

SEABIRDS OFF THE MADEIRA ISLANDS IN AUGUST

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With 5 figures and 3 tables

SUMMARY. During a week in early August 1990 a boat was chartered to sail from Madeira to the Desertas and Porto Santo. Eight days of observations of seabirds at sea were made and their distributions plotted. The most interesting records were the concentrations of *Pterodroma feae* (Fea's Petrel) and *Bulweria bulwerii* (Bulwer's Petrel). Reference is also made to Cetaceans and turtles.

RESUMO. Durante uma semana em Agosto de 1990, efectuaram-se viagens de barco entre as ilhas da Madeira, Desertas e Porto Santo, tendo sido registadas as observações de aves marinhas efectuadas durante oito dias.

Os registos mais interessantes foram as concentrações de *Pterodroma feae* (Freira do Bugio) e *Bulweria bulwerii* (Alma Negra). É também feita uma referência aos cetáceos e tartarugas observadas.

INTRODUCTION

Between 8 and 15 August 1990 a 12 metre yacht, the Jobacanda, was chartered to sail around the Madeira, Desertas and Porto Santo Archipelago. The course taken is shown in Figs. 1 and 2 and a total of 62.5 hours were spent observing seabirds at sea. The itinerary was:

- August 8 Madeira (Funchal) to Deserta Grande (1630-2030) (NE wind; force 4)
- August 9 West side of Deserta Grande and Bugio to 16km SW of Bugio; and return (1100-1900) (NE wind; force 4)
- August 10 West side of Deserta Grande and Bugio then east side north to eastern tip of Madeira (1015-1900) (NW wind; force 4)
- August 11 Eastern tip of Madeira to Porto Santo (1900-1530) (N Wind; force 4)
- August 12 Porto Santo (Ilhéu de Baixo) to western end of Madeira and return to eastern end of Madeira (1015-1900) (WNW wind; force 2)
- August 13 Eastern end of Madeira to the Desertas, looping round Bugio (1000-2000) (WNW

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wind; force 2)

August 14 From Deserta Grande large loop around Bugio going 11km out to SW (1100-1900) (N Wind; force 3)

August 15 Eastern side of Deserta Grande to eastern tip of Madeira, then to Funchal (0915-1745) (N Wind; force 4-5)

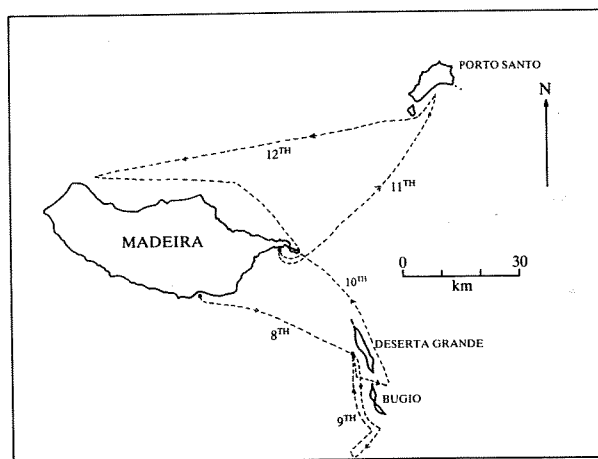


Fig. 1 - Sea routes between the Madeiran Islands 8 - 12 August 1990.

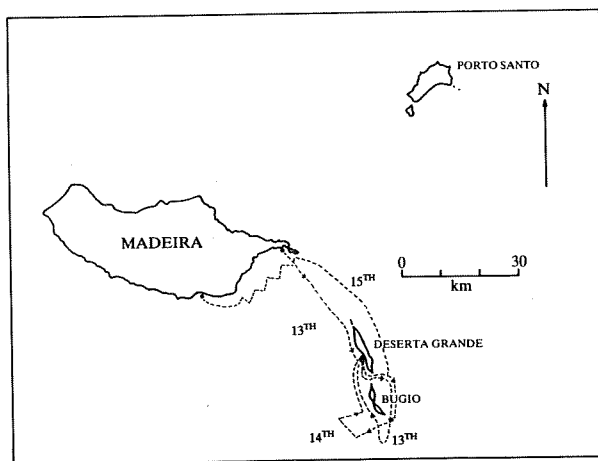


Fig. 2 - Sea routes between the Madeiran Islands 13 - 15 August 1990.

