

SOME THOUGHTS ON CASPIAN TERNS IN NEW ZEALAND

By R.B. SIBSON

SUMMARY

Early European naturalists and explorers, who of necessity spent much of their time near the coast, do not seem to have logged or noticed Caspian Terns. This notable species was not officially listed in New Zealand till about 1860. It was regarded as rather scarce throughout the 19th century and even well into the 20th century.

Two possible explanations for this apparent scarcity are offered: (a) that, as it laid large palatable eggs in places that were usually accessible, it had become scarce after 800 years of hungry human (Polynesian) predation, and (b) that, like some other waterfowl, e.g. Pukeko, White-faced Heron, Royal Spoonbill, it is a comparative newcomer to New Zealand and has enjoyed a 'boom period' in the middle of the 20th century.

In New Zealand, the Caspian Tern (*Sterna caspia*) is a familiar bird of estuaries and inlets around the coasts of the North and South Islands. It also frequents the lakes of the Volcanic Plateau and in the South Island may follow rivers as far as subalpine waters. It is therefore all the more puzzling that, for nearly 100 years after Captain Cook's *Endeavour* dropped anchor in Poverty Bay, what Buller calls "this fine tern" escaped the notice of the early naturalists. Almost all of those early scientific explorers came from Western Europe, where the Caspian Tern was, and still is, a rare bird. In Britain, according to Seebohm (1885), it was not recognised till 1825. Now it is known that a very thin trickle of migrants passes along the south-east coast of England in spring and autumn, either heading for or leaving Europe's main breeding colonies in the Baltic. Surely such a striking species would have called for comment, and if possible taxidermy, if it had crossed the path of those early collectors. When, for instance, that astute, versatile and indefatigable English naturalist John Gould visited Australia for less than two years in 1838-1840 it did not take him long to find and identify Caspian Terns.

Some years later, in 1846, when Gould was officially naming his big 'new' tern from southern Australia, he called it *Sylochelidon* (robber sea-swallow) *strenuus*, adopting a continental generic name which had been minted for the Caspian Terns of the Baltic.

As things stand, the first mention of Caspian Terns as New Zealand birds seems to be in some reminiscences of J.B. Ellman, an itinerant Englishman who published his observations in the *Zoologist* of 1861. Ellman clearly had a lively mind and an eye for significant detail and, since his text is not easily accessible, I quote the relevant passage in full: "Great Tern (Tara Kakao) *Sterna major*. Expanse of wings four feet. Primaries tipped with black.

A very noisy bird. Confined to the coast." Ellman was apparently unaware of Gould's *Sylochelidon strenuus* and also that he was adding a new bird to the New Zealand list. He was quite happy to invent a popular name such as Great Tern or a scientific name such as *Sterna major*. The Maori name, Tara Kakao, which he mentioned has onomatopoeic merit. Is it ever heard today? Incidentally, for want of the correct information, Ellman invented for the common White-fronted Tern an ephemeral name *Sterna vulgaris*. It does not reappear in the checklists.

Richard Laishley arrived in New Zealand in the spring of 1860 and settled at Onehunga to take up his duties as a minister in the Congregational Church. He was also a trained artist and was quick to appreciate the natural history of his adopted environment. The newness of things stimulated him, so that he simply had to find time to observe and paint. Onehunga 'on the Manukau' was – and still is – a handy place for sketching shorebirds; and the painting, here reproduced, belongs to his prolific Onehunga period and dates from about 1865. Laishley's Caspian has the finely streaked head of a young bird, probably in its first autumn. The shortly forked tail is drawn with precision, the work of an observer with a trained eye. The bird is named *Sterna strenua*. Gould's long-winded *Sylochelidon* is discarded; but his binomial is retained with no adjustment for gender. In more ways than one Laishley was right up with the play. In the same pleasing picture, Laishley has also shown an adult White-fronted Tern. He labelled it *Sterna frontalis*, that being the scientific name then in use. *Frontalis* refers to the narrow white band across the forehead, as also in the name of the Wrybill.



FIGURE 1 — A rough photocopy of the Laishley painting.

Meanwhile the youthful Walter Buller had been gathering material for an essay on the ornithology of New Zealand, which was to win him a prize awarded by the New Zealand Exhibition of 1865. Near the end of the essay, the Caspian Tern in a somewhat rhetorical and definitely inaccurate passage is mentioned as one of five species of terns which have visited our shores and which enjoy an "unlimited oceanic range". Perhaps the judges were not as critical as they might have been.

