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ORNITHOLOGICAL WINTER OBSERVATIONS ON SELVAGEM GRANDE

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With 1 figure and 1 table

S u m á r i o . A avifauna da Selvagem Grande foi estudada de 4 de Dezembro de 1980 a 7 de Janeiro de 1981.

O objectivo da investigação foi o estudo das populações de aves marinhas e sua distribuição bem como a sua anilhagem. Foram levadas a cabo observações de aves no mar-alto.

Foram estudadas as seguintes espécies: Pintainho (*Puffinus assimilis baroli*), Alma de Mestre (*Hydrobates pelagicus*), Roque de Castro (*Oceanodroma castro*), Calcamar (*Pelagodroma marina hypoleuca*) e Alma Negra (*Bulweria bulwerii*). A Cagarra (*Calonectris diomedea borealis*) não foi observada.

São apresentados valores estimados dos efectivos das espécies acima mencionadas bem como delimitadas as áreas de nidificação e caracterizados pormenorizadamente os tipos de terrenos dessas mesmas áreas.

É fornecida uma lista das espécies de aves e número de indivíduos para além daquelas que são objecto de estudo no presente trabalho.

With the kind permission of the Serviço Nacional de Parques e Reservas e Património Paisagístico, Lisbon, the birdlife on Selvagem Grande was studied from 4th December 1980 to 7th January 1981, a total of 35 days.

The object of the investigation was to study the distribution and population of sea-birds and also to ring some of these birds. Furthermore, observations were made of the birds off-shore.

* Stenderupgade 7 2nd fl., 1838 Copenhagen V, Denmark.

Despite the fact that the population of sea-birds on Selvagem Grande has been thoroughly studied, especially Cory's Shearwater (*Calonectris diomedea borealis*), there are several aspects of sea-bird life which have not been taken into account. Also, population estimates have not always been correct.

I would like to express my gratitude to Commander Chuquere Gonçalves da Cunha, Naval Commander of Funchal, the captain and crew of the Patrol Boat «Save», game warden Fernando Almada and P. A. Zino for their kind and devoted help.

SEA-BIRDS

The following species were identified: Little Shearwater (*Puffinus assimilis baroli*), British Storm-petrel (*Hydrobates pelagicus*), Madeiran Storm-petrel (*Oceanodroma castro*), White-faced Storm-petrel (*Pelagodroma marina hypoleuca*), and Bulwer's Petrel (*Bulweria bulwerii*). Cory's Shearwater (*Calonectris diomedea borealis*) was not seen.

Due to the rough nature of the terrain it is difficult, and in some places impossible, to carry out thorough investigations during the night, and since the entire population is not present at the same time, it is impossible to calculate any totals. The calculations made are based on countings, but due to the adverse conditions they are inaccurate and are only estimates.

Little Shearwater. Breeds in screes, cavities, crevices and stone walls, but seldom on soil, nearly all over the island. The largest colonies exist in Enseada das Cagarras, Pico dos Tornozelos and perhaps Fonte Salgada.

The species was present during the whole period, but no eggs were found. The population is less than 1,500 pairs, of which 250 were ringed.

British Storm-petrel. On 6th December at about 21.00 hours, at least 3 birds were heard, 5-6 times, with a cry like that of a Nightjar (*Caprimulgus europaeus*) flying over the central plateau among several Madeiran Storm-petrels.

The nearest breeding ground for this species is the Canary Islands, about 150 km southeast of the Selvagens. This observation could indicate the existence of a small breeding population.

Madeiran Storm-petrel. Observed and heard every night. Moonlit nights neither reduced the display activity nor the number of birds ashore. On windy nights less birds were present.

Breeds in small numbers all over the island, mostly concentrated along coastal ledges, in stone walls and cliff sides on Pico dos Tornozelos. Sometimes found in burrows among White-faced Storm-petrels.

The greater part (31 pairs controlled) did not have any eggs; the majority of eggs found having been laid at the beginning of the

breeding season. Most of the birds were still in display-flight and searching for suitable nesting sites.

Breeding time is either throughout the year or then involves two different populations. Bannerman (1963) says that eggs were found from end of June or early July through to September. This fits in with several finds of old egg-shells in burrows without birds; but a few chicks and eggs were also found:

Date	Age	Start of incubation
11/12	chick 7 days	ca. 24/10
13/12	» 30 days	ca. 1/10
15/12	» 1 day	ca. 3/11

All adults controlled were in fresh plumage except for one incubating bird controlled on 11th December, where the body feathers on the belly were all found to be very worn.

The population, partly counted and partly estimated, is greater than 1,500 pairs, of which 29 were ringed.

White-faced Storm-petrel. Since the species should return in February (Jouanin and Roux, 1965) no search was started until a single bird, killed by Herring Gulls (*Larus argentatus atlantis*), was found close to Cisterna Velha on the central plateau on 31st December.

From 1st-7th January thousands of individuals were observed at night and several birds were found in burrows during daytime. It is possible that the population returned to the breeding grounds in the last week of December, since no sign of digging, feathers, footprints etc. were found and no sounds were heard from the burrows during December.

The population was estimated at half a million individuals in 1963 (Jouanin and Roux, 1965). Although the concentration in the colony is enormous the population is definitely much smaller than this estimate.