Seabirds were located by nearly constant scanning by all observers using binoculars of magnification x7 to x10. All birds were counted and their positions charted. A total of 8,408 sightings of 15 species were made and a summary of the observations is given in the systematic list. The commonest species were *Bulweria bulwerii*, Bulwer's Petrel, *Calonectris diomedea*, Cory's Shearwater and *Pterodroma feae*/*P. madeira* and Figs. 3, 4 and 5 map their distribution at sea.

The Observations and comments

Pterodroma feae/*P. madeira* Fea's Petrel/Madeira Freira. A total of 274 sightings, most to the east of Bugio (see Fig. 3 and Table 1). The largest concentration was 125, counted over a two-hour period on 13 August though a previous less extensive visit to the same sea area on 10th had indicated that the seas some 5-6kms east of the northern tip of Bugio were an important resting and/or feeding area for this species.

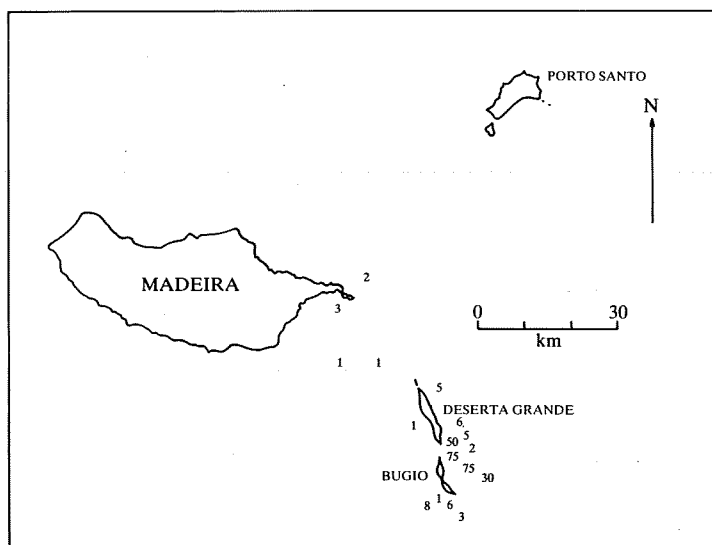


Fig. 3 - Distribution of *Pterodroma feae*/*Pterodroma madeira* at sea off Madeiran Islands: Hourly totals between 8 - 15 August 1990.

TABLE 1 - *Pterodroma feae/madeira*. Hourly totals at sea, Madeira/Desertas/Porto Santo archipelago, August 1990.

	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	
8th								1		1	2
9th					6	8					14
10th		75	2		5						82
11th	3	2									5
12th											
13th		1		50	75		3		1		130
14th			30								30
15th	5	6									11

Two species of the genus *Pterodroma*, *P. feae* and *P. madeira* breed in the archipelago of Madeira: *P. feae* in Bugio with an estimated population of 150-200 breeding pairs (ZINO & BISCOITO, 1994) and *P. madeira* in Madeira with a population in the order of 30 pairs. Whilst there is no published identification criteria for separating these two species in the field (i. e. at sea), the photographs taken of the birds off Bugio were shown to P. J. HAYMAN who is studying the morphology and taxonomy of these petrels. He was convinced after taking detailed measurements that the birds were *Pterodroma feae*; he based this on the comparative narrowness of the wings and small size of bill. It would also be reasonable to assume that the concentrations of 125 birds that we estimated to the east of Bugio were *feae* given both the closeness of their breeding island and the numbers observed. Presumably these included feeding, off-duty birds (early August is the height of Fea's breeding season with most pairs on eggs) though no further comment is offered on what proportion of the total population this might represent.

There have been no previous observations at sea which show such large numbers of Pterodromas in the Madeiran archipelago though this is doubtless a reflection of the paucity of pelagic trips, especially to the east of Bugio where our concentrations occurred. Two that have been made between Madeira and the Desertas in August and September recorded 20 and 17 respectively, several more than we observed on the same crossing (JEPSON and ZONFRILLO, 1988 and WHITEHOUSE, 1988). As many as 17 birds have been recorded on regular trips between Madeira and the Desertas (ZINO and ZINO, 1986) and occasionally up to 35 (F. ZINO pers. comm.). In early August 1988 'dozens of sightings' were made at long range from a headland off western Madeira (FISHER, 1989). On two crossings from Madeira to Porto Santo in July and September only one *Pterodroma* s.p. was seen (WHITEHOUSE, 1988 and ZONFRILLO *et al.*, 1986). This accords with our observations (and those of ZINO and ZINO, 1986) that the stretch of water between these two islands is one where Pterodromas rarely occur.

