

EGYPTIAN GEESE *ALPOCHEN AEGYPTIACUS* MOULTING ON DASSEN ISLAND, SOUTH AFRICA

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Records of waterfowl (Anatidae) at sea or on the coastline in southern Africa are relatively scarce, and such observations are frequently reported as faunistic notes (e.g. Skead 1966 and references therein, Whitelaw & Underhill 1977, Randall & Randall 1984, Underhill 1989 and references therein, Every *et al.* 1989 and references therein, Fraser & McMahon 1991, 1992, Sheppard & Sheppard 1991, Fraser *et al.* 1996). Species recorded have been Egyptian Goose *Alopothen aegyptiacus*, South African Shelduck *Tadorna cana*, Yellow-billed Duck *Anas undulata*, Cape Shoveler *A. smithii* and Spur-winged Goose *Plectropterus gambensis*. The Egyptian Goose is the anatid most frequently observed on the coastline and adjoining sea, where it has been recorded feeding and breeding (Skead 1966, Brooke & Crowe 1982, Underhill 1989, 1998).

During surveys at Dassen Island (33°25'S, 18°06'E), Western Cape, South Africa, between 1971 and 1988, fewer than 30 full-grown Egyptian Geese were counted (Table 1). During the period January 1971 to October 1972, Egyptian Geese were present on 19 of 21 monthly checklists, numbers seldom exceeded five to 10 individuals, and breeding was observed in August, September and October (J. Cooper *in litt.*). A series of 78 surveys between January 1996 and May 2000 showed that the numbers of geese on the island have increased more than 10-fold since 1988 (Fig. 1, Table 1). Numbers of geese on Dassen Island peak annually in summer, from November to February (Fig. 1).

The largest count was on 3 December 1997, when 598 Egyptian Geese were seen (Table 1, Fig. 1). Flocks on up to 150 geese were observed both in the sea and in the intertidal zone, with occasional small groups farther inland on the island. About two-thirds of the geese were along the rocky east coast of the island. The remainder were mainly on the west coast, with most at West Bay, where there is a sandy beach, and smaller groups were scattered along the exposed rocky shore between West Bay and Boom Point (see Crawford *et al.* (1995) for a map of Dassen Island).

Many of the geese had recently shed their primary feathers, and were flightless. This became clear when the reactions to a Cape Fur Seal *Arctocephalus pusillus* and a Bryde's Whale *Balaenoptera edeni* passing close to a party of geese *c.* 50 m offshore were observed. Those geese that could not fly swam towards the shore using the characteristic 'paddle-steamer' wing action of flightless anatids. Similarly, when disturbed on open rocky shores, those geese that were able to get airborne flew over the rough surf and landed in the sea, while those that were flightless entered the sea on foot, and paddled through the breakers to the calmer sea beyond. Similar observations of

moulting geese were made in the following summers, 1998/99 and 1999/2000. Summer-moulting Egyptian Geese are likely to belong to the population that breeds in the winter-rainfall region of the Western Cape (Siegfried 1967).

Egyptian Geese have increased in numbers in the Western Cape in recent decades, and they are considered agricultural pests in the Swartland region, the grain-producing area on the mainland adjacent to Dassen Island (Hockey *et al.* 1989). It is possible that traditional moult sites on the mainland have reached capacity, or have been subjected to disturbance.

Dassen Island (area 220 ha, perimeter 8.6 km, 9 km offshore) is dry by December and there is minimal growth of vegetation on the interior of the island. On the perimeter of the island, along sections of rocky shoreline, there are dense growths of green algae which could be grazed by the geese. In common with other islands in the Western Cape supporting large populations of seabirds, guano leaches into the intertidal zone, resulting in nutrient-rich water and enhanced algal growth (Bosman *et al.* 1986). Even so, it is unlikely that *c.* 600 Egyptian Geese would find adequate food on Dassen Island. However, Egyptian Geese can exist largely on body reserves during moult. At Barberspan, North West Province, South Africa, Shewell (1959) reported that one Egyptian Goose lost 24% of body mass over 30 days while in moult, and estimated the average mass loss during moult to be 20% to 25%. Dean (1978) estimated the duration of the flightless period of Egyptian Geese to be *c.* 40 days; Milstein (1993) considered the period to be shorter, approximately 4–5 weeks. The energetics of moult of Egyptian Geese at Dassen Island need further study.

