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A NOTE ON THE DIET OF FERAL CATS ON DESERTA GRANDE

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Introduction

On 8 August 1970 faeces of a feral cat were collected on Deserta Grande on the flat plateau to the north of the island. The visit to the Desertas formed part of a study of variation in the lizards of the Madeira islands (Cook, 1979, Crisp *et al.*, 1979, Sadek, 1978) and of the land mollusc fauna (Cook *et al.*, 1972, Cook and Pettitt, 1979, Pettitt, 1977). We were interested in the possibility that cats, both feral and domestic, are predators of the lizards and also in what other prey was taken on the Desertas. Accordingly the composition of the faeces was established by D.W.Y.

Material and Methods

The material consisted of 8 pellets and some fragments. The pellets were dry and very hard when received; each pellet was weighed on a 10 g Pesola spring balance, and then teased apart after moistening with alcohol. Skeletal fragments which might prove useful for identification, if not to species at least to size of prey, were separated. The matrix was also examined, and a subjective assessment made of the percentage contribution of the types of matrix.

Results

The material, dry, totalled 20.7 g; pellets ranged from 0.7 to 5.5 g (table 1). Multiplying these weights by the rough percentage

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matrix composition of the pellets suggests that 62% of the diet was avian and 38% mammalian. The skeletal fragments of the birds all appear to be of Procellariiformes, and the fragmentary bills clearly belong to members of that order. Three species are known to nest on Deserta Grande, Cory's Shearwater *Calonectris diomedea*, Bulwer's Petrel *Bulweria bulwerii*, and Madeira Storm Petrel *Oceanodroma castro* (Bannerman & Bannerman 1965, Cramp & Simmons 1977). The fragments of limb bone and skull in pellet 1 and the articular (lower jaw) bones in pellet 6 seem fairly certain, on size, to be Bulwer's Petrel; quite possibly two individuals are involved. A much smaller bill fragment in pellet 6 must represent a Madeiran Storm Petrel. Among mammal prey, pellet 8 contained most of the skeleton and fur of a House Mouse, *Mus musculus*. A few lagomorph teeth in pellet 5 confirm that the fur in other pellets is indeed lagomorph (cf. Day 1966); Rabbits, *Oryctolagus cuniculus* are common on the island. Other prey remains seem insignificant. Head capsules of three caterpillars (Lepidoptera, larvae) occurred in two pellets, and pellet 7 contained the parietal shield and also the lower jaws of a lizard, *Lacerta dugesii* — no scales or other evidence appeared in the pellet, and had presumably been voided earlier.

Discussion

Little seems to be recorded on the size of the Procellariiform populations on Deserta Grande, and the meagre data here certainly do not allow any assessment of the seriousness of cat predation to be made. Bulwer's Petrel and Cory's Shearwater both have breeding seasons extending from early May through to the end of October, after which they desert the islands. These pellets, collected in August when well grown nestlings would be present in the burrows, or beginning fledging, might well overestimate the importance of avian food in the annual diet. Presumably, rabbits are the staple diet over winter. However, the Madeiran Storm Petrel seems to have an extended breeding season, with what are probably two sub-populations breeding mainly in June-September and October-December, and birds are present through the year (Bannerman & Bannerman 1965). This must make it more vulnerable to predation (Cramp & Simmons 1977).

The presence of cats could have a serious effect on this bird species. It may also be one reason why breeding of Manx Shearwater, *Puffinus puffinus* and the Soft Plumaged Petrel, *Pterodroma mollis*, is restricted, in the Desertas, to Bugio. One of the main threats to the fauna and flora as a whole, however, is destruction resulting from soil erosion. This is likely to be increased by the activity of the rabbits as well as of the feral goats. Cats may have a beneficial effect if they restrict the rabbit population. Their presence is an important consideration if a conservation programme is to be attempted to preserve this interesting island habitat.

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Table 1. — Composition of feral cat faeces from Deserta Grande

Pellet	Weight (g)	Matrix	Skeleton
1	3.0	feather	limbs, skull, cf. Bulwer's Petrel
2	1.3	60% feather 40% fur	none
3	5.5	feather	fragments
4	2.5	fur	fragments
5	2.4	fur	lagomorph teeth caterpillar
6	2.5	feather	small mandible, cf. Madeiran Storm Petrel
7	1.1	80% feather 20% fur	Head of femur, cf. petrel lizard parietal and jaws.
8	0.7	10% feather 90% fur	2 articular bones, cf. Bulwers Petrel. skeleton of House Mouse.
fragments	1.7	fur	fragments of rabbit bones. 2 caterpillars.
total	20.7	12.7 g feather 7.9 g fur	
	including	0.6 g mouse 7.3 g rabbit	

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