Bulweria bulwerii. Bulwer's Petrel. A total of 4,079 sightings, mostly to the south-west of Bugio, where the largest hourly total was 1,000 (See Fig. 4 and Table 2). Given the large number that breed on the island (JOUANIN, MOUGIN, ROUX and ZINO, 1979), it was not surprising to observe so many off the archipelago. It is interesting to note that the largest concentrations of *Pterodroma* were to the north-east of Bugio (compare Figs. 3 and 4). Bulwer's Petrel previously recorded in fairly high numbers at sea e. g. 70 between Madeira and Porto Santo in July, 2000 on the same route in August and 48 between Madeira and the Desertas in September (WHITEHOUSE, 1988 and JEPSON and ZONFRILLO, 1988). F. ZINO (pers. comm.) states that sightings of over 200 are not out of the ordinary.

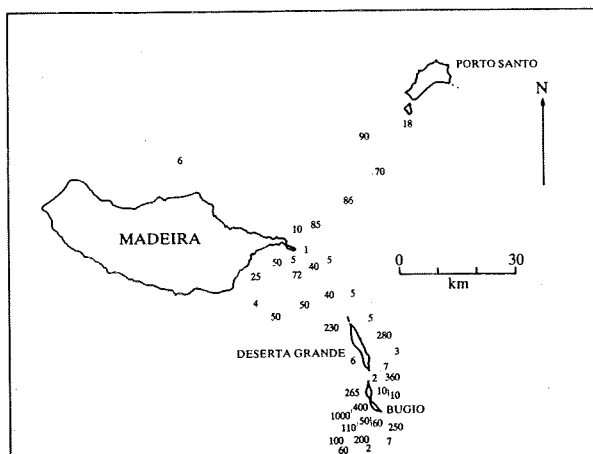


Fig. 4 - Distribution of *Bulweria bulwerii* at sea off Madeiran Islands: Hourly totals between 8 - 15 August 1990.

TABLE 2 - *Bulweria bulwerii*, Bulwer's Petrel. Hourly totals at sea, Madeira/Desertas/Porto Santo archipelago, August 1990.

	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	
8th								4	50	230	284
9th					320	110		265			695
10th		2	360	280			80	1			723
11th	85	86	70								241
12th	18	90		6					10		124
13th	72	50		6	10		7	2			147
14th			10	250	100	1000	400	50			1810
15th	7	3	5	5	5	5	25				55

Calonectris diomedea. Cory's Shearwater. A total of 3,879 sightings with a maximum of 500 in any one hour period (See Fig. 5 and Table 3). To observe so many off the archipelago was not surprising given the large numbers that breed in these islands (F. ZINO pers. comm.). Previously recorded in fairly large numbers e.g. 70 between Madeira and Porto Santo in July and 220 between Madeira and the Desertas in September (WHITEHOUSE, 1988 and JEPSON and ZONFRILLO, 1988). F. ZINO (pers. comm.) reported huge concentrations off Madeira in 1989 which may have totalled 10,000 birds.

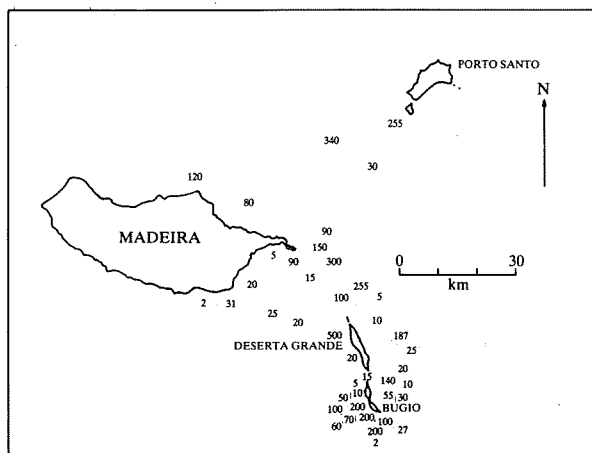


Fig. 5 - Distribution of *Calonectris diomedea* at sea off Madeiran Islands: Hourly totals between 8 - 15 August 1990.

