

NOTES ON CASPIAN TERNS *STERNA CASPIA* BREEDING NEAR THE  
BERG RIVER, SOUTHWESTERN CAPE

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INTRODUCTION

During November 1979 several Caspian Terns *Sterna caspia* were regularly present at a pan near the Berg River, southwestern Cape, South Africa, one particular island in the pan being favoured. On 9 December 1979, nine nests were found on this island. The site was visited on a further four occasions between mid-December and the end of January 1980. On some visits observations were made from a hide. The Caspian Tern is listed as 'vulnerable' in the South African Red Data Book - Aves (Siegfried *et al.*, 1976), and therefore disturbances from visits were kept to a minimum. Table 1 summarises the status of the colony at five visits during December 1979 and January 1980.

BREEDING SITE

The colony was located on a small, sparsely vegetated island of dried mud approximately 50 m from the shore. The island was cigar shaped, 65 m long, with an average width of 5 m and a maximum width of 8 m. The highest point on the island was 0,75 m above the mean water level. The majority of nests was sited on the higher, unvegetated area. Dry roots were present here suggesting that vegetational cover is variable, probably controlled by fluctuations in the water level in the pan. The site was hot during the summer months, making extended visits impossible, particularly when small chicks were present since they showed signs of heat stress within minutes of the adults leaving the colony.

The water level fluctuated minimally in the pan during summer 1979-1980, providing a stable habitat safe from potential land predators. The success of the colony implies that Sacred Ibis *Threskiornis aethiopicus* which roosted on the island were not a threat to the terns. If this site is used in future years, changes in water levels may constitute the greatest direct threat to the birds' breeding success. A rise in water level following egg-laying may flood the nests (one nest was only 0,3 m above water level), and a fall in water level could create a land bridge to the island allowing access to predators.

ADULT NUMBERS

A total of 15 nests was found (Table 1), implying that the minimum number of adults associated with the colony was 30. Adult counts ranged from 28 to 31 individuals. A count of 31 birds on 30 December 1979 included five individuals showing traces of subadult grey coloration in the tail.

NESTS, EGGS AND CHICKS

The nests were simple scrapes in the ground made by the bird leaning forward onto its breast and pushing backwards with its legs. Birds were seen making new scrapes while guarding chicks.

There were many unused scrapes in the colony, suggesting that individual pairs made more than one scrape during the breeding period.

Nest dimensions were fairly consistent, with diameters (mean of two measurements) ranging from 220 mm to 290 mm (mean 246 mm). Depth ranged from 25 mm to 50 mm (mean 40 mm). One egg was laid on bare ground and this has been excluded from the statistics. All nests were lined to some extent with dead vegetation, but no attempt was made to assess how much of this was "natural" and how much had been carried to the nest. The percentage of the nest surface lined ranged from 5 % to 70 %, with a mean of 30 %. Nests were close together; the shortest distance separating two nests being 0,65 m and the most isolated nest in the colony being 2,90 m from its nearest neighbour. The mean distance between neighbouring nests was 1,23 m.

Two types of egg coloration were evident, type A having a green background, with heavy dark markings similar to a Kelp Gull *Larus dominicanus* egg. Type B had a pale turquoise background with a few purplish markings. Four of 23 eggs were classified as intermediate between these types. In only one instance did a clutch contain eggs of both types. Type A was the most frequent (48 %), with type B and intermediate eggs comprising 35 % and 17 % respectively. Egg mass varied from 52 g to 72 g, with a mean of 63,3 g (n=19). Starred and pipped eggs were excluded from the analysis due to the rapid loss of mass that occurs at this time. Egg length ranged from 58,7 mm to 69,0 mm with a mean of 65,7 mm (n=23), and maximum width from 40,4 mm to 46,0 mm with a mean of 43,9 mm. Of 14 nests observed on more than one occasion, 12 contained clutches of two eggs and two contained single eggs. The single eggs were sited away from the main colony and included the egg laid on bare ground. It is possible that the two single eggs were laid by inexperienced and/or sub-adult birds excluded from the more favoured sites within the main colony by experienced breeders. Chicks were fed on fish, brought singly in their parents' bills. Fifteen pairs produced 16 chicks equivalent to 1,1 chicks per pair.

#### REFERENCE

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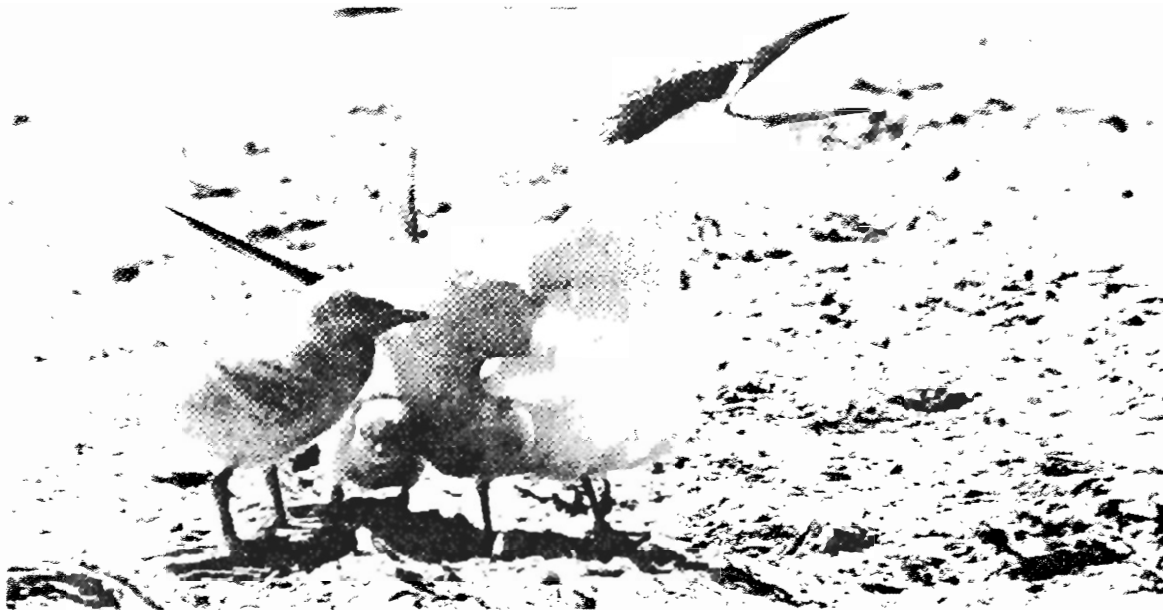
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TABLE 1

DETAILS OF THE CASPIAN TERN COLONY NEAR THE BERG RIVER, 1979-1980

Date	Nests	Intact eggs	Pipped/ starred eggs	Chicks	Mean chick mass	Adults
09 Dec 79	9	16	-	-		30
22 Dec 79	14	18	4	2	49,5	28
27 Dec 79	14	13	3	9	90,6	28
30 Dec 79	15	10	-	14		31
28 Jan 80		-	-	16*		31

\* 12 fledged young, 4 large downy chicks



Caspian Tern *Sterna caspia* with two chicks near the Berg River in 1980



Caspian Tern *Sterna caspia* making a scrape while its chick looks on, Berg River 1980



Incubating Caspian Tern *Sterna caspia* near the Berg River in 1980