

THE BERG RIVER ESTUARY: AN IMPORTANT WETLAND FOR CASPIAN TERNS *STERNA CASPIA*
IN SOUTH AFRICA

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The Caspian Tern *Sterna caspia* is listed as "rare" in the South African Red Data Book for birds, and has a South African breeding population of approximately 240 breeding pairs (Brooke 1984, Cyrus 1990). Previously, Hockey & Hockey (1980) reported Caspian Terns breeding at the Berg River estuary, western Cape. This note reports on the breeding of Caspian Terns during three consecutive breeding seasons between 1987/88 and 1989/90 and describes seasonal fluctuations in the numbers of Caspian Terns between September 1987 and April 1989 at the Berg River estuary (32 47S, 18 10E).

The breeding area at the Berg River estuary has been described by Hockey & Hockey (1980). The same site was revisited as frequently as possible when birds started to show breeding behaviour. The maximum numbers of adults, nests, chicks and fledglings were recorded on each visit to the colony. To minimize disturbance, no attempts were made to count the number of eggs. Birds present in the estuary were counted monthly (one to three times) from September 1987 until April 1989.

The number of breeding birds varied from year to year (Table 1). During the summer of 1987/88 only one pair bred (producing two fledglings). During the summer of 1988/89, at least 32 pairs bred and at least 48 fledglings were produced. The colony was not monitored regularly in 1989/90, but at least 18 young fledged. The small number of breeding birds recorded at the traditional breeding site during summer 1987/88 may have been due to birds breeding elsewhere in the estuary. Local

landowners reported a "big colony" breeding in another salt pan system farther upstream, but this was not confirmed. The number of nests, fledglings and adults in 1988/89 were higher than those reported for 1979/80 by Hockey & Hockey (1980) when a maximum of 15 nests, 16 chicks, 12 fledged young and 31 adults were counted.

During the summer of 1988/89 the colony was visited regularly. Breeding activity of Caspian Terns started in mid October. The first chick was observed by the middle of November and the last downy chick was observed in mid February 1989. This indicates that breeding within the colony was asynchronous and that more than 32 breeding pairs were probably present. No signs of terrestrial predators or eggs thieves were observed during visits to the colony.

Chicks were fed on fish, mainly Southern Mullet *Liza richardsonii*, Elf *Pomatomus saltatrix* and occasionally sole (indeterminate species). The fish were brought singly to the chicks and the size of the fish usually was proportional to the size of the chick. When a chick rejected and dropped the fish on the ground, one of the parents washed the fish in the river before presenting it again.

Decreases in numbers of breeding Caspian Terns have been reported in the eastern Cape (Courtenay-Latimer 1937, Randall *et al.* 1981) and at Lake St. Lucia, Natal, South Africa (Berruti 1980, Cyrus 1990). The decrease has been attributed mainly to disturbance by man or mammalian predators (Brooke 1984). Human egg

TABLE 1

CASPIAN TERN *STERNA CASPIA* BREEDING RECORDS AT THE BERG RIVER ESTUARY

Date	Number of			
	Adults	Nests	Chicks	Fledglings
1 Nov 1987	2	1	0	0
5 Dec	2	1	2	0
4 Jan 1988	2	0	0	2
23 Oct 1988	49	14	0	0
3 Nov	45	27	0	0
7 Nov	62	32	0	0
17 Nov	47	30	2	0
21 Nov	52	31	2	0
25 Nov	32	31	8	0
26 Nov	NR	-	14	0
30 Nov	NR	-	20	0
3 Dec	NR	-	31	0
8 Dec	45	-	40	0
21 Dec	36	-	33	0
4 Jan 1989	46	-	8	31
7 Jan	28	-	8	48
18 Jan	NR	-	8	22
20 Jan	17	-	8	17
21 Feb	5	-	2	5
13 Jan 1990	52	5 incubating	9	18
26 Jan	37	-	0	4

*NR = not recorded.