TABLE 3 - *Calonectris diomedea*, Cory's Shearwater. Hourly totals at sea, Madeira/Desertas/ Porto Santo archipelago, August 1990.

	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	
8th							31	25	20	500	576
9th	15	10			200	70	<-	200	->		495
10th		140	15		187	<-		255	->	300	892
11th	90		30								120
12th	255	345					120	80	150		945
13th	15	100			55		27	2	5		224
14th			30	100	60	100	200	50			540
15th	20	25	10	5		5	20	2			87

Puffinus gravis. Great Shearwater. One to west of Bugio on 9 August. Previously recorded by SCHMITZ (BANNERMAN 1965), by SWASH (1986) when eight observed on 28 August 1981, by JEPSON and ZONFRILLO (1988) when five observed on 9 September 1986 and by F. ZINO (pers. comm.) who has regularly seen Great Shearwaters in October.

Puffinus puffinus. Manx Shearwater. One between Deserta Grande and Madeira on 10 August. Previous autumn records are for August: two in 1987 and 17 in 1988, and for September: two in 1984 and one in 1986 (MOORE, 1988; SWASH, 1986; ZONFRILLO *et al.*, 1986 and JEPSON and ZONFRILLO, 1988). Manx Shearwaters have been recorded as breeders for years (BANNERMAN, 1914; F. ZINO pers. comm.) but as they finish in July it probably explains why autumn numbers are so low.

Puffinus assimilis. Little Shearwater. A total of 30 sightings mostly singly, with a maximum of five in any one hour period. Birds were fairly evenly spread throughout the sea areas visited. One heard at night on Deserta Grande. Apart from the two Pterodromas this winter breeder is the least common of the tubenoses breeding on the Madeiran islands (F. ZINO pers. comm.). Other observers have only recorded this species in very small numbers at sea with e. g. in July one between Madeira and Porto Santo (WHITEHOUSE, 1988) and in August: three in 1981 (SWASH, 1986) and three in 1987 (MOORE, 1988).

Oceanites oceanicus. Wilson's Petrel. One between Madeira and Porto Santo on 11 August.

Oceanodroma castro. Madeiran Petrel. None observed at sea but one caught on Deserta Grande at night on 13 August, where several were heard calling. This species breeds throughout the archipelago (BANNERMAN, 1965) in fairly good numbers, but is difficult to observe at sea. Previously only recorded by F. Z. (pers. comm.) who reports observing two or three each year.

Sula bassana. Gannet. One immature south-west of Bugio on 9 August.

Arenaria interpres. Turnstone. One flying c10km east of Bugio on 10 August.

Stercorarius parasiticus. Arctic Skua. One dark-phase off Bugio on 14 August.

S. longicaudus. Long-tailed Skua. An adult flying south-east between Madeira and Porto Santo on 11 August. This is the first record for the Madeira archipelago.

S. skua. Great Skua. A total of four sightings between 8 and 13 August. All were closely scrutinised because of the possibility of *S. maccormicki*, South Polar Skua.

Stercorarius sp. (unidentified skuas). Two records of that bird were either *Stercorarius parasiticus* or *S. pomarinus* (Pomarine Skua).

Larus cachinnans. Yellow-legged Gull. About 30 frequented Funchal harbour, Madeira; up to 10 were observed at the eastern tip of Madeira and up to 25 along the west coast of Deserta Grande and Bugio. These numbers are surprisingly low as, for example, there is a huge breeding colony at the eastern end of Madeira and 1,500-2,000 pairs on Ilhéu Chão of the Desertas.

Sterna hirundo. Common Tern. Observed on the coastline of all islands visited; ca. 10 along the west and 10 along the east coast of Deserta Grande and Bugio; six at the eastern tip of Madeira; 20 around the harbour at Porto Santo and 80 on Ilhéu de Baixo, its neighbouring island.

Cetaceans and turtles. During our 62½ hours at sea it was a surprise to us that no Cetaceans were observed. Turtles were seen however on four days, totalling 24 individuals. All were thought to be Loggerhead *Caretta caretta* and indeed one caught on the 13th that had become entangled with nylon filament, probably from a drift-net, was positively identified as this species.

ACKNOWLEDGEMENTS

We would like to thank DR. FRANK ZINO for his encouragement and for commenting on the draft of this paper.

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