long pointed tail, its wings are shorter, and it is known only from the North Pacific Ocean. The white-rumped storm-petrels found in the North Atlantic, of course, are noticeably smaller than Bulwer's Petrel as well. Gadfly petrels can normally be excluded by their lack of pale carpal bars, but worn individuals can show pale bars. However, birds in this genus, as well as the Kerguelen Petrel *(Lugensa brevirostris)*, show neither a long and pointed tail nor very long and constantly bent or bowed wings; in overall appearance and flight style, *Pterodroma* and *Lugensa* species look rather husky and stiff-winged compared to the slender and bent-winged *Bulweria*.

Distribution and Dispersal. Bulwer's Petrel occurs in the temperate and tropical waters of the Atlantic, Pacific, and Indian Oceans. In the Atlantic, breeding takes place only on islands in the eastern portion, off the coast of Africa. Megyesi and O'Daniel (1997) list the Azores, Madeira Islands, Desertas, Great Salvage Island, Canary Islands, and Cape Verde Islands as breeding sites in the Atlantic. The Atlantic population is thought to number several tens of thousands of breeding pairs (del Hoyo et al. 1992), but this estimate may be overstated. Zino and Biscoito (1994) estimate 1000 pairs on Porto Santo and nearby islets in the Madeira archipelago, about 500 pairs on Bugio and 1000 pairs on Deserta Grande and Ilhéu Chão. On the Selvagems (Salvage Islands), Zino and Biscoito (1994) revise earlier estimates and reckon 5000 pairs there. In the Cape Verde Islands, Bulwer's is only known to breed on the islets of Cima and Raso, with about 100 pairs (Hazevoet 1994). On the Azores, they nested formerly on both Santa María and Graciosa but more recently (Paterson 1997) have only been confirmed on the former, with estimates of 500 to 1000 pairs (Tucker and Heath 1994). Finally, on the Canary Islands, the total population is about 1000 pairs in 35 colonies (Hernández et al. 1990). The most recent population estimates from the eastern North Atlantic thus total only about 9100 to 9600 pairs.

In the Madeira archipelago, and in most other Atlantic nesting areas, the first returning adults appear in April, and birds are common at sea by late May (Zino and Biscoito 1994). Nesting generally takes place from May to July, with egg-laying usually in early June and fledging of young about 100 days later (Zino and Biscoito 1994) Dispersal from the colonies begins in late August through September and October (Harrison 1983), but breeding failure can be fairly high in the species, such that some birds may disperse earlier (Zino and Biscoito 1994). Most of the Atlantic population moves south and west to winter in the South Atlantic off northeastern Brazil, as far as 30° to 40° S (Bourne 1995, Megyesi and O'Daniel 1997).

The August 8, 1998, record of Bulwer's Petrel is the first to be documented by photograph for the waters off eastern North America There are no known specimens from this region, but there are several published sight records. The first published report was of a probable Bulwer's Petrel off Key West, Florida, on May 14, 1969 (Taylor 1972). Another was reported off northeastern Florida on May 1, 1984 (Haney and Wainright 1985). Unpublished is a credible sight record of a single Bulwer's from the *Argentia*, the ferry between Newfoundland and North Sydney, Nova Scotia, on July 15, 1980, by David Wolf and Bret Whitney (Whitney, pers. comm.). A sight record for Virginia about 80 miles east of Chincoteague on August 15, 1993, is plausible but was not accepted by the state records committee (Kain 1995). There are also several sight records for the southeastern Caribbean Sea and the Netherland Antilles (Voous 1983, Tostain 1987). Apparently the only known specimen for the western North Atlantic is a Bulwer's Petrel found dead on Soldado Rock off Trinidad in the West Indies, on January 23, 1961 (ffrench 1963).

In waters off North Carolina, Hass observed one in the Gulf Stream off the Outer Banks on July 1, 1992 (Hass 1995). The North Carolina Bird Records Committee (1994) accepted this sight record Lee (1995) "briefly saw a bird fitting the description of this species off North Carolina on 6 June 1979." This sighting was not mentioned in other papers summarizing the distribution of seabirds off North Carolina (Lee 1984, 1986) and still lacks published details (cf. Tove et al. 1998).

A Bulwer's Petrel was observed and photographed off the coast of California on July 26, 1998; photographs and descriptions of this bird have appeared in the present journal (*FN* 52: 498 & 519), making it the first documented record of the species for the Pacific Ocean waters of the mainland United States (Roberson et al. 1999). There is a report of the species seen at the north end of the Salton Sea, Riverside County, California, on July 10, 1993, following a tropical storm (Small 1994). The species breeds in the Pacific as close to California as the Hawaiian Islands (American Ornithologists' Union 1998).

Based on the very few reports of the species from both coasts of the United States, it is apparent that this distinctive and relatively easily identified species does not widely disperse toward the western North Atlantic or the eastern North Pacific. This scarcity of records is in stark contrast to the regular appearance of several other species that nest on the same islands in the eastern Atlantic. Moreover, the relative abundance of these regularly encountered species in the western North Atlantic closely parallels their documented population sizes in the eastern North Atlantic (Hass 1995). For example, Cory's Shearwater is a common visitor to the western Atlantic in the warmer months, and Band-rumped Storm-Petrel *(Oceanodroma castro)* is regular in some numbers, particularly off North Carolina White-faced Storm-Petrel *(Pelagodroma marina)*, whose populations are smaller, is a rare but somewhat regular late summer and fall visitor to the northeastern and mid-Atlantic states. The very rare Fea's

Petrel *(Pterodroma feae)* has been seen on about 32 occasions off North Carolina (Tove 1997; Brinkley and Patteson 1998). On the other hand, Little Shearwater *(Puffinus assimilis)* shows apparently even less trans-Atlantic movement than does Bulwer's Petrel, as there are just two specimens, from Nova Scotia and South Carolina (A O U. 1998). We are not aware of any photographs or accepted sight records of Little Shearwater from the western North Atlantic.

There are too few records and reports of Bulwer's Petrel in the western North Atlantic to show any pattern of occurrence. Nonetheless, with the continued interest in pelagic bird distribution off both coasts of the United States and Canada, additional records of the Bulwer's Petrel might be expected every few years, at least off the southeastern coast of the United States and in the Caribbean Sea.

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