

# Bulwer's Petrel in the South Atlantic Bight

**Recent surveys in this area reveal unexpected frequencies and seasons of occurrence for several eastern North Atlantic seabirds**

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**O**N MAY 1, 1984, WE OBSERVED an unfamiliar procellariiform bird while censusing seabirds in the South Atlantic Bight off the northeastern coast of Florida (Fig. 1). At approximately 3:35 p.m. EDT, an all dark, storm-petrel-like bird flew across the bow 100-200 meters from the ship, the *RV Cape Hatteras*. A few moments later the bird reappeared and we watched it continually for a period of 60 to 90 seconds.

The following description is based on field notes and sketches we made immediately after the observation. The bird was uniformly dark sooty- or blackish-brown dorsally, without a white rump. The ventral coloration was similar to that of the dorsal surface. No evidence of any light color was noted on the bird. The tail was quite long, giving the impression that the caudal portion of the body (behind the wings) was 1.5 to 2 times the length of the cranial portion (in front of the wings). The tail attenuated uniformly to a blunt point. The wings were long, narrow, and angled at the carpal joint. The bill was dark, stubby, and neither as long as a small shearwater's nor as thick as a gadfly petrel's. We did not see the legs.

The bird was seen as close as 50 meters from the ship through 9 × 35 Bausch and Lomb binoculars. At one point a Wil-

son's Storm-Petrel (*Oceanites oceanicus*) was in view fewer than four meters from the unidentified procellariiform. The latter bird was approximately 50% larger and of very different proportions, appearing much slimmer, with more angled, narrow wings.

The flight of the unidentified bird was unlike any species previously seen in two years of bi-monthly surveys of seabirds in the region. On three or four occasions the bird made abrupt turns in its otherwise horizontally direct flight, enabling us to view it from several angles. It flew with a few rapid wing beats followed by a longer glide, resulting in relatively long, shallow *Pterodroma*-like arcs. The wings were slightly bowed during the glides and were tilted toward the vertical plane during the peak of the arc. At no time did we observe the bird flying more than two meters from the water's surface. During this period, winds were southerly at 15-18 knots and sun conditions consisted of even lighting from high thin overcast skies.

Other species of seabirds observed in the vicinity before and after this sighting included Wilson's Storm-Petrel, Band-rumped Storm-Petrel (*Oceanodroma castro*), Black-capped Petrel (*Pterodroma hasitata*), Audubon's Shearwater (*Puffinus therminieri*), Pomarine Jaeger (*Stercorarius pomarinus*), and Sooty

Tern (*Sterna fuscata*). We eliminated dark-phase jaegers (*Stercorarius*, sp.) and Brown Noddy (*Anous stolidus*) from consideration. These two species are both larger with more direct flight and longer, slimmer bills. Other seabirds we eliminated as possibilities were Sooty Shearwater (*Puffinus griseus*), and dark-phase Herald Petrel (*Pterodroma arminjoniana*), which are much larger, with some light-colored plumage normally present. The towering flight of the Sooty Shearwater in moderate to high winds is distinctive. Lee (1979 and 1984) gave detailed descriptions of the flight behavior and appearance of dark-phase Herald Petrels and they differ markedly from the bird observed. Haney had prior at-sea experience with field identification for each of these species elsewhere. We concluded that the bird we had observed was a Bulwer's Petrel (*Bulweria bulwerii*), after consulting Tuck and Heinzel (1980), Harrison (1983), and several standard North American field guides. The similar, larger Jouanin's Petrel (*Bulweria fallax*) is unlikely to wander from the western Indian Ocean into the North Atlantic, although long-distance vagrancy has been reported in the Pacific (Harrison 1983). Jouanin's Petrel also has a higher flight typical of *Pterodroma* petrels (often 15-20 meters above the water surface) at the wind speeds we witnessed (cf. Harrison 1983).

We did not observe two additional field marks characteristic of the Bulwer's Petrel. A paler diagonal, dorsal wingbar, similar to those of several storm-petrels, may be noticeable only at close range, under better-than-average lighting conditions (Harrison 1983). The diagnostic wedge-shaped tail is normally visible only briefly during flight maneuvers or when the observer is high above the bird (Alibone 1980; Gauntlett 1981; Harrison 1983). The tail is usually folded in a tapering point in flight.

