RECENT OBSERVATIONS SUGGEST BULWER'S PETREL *BULWERIA BULWERII* MIGHT BREED ON ST HELENA

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Bulwer's Petrels (*Bulweria bulwerii*) have been observed at sea in the South Atlantic Ocean, but they have not been confirmed to breed in the area (Megyesi & O'Daniel 1997, Brooke 2004, Onley & Scofield 2007). St Helena, a 122 km^2 island located in the South Atlantic Ocean at 15°58'S, 5°43'W, was inhabited by the endemic *Bulweria bifax*, known only from subfossil deposits (Olson 1975), and possibly extirpated following invasion by mammalian predators (Rowlands *et al*. 1998). Bulwer's Petrels have been recorded as rare visitors to St Helena waters (Rowlands *et al*. 1998).

On 21 July 2011, we captured a Bulwer's Petrel on rodent-free Egg Island, situated 80 m off the western coast of St Helena, and took the following measurements: wing length: 210 mm; tail length: 130 mm; culmen: 21.95 mm; head length, including bill: 55.3 mm; full tarsus (measured to back of tibia): 31.8 mm. The bird had a clear brood patch that was not vascularized, and approximately 5% of its area was covered by newly regenerated body feathers. The identification of Bulwer's Petrel was subsequently confirmed on the basis of its wedge-shaped tail, plumage coloration and the morphological measurements.

On 17 August 2011, a second Bulwer's Petrel was found grounded on pastures on St Helena and later died during rehabilitation care. This bird had a refeathered brood patch that was not vascularized, and approximately 30% of its area was covered by newly regenerated feathers. The tarsus length (tarsus bone only) was 27.3 mm, full tarsus (to back of tibia) was 30.5 mm, and further measurements were as follows: wing length: 202 mm; tail length: 109 mm; bill width: 9.1 mm; bill depth (at nares): 9.4 mm; culmen: 21.2 mm; and head length, including bill: 53.8 mm. Differences in measurements make it unlikely that these two records involved the same bird. Liver samples of the second individual were sent to J. Bried (University of Montpellier), and the specimen was deposited with the St Helena Museum.

The measurements of the captured birds are consistent with known measurements of Bulwer's Petrel, and thus smaller than the size expected of the extinct endemic *B. bifax* or the related Jouanin's Petrel (*B. fallax*) (Olson 1975, Cramp & Simmons 1977, Megyesi & O'Daniel 1997).

We do not know whether either of these individuals were from an undiscovered breeding colony on St Helena. Both individuals had distinct brood patches at different stages of refeathering. However, in most species of petrel even non-breeders can develop a brood patch, and refeathering of the brood patch is similar regardless of breeding status (Warham 1990). The presence of a brood patch therefore does not allow a firm conclusion that the birds we observed were breeding on St Helena in 2011.

Recent geolocator tracking of birds breeding in the North Atlantic indicated that they winter in the South Atlantic and may occur at St Helena (Flood & Fisher 2011, Roscales *et al*. 2011). However, none of 10 tracked individuals departed their North Atlantic breeding grounds before late August (Roscales *et al*. 2011). Therefore, it is unlikely that the birds we observed on St Helena in July and August had dispersed from North Atlantic breeding colonies. Although immature birds of North Atlantic origin may occur around St Helena year-round, we speculate that there may be unknown breeding colonies of Bulwer's Petrels in the South Atlantic. As a small burrow-nesting seabird, Bulwer's Petrels would be highly vulnerable to rat predation (Jones *et al*. 2008), and if Bulwer's Petrels were currently breeding on St Helena they would therefore likely be confined to locations inaccessible to introduced mammalian predators, such as offshore islands or stacks.

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