Within a few years, T.H. Potts, another alert countryman from England, had found Caspian Terns nesting at Lake Ellesmere and described the occurrence in the newly established *Transactions of the NZ Institute* (Potts 1870). Yet disappointingly that species is not mentioned in his book of collected essays, *Out in the Open* (1882), which is of such value to Canterbury historians and naturalists.

The first (1873) edition and the second (1888) edition of Buller's *History of the Birds of New Zealand* are indispensable sourcebooks, particularly for the endemic or unique species. In the first edition Buller wrote that "the Caspian Tern is actually met with in pairs, but I have occasionally observed parties of five or more resting on the sands near the mouths of rivers." This comment is repeated with little of local significance added, in 1888. The inference seems to be that Caspian Terns were rather uncommon. Perhaps Buller was not really interested in a bird whose distribution, the polar regions and central Pacific excepted, was almost world-wide.

The early years of Buller's boyhood were spent at Tangiteroria among the kauri-dominated forests of northern Kaipara. Like most country boys he was a keen birdsnester and even tried his hand at preserving museum skins of some of the rarer bush birds.

At the age of 11 he was sent to the Wesleyan College in Auckland. This necessitated long laborious journeys by water down the Wairoa River, across mid-Kaipara and up the southern arm to Helensville. Nowadays Caspian Terns are conspicuous fishers of the tidal waterways which make up the huge sprawling octopus of the Kaipara Harbour; and one of the biggest breeding colonies in the country is in the sandy wilderness which lies below South Kaipara Head. Perhaps this talented bilingual boy from the bush and backblocks may be forgiven if his mind was on other things than bird-watching, as he sailed or rowed "like snail unwillingly to school"; and in due course returned home, with what delight! at the end of long and uncongenial terms.

Caspian Terns were among the shorebirds specially counted at a Field Study Course masterminded by Ross McKenzie and based at Helensville in January 1965 (McKenzie 1965). The tally was 345. Thirteen years later these figures were confirmed when more than 300 were logged on each of two separate days in March (Veitch 1979).

The few references in Helen Oliver's annotated index of the *Transactions of the NZ Institute* 1868-1900 (Oliver 1968) suggest either that Caspian Terns were rather scarce or else that they seldom came to the attention of the few naturalists who might be interested. Places from which they were reported were Lake Ellesmere, where Potts had found them nesting; Okarito, Petone, Napier, Great Barrier and rather curiously the Kermadecs. There was one

report that they were numerous in Marlborough; and in the 1890s A.T. Pycroft found that they were very numerous at the Bay of Islands.

Our early naturalists clearly regarded the Caspian Tern as rather scarce, an evaluation which persisted well into the 20th century. For instance, in the *Animals of New Zealand*, Hutton & Drummond (1904) described the Caspian Tern as "a solitary bird"; a statement which was repeated in the fourth edition of 1923. In October 1910, Guthrie-Smith (1925) explored Porangahau and found one pair of Caspian Terns. In November he noted with satisfaction that there were three breeding pairs and "six" unmated birds." These would now be called, perhaps more accurately, subadults. Incidentally Guthrie-Smith had recommended Hutton & Drummond's volume" as the most accessible to those interested in our avifauna."

In 1925 Perrine Moncrieff published a book which was to become deservedly popular. It ran to several editions. In both the first (1925) and fifth (1957) editions, Caspian Terns are described as "usually found in pairs," but whereas the original edition credited them with a "weak mewling note", which is clearly the importunate begging call of young birds and may be heard months after they have left the nest and indeed throughout their first winter, the text was altered in later editions to "harsh grating note," a sound much more familiar to watchers of Caspian Terns. As recently as 1930, Oliver wrote "Never seen in large numbers."

The omission of the species from Edgar Stead's (1932) *Life Histories of New Zealand Birds* suggests that the author knew of no local colonies suitable for photography. Thirty years later, E.G. Turbott (*in* Knox 1969) wrote "There are no colonies of Caspian Terns in Canterbury; but isolated pairs nest on the riverbeds." In the South Island the two largest breeding colonies known are at Farewell Spit and in the Oreti Estuary near Bluff. Both colonies are subject to high winds and are likely to be threatened by the highest tides; but comparatively sheltered bays, lagoons and estuaries are not far distant. Towards the end of January 1961, when the nesting grounds at Farewell Spit were virtually deserted, 86 Caspians were counted at intervals along the spit during an OSNZ survey. In the Oreti estuary, during a similar OSNZ survey, about 120 adults were estimated to be present at the main breeding site. Probably most of these most southerly Caspians, especially the subadults, move north in winter to less boisterous regions than Foveaux Strait.