**T**HE BULWER'S PETREL BREEDS ON subtropical and tropical oceanic islands in the eastern North Atlantic in the Salvages, Porto Santo, Desertas, Canary,

Cape Verde, and Berlengas islands, and formerly in the Azores (Cramp and Simmons 1977). The post-breeding, at-sea distribution of Bulwer's Petrel is not well known (Clapp *et al.* 1982). It is thought to disperse southwest to tropical seas between 20°W and 50°W in winter, and return to breeding colonies in April and May. Vagrants have appeared in Ireland and England and a few have been recorded west to the Sargasso Sea and Lesser Antilles (Cramp and Simmons 1977).

In the western North Atlantic, the occurrence of Bulwer's Petrel has been documented conclusively on only one occasion. A dead bird was found on Soldado Rock off Trinidad, West Indies, January 23, 1961 (French 1963). Taylor (1972) observed this species May 14, 1969, between Key West and the Dry Tortugas, Florida, and David S. Lee (*pers. comm.*) states that he briefly observed a bird fitting the description of this species off North Carolina. Additional recent sight records of Bulwer's Petrel also exist for the southeast Caribbean and Netherlands Antilles (Ruud van Halewijn, *pers. comm.*).

We made our observation at 30°15'N, 79°37'W, 98 statute miles from nearest land (Anastasia Island, Florida), and 102 statute miles east of Jacksonville Beach, Duval County, Florida (Fig. 1). This position is on the Blake Plateau near the central axis of the Gulf Stream at a depth of 830 meters. Water surface temperature was 25.8°C. The bathymetry of this area north to 32°N is distinctive and unique for the Blake Plateau, an intermediate topographical feature between the continental shelf and slope. A series of subterranean ridges, mesas, and bowls traverse the region. Relief of 100-200 meters over short distances in concert with the strong Gulf Stream current contribute to vertical transport in the water column. Surface turbulence is often apparent at these locations. Concurrent oceanographic and seabird studies conducted during 1983 and 1984 revealed higher densities of seabirds here relative to other Gulf Stream locations (Haney *et al.*, *in prep.*).

The significance of records for vagrant seabirds is often difficult to ascertain. When the total source population of a particular species is small, if the species is solitary in its habits, or if a region has been little studied, the difficulty in interpreting vagrant records is compounded. All of the preceding factors are relevant here. The South Atlantic Bight has been a major hiatus in our understanding of sea-