The areas where the species breeds on Selvagem Grande are:

- A: *Central Plateau*: from Cisterna Velha eastwards to Enseada das Pedreiras, south through the tobacco tree forest (*Nicotiana glauca*) to the main stone wall as its northern limit.
- B: *Chão dos Caramujos*: From the wadi eastwards to the snail shell area and between Ponta do Corgo da Areia and from Ponta da Espinha westwards to the bottom of Pico dos Tornozelos.
- C: *Pico da Atalaia*: In an area of very soft soil northwest of the lighthouse.

1. *Stone wall to tobacco forest.* Hard, sandy soil with dense scrub, a few rabbit burrows (*Ryctolagus cuniculus*) and in part covered with stones.
38 pairs = 0.08 pairs/m².
2. *South of Cisterna Velha.* 2/3 soft, sandy soil, 1/3 hard soil with a few rabbit burrows.
126 pairs = 0.25 pairs/m².
3. *Southwest of Pico da Atalaia.* Soft, sandy soil, stony, with some rabbit burrows.
59 pairs = 0.12 pairs/m².
4. *Centre of central plateau.* Soft soil with rabbit burrows.
127 pairs = 0.25 pairs/m².
5. *Eastern limit between Ponta do Risco and south of Pico da Atalaia.* Soft, sandy soil with very few rabbit burrows.
98 pairs = 0.20 pairs/m².
6. *South of Cisterna Velha.* Very soft soil with rabbit burrows.
158 pairs = 0.32 pairs/m².

Area 6 is not included in the final calculation, since it is a very small and uncharacteristic area.

Table 1.—Population of White-faced Storm-petrel

Area	Area occupied	Pairs/500 m ²	Population
1	20%	38	1,197
2+4	20%	126	3,969
3	50%	59	4,646
5	10%	98	1,543
Total	100%		11,355

The colony on Chão dos Caramujos breeds in a somewhat sandy area of ca. 40,000 m² and the density is more than 80 pairs/500 m².

The total is a minimum of 6,400 pairs

The Pico da Atalaia population amounted to 91 pairs

The total breeding population of Selvagem Grande is a minimum of 17,800 pairs

Measurements of two birds in mm: Wing 158 and 174; bill 17 and 18; tarsus 41 and 42; total length 198 and 209. Weight 44 and 46 g. Of 70 birds 8 showed a very small, brownish barring on their mantle. Seventy individuals were ringed.

OFFSHORE OBSERVATIONS

Observations from the Patrol Boat were difficult to carry out due to the rough sea. All individuals were observed less than 100 m from the boat.

Little Shearwater. On 3rd December 5 birds were observed 10 km south of Madeira. On 4th December 5 birds 2 km south-west of Selvagem Grande.

Bulwer's Petrel. On 7th January one seen ca. 180 km northwest of Selvagens.

Madeiran Storm-petrel. On 7th January 11 birds seen between Selvagens and Madeira. First observation ca. 70 km north-west of Selvagens.

White-faced Storm-petrel. On 7th January two birds ca. 60 km northwest of Selvagens.

LIST OF OTHER BIRDS OBSERVED ON SELVAGEM GRANDE

Ardeidae

Grey Heron (*Ardea cinerea*). 7

Accipitridae

Buzzard (*Buteo buteo*). 2

Kestrel (*Falco tinnunculus*). 18

Charadriidae

Golden Plover (*Pluvialis apricaria*). 5

Turnstone (*Arenaria interpres*). 7

Lapwing (*Vanellus vanellus*). One killed by a buzzard. 2

Common Sandpiper (*Tringa hypoleucos*). 2

Curlew (*Numenius arquata*). 3

Black-tailed Godwit (*Limosa limosa*). 1

Dowitcher sp. (*Limnodromus* sp.). The bird was observed for 5 minutes under good conditions before it finally flew away to the southeast.

Stercorariidae

Pomarine Skua (*Stercorarius pomarinus*). Adults - light phase. 2

Laridae

Black-headed Gull (*Larus ridibundus*). Two 2nd year birds + one adult. 3

Herring Gull (*Larus argentatus atlantis*). The breeding population is ca. 25 pairs. Maximum 8 juveniles. Ca. 30 following a ship. 83

Lesser Black-backed Gull (*Larus fuscus graelsii*) 9

Sternidae

Common Tern (*Sterna hirundo*). One adult found dead on the plateau.

Strigidae

Short-eared owl (*Asio flammeus*). 3

Upupidae

Hoopoe (*Upupa epops*). One killed by a Herring Gull. 6

Alaudidae

Skylark (*Alda arvensis*). 70

Hirundinidae

House Martin (*Delichon urbica*). 1

Motacillidae

Berthelot's Pipit (*Anthus berthelotti*). 84

White Wagtail (*Motacilla alba*). 1

Grey Wagtail (*Motacilla cinerea canariensis*).

Sylvidae

Chiff-chaff (*Phylloscopus collybita* ssp.). 17

Turdidae

Black Redstart (*Phoenicurus ochruros gibraltariensis*). 5

Robin (*Erithacus rubecula*). 1

Redwing (*Turdus iliacus*). 5

Song-thrush (*Turdus philomelos*). 7

Fieldfare (*Turdus pilaris*). One adult found dead.

Sturnidae

Starling (*Sturnus vulgaris*). One was ringed. 4

Spotless Starling (*Sturnus unicolor*). 26

Fringillidae

Siskin (*Carduelis spinus*). 2

Linnet (*Acanthis cannabina*). 1

Serin (*Serinus serinus*). 5

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