Along the more exposed coastal stretches of the North and South Islands Caspian Terns occur sparingly; but they are numerous roughly north of 38° south latitude, a line, say, drawn from Kawhia to East Cape. For example, in January 1978, an OSNZ survey logged 249 between Bowentown and Ohiwa. A nesting colony, at which 80 adults were present, was subsequently inundated; and at Sulphur Point, Tauranga, 130 had gathered at a high-tide roost in late February.

In the Far North, the Rangiputa Bank close to the exit to Rangaunu Harbour supports a substantial breeding colony and is also used as a high tide roost which is shared by thousands of other shorebirds of several species. When this well-known colony was visited in January 1971 during an OSNZ survey of the Aupouri Peninsula, about 250 Caspians, excluding a few chicks, were counted.

For many years two of the biggest nesting colonies in New Zealand have been at Mangawhai and South Kaipara Head near what were the rather inaccessible tips of long beaches and extensive dunes. A large area of these has now been planted with pines. As the nesting season ends, most of these Caspian Terns disperse over the shallow harbours and estuaries of northern New Zealand. These afford good fishing and many sandbanks or shelly islets which serve as high-tide roosts. In Manukau Harbour and the Firth of Thames, summer and winter counts of Caspian Terns are all the more revealing because few, if any, of these noisy and conspicuous birds nest within the limits of these two large inlets. An isolated nesting pair can be strikingly aggressive. Experimental censuses of shore-birds began more than 40 years ago and continue. According to the times of suitably high tides, winter counts take place in late June or July and summer counts in late November or early December. The accuracy of the figures obtained depends on the experience and numbers of the counters and, of course, on the weather, which may affect the coverage. Table 1 summarises the resultant figures for a period of 20 years in the two inlets.

TABLE 1 — Census figures for Caspian Terns in the Manukau Harbour and Firth of Thames from 1962 to 1981

Place	Winter			Summer		
	Mean	SD	Range	Mean	SD	Range
Manukau Harbour	157	70	60-276	89	31	44-142
Firth of Thames	171	138	54-545	51	33	14-157

In the absence of local breeding colonies these figures are useful because they indicate an 'autumn' influx. For example, in the Firth of Thames there are commonly three times as many Caspian Terns in winter as in summer and on the Manukau twice as many. The influx may begin as early as Christmas and the New Year, possibly with failed breeders or with the offspring of very early successful nesters. The figures obtained in November or early December are also valuable because they are mainly of subadults and are a pointer to the success or otherwise in recent years of breeding elsewhere. They are the hope for the future.

Banding has shown that some Caspian Terns from the Northland colonies wander south to winter in these two inlets or in the inner Waitemata. Banded birds are quite often seen, but since it is seldom possible to read ring numbers, the evidence depends mainly on casualties. The populations of many species of colonial terns are known to fluctuate. They have their lean years or cycles and their fat years. A successful nesting season in Northland is likely to be followed by a strong influx into the Firth of Thames or Manukau Harbour, as happened, for example, in the years 1957-60 and 1966-71. Now Maida Barlow's colour-banding of Caspian Terns near Bluff is showing that in autumn most birds, both adults and juveniles, disperse northwards after breeding (Maida Barlow, pers. comm.). It remains to be seen how many southern birds reach the vicinity of Auckland and whether some from the far south may be expected annually.

Caspian Terns lay large palatable eggs in places which are usually accessible. This may explain why after centuries of Maori settlement they were apparently so scarce that for 90 years they escaped the notice of the early European ornithologists. When in the spring of 1939 I was taken to see the extensive breeding site in the Mangawhai sandhills, there was ample evidence of Polynesian occupation in the form of cracked cooking stones and fragments of stone artifacts. However, Polynesians were not the only nest-robbers; for as G.A. Buddle (1951) wrote, "In earlier days it was the local custom to raid the colony when laying commenced in early November, to obtain a supply of eggs for baking the Christmas cakes."

It is a feature of this country's many shallow and sandy estuaries that they afford good hunting not only for Caspian Terns and other shorebirds but also for hungry humanity. As Caspian Tern colonies are noisy and conspicuous, the isolated nesting of pairs in places well off the beaten track may be of value for the survival of the clan.

It has also been suggested – and the hypothesis deserves consideration – that, like several other species of waterbird, of which obvious examples are White-faced Heron (*Ardea novaehollandiae*), Royal Spoonbill (*Platalea regia*), Black-fronted Dotterel (*Charadrius melanops*) and Spur-winged Plover (*Vanellus miles novaehollandiae*), Caspian Terns have colonised New Zealand comparatively recently. Ron Scarlett and Phil Millener assure me that very few bone fragments have been identified from middens, whereas midden deposits yield widespread evidence that White-fronted Terns (*