It is possible that those geese not in moult were using Dassen Island as a day-time roost, flying to the mainland to feed at night. This strategy could be a response to attempts to persecute geese on agricultural land in the Swartland; the nearest wheat fields to Dassen Island are at a distance of *c.* 12 km. However, no observations of geese leaving for the mainland at or after dusk or returning before or at dawn have been made.

Moult migrations of Egyptian Geese to new moulting sites have developed elsewhere, notably to the large impoundments constructed in the Free State (Geldenhuys 1975, Milstein 1993). Dassen Island offers a relatively safe refuge during the flightless period. Feral cats *Felis catus*, the only terrestrial predator on the island, have been reduced to negligible numbers (pers. obs.). Seals may pose a threat to birds sitting on the sea, but there are no large seal colonies in the vicinity.

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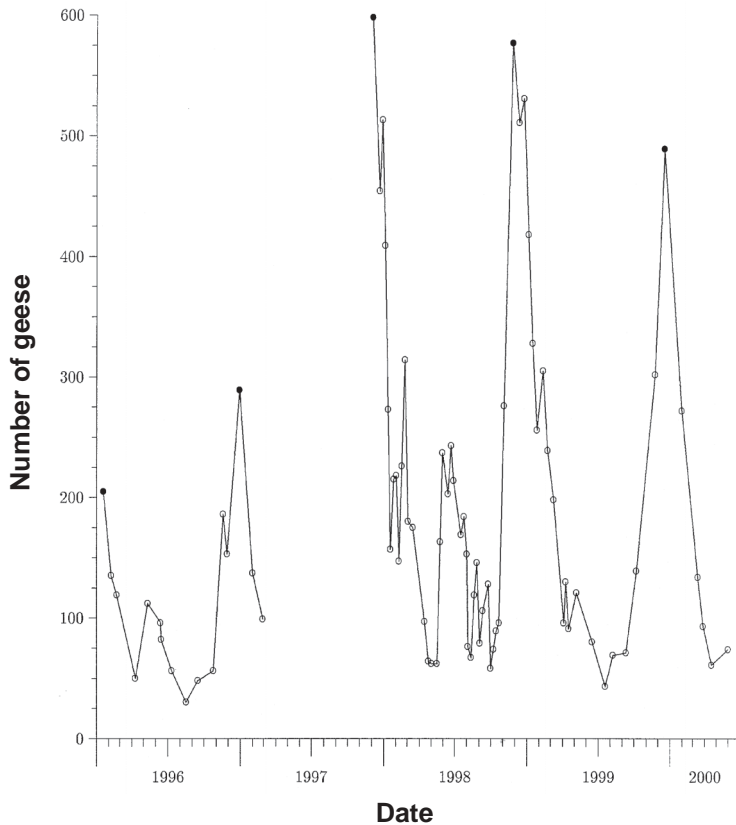


Fig. 1. Counts of Egyptian Geese on Dassen Island, Western Cape, January 1996 to May 2000. Circles are located above dates on which counts were made; closed circles indicate the largest count per year, from midwinter to midwinter.

TABLE 1

Counts of Egyptian Geese on Dassen Island (FG = full grown), 1971–1988, and maximum counts for summers 1995/96–1999/2000. See Fig. 1

Date	Count	Source
28 Jul. 1971	27	J. Cooper
16 Jan. 1972	25 at West Bay	J. Cooper
3 June 1979	c. 20 FG	R.K. Brooke
1 Sep. 1979	c. 20 FG, 4 'juveniles'	R.K. Brooke
3 Nov. 1988	23 FG, broods of 2, 6 and 6 chicks, nests containing 6 and 12 eggs	Underhill 1989
17 Nov. 1996	205 FG	PAW
29 Dec. 1996	289 FG	ACW
3 Dec. 1997	598 FG, many in flightless moult	LGU
28 Dec. 1998	513 FG	ACW
19 Dec. 1999	489 FG	ACW