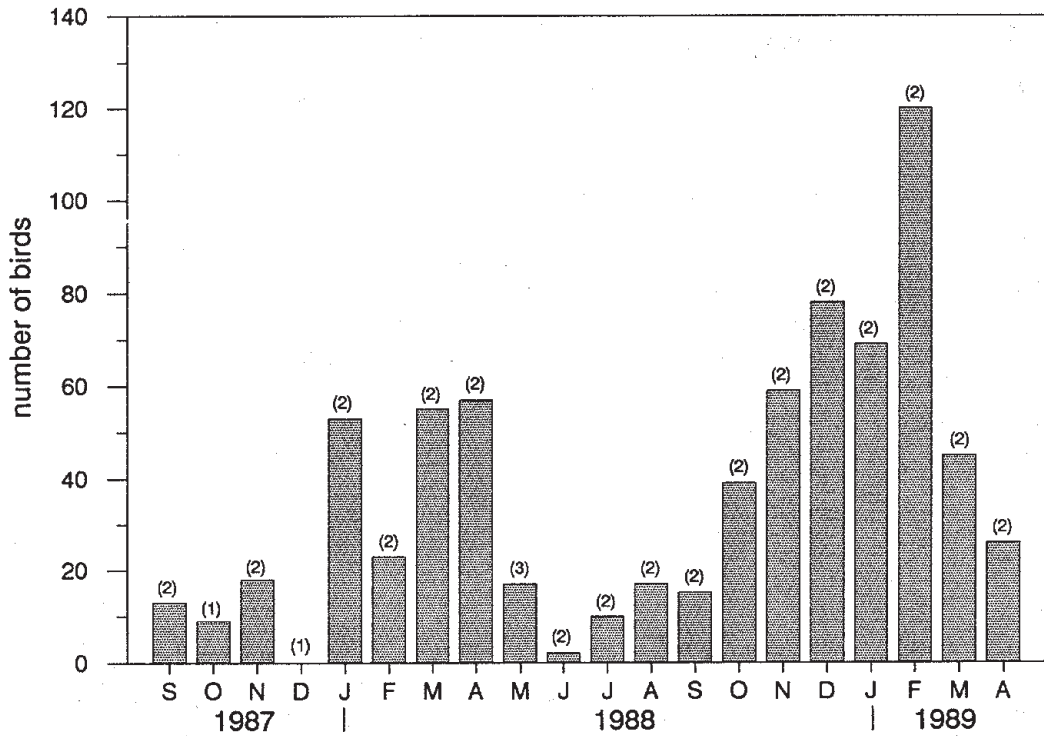


Figure 1

Monthly average counts of Caspian Tern *Sterna caspia* at the Berg River estuary. Number of counts per month in parentheses.

thieves were the main cause of breeding failure at a breeding colony of Caspian Terns near Porth Elizabeth, eastern Cape, South Africa (Martin & Randall 1987). At Lake St. Lucia in the late 1980s, human disturbance, flooding and fish mortality caused low breeding success of Caspian Terns (Cyrus 1990).

The number of pairs breeding at the Berg River estuary is highly variable, suggesting that Caspian Terns are highly mobile, which may probably explain some of the annual variability in numbers of birds at breeding localities elsewhere in South Africa. Cuthbert (1985) reports intraseasonal movement of Caspian Terns between colonies in northeastern Lake Michigan. He suggested that intercolony movement may also occur in other populations of Caspian Terns that breed in areas where alternative colony sites are available and reproductive failures occur frequently.

Caspian Terns use the Berg River estuary extensively as a feeding area. They were most abundant during the austral spring and summer (the breeding season), and the numbers fell substantially during the winter months (Fig.1). The winter decrease is probably related to high turbidity of the water in the estuary during winter, forcing the birds to forage elsewhere.

The maximum number of birds recorded in the estuary was 199, in February 1989, and the maximum number of pairs breeding was 32, which represents 13% of the total estimated South African breeding population. The Berg River estuary must therefore be considered as a site of national importance for this species.

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