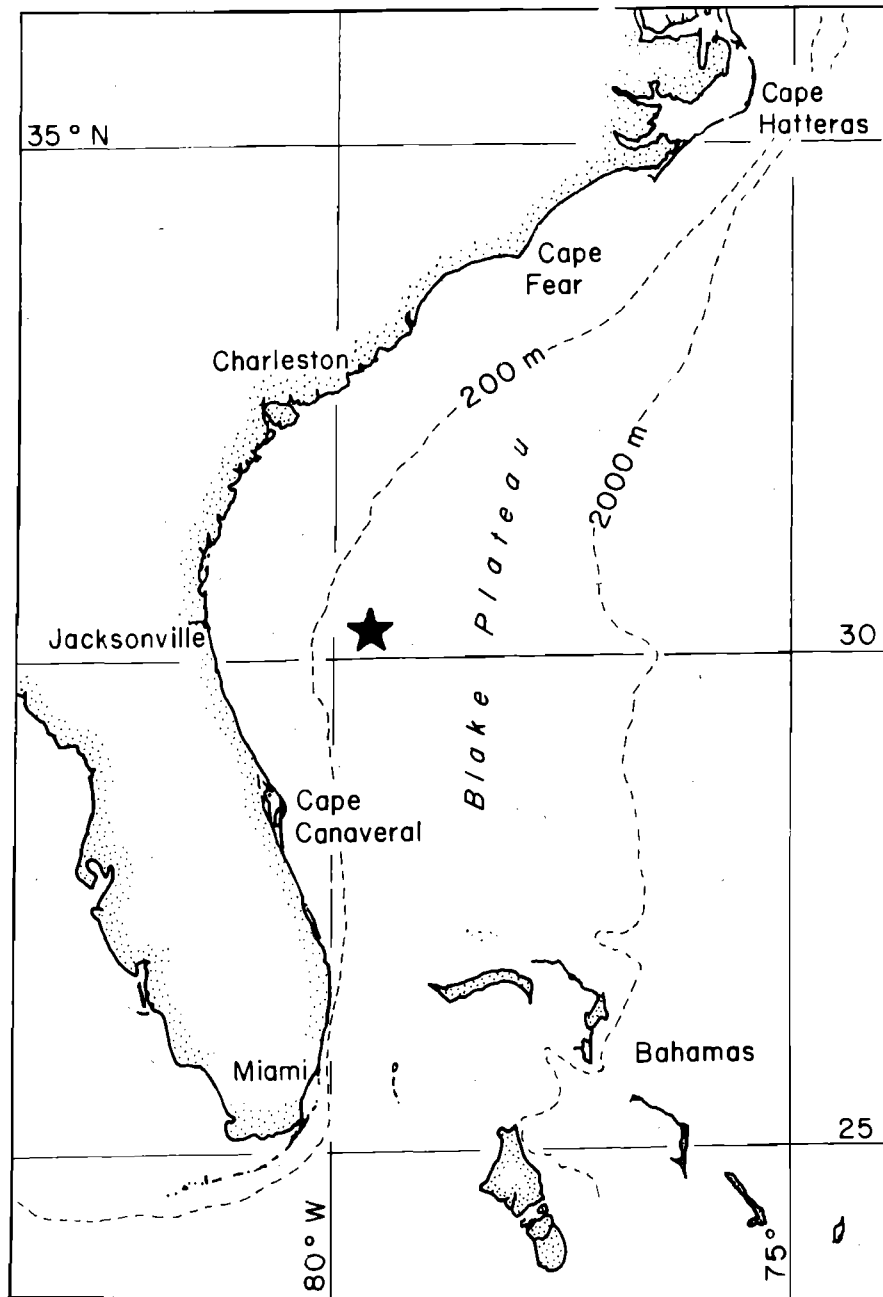


Figure 1. Map of the South Atlantic Bight with the ★ showing location of Bulwer's Petrel sighting. Depth contours are shown by dashed lines.

bird distribution in the western North Atlantic. This is particularly true of the extensive tropical, deep water areas east of the continental shelf between Cape Hatteras, North Carolina, and Cape Canaveral, Florida. Seldom have observers ventured into really deep water zones in any area off the southeastern United States coast, especially during winter when post-breeding Bulwer's Petrels may disperse from the eastern Atlantic. Recent surveys conducted since 1982 have revealed previously unexpected frequencies and seasonality for Masked

Booby (*Sula dactylatra*), Black-capped Petrel, Band-rumped Storm-Petrel, as well as others.

Several seabird species breeding in the eastern North Atlantic disperse to western North Atlantic waters unassisted by hurricanes or other weather disturbances. The Cory's Shearwater (*Calonectris diomedea*), is a notable example, but this pattern is exhibited also by White-faced Storm-Petrels (*Pelagodroma marina*), and Band-rumped Storm-Petrels (Lee and Booth 1979; Lee 1984; Haney 1983). Additionally, some North American rec-

ords of the Manx Shearwater (*Puffinus puffinus*) may be of individuals breeding in the eastern Atlantic. The recent sight record of Soft-plumaged Petrel (*Pterodroma mollis*), off North Carolina (Lee 1984) and the Bulwer's Petrel reported here, suggest that other species may be involved as well. Whether the Bulwer's Petrel actually follows the pattern of other eastern North Atlantic seabirds may remain a mystery until temporal and spatial coverage of pelagic waters off the southeastern United States is increased.

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Sanderlings (*Calidris alba*). Illustration/Georges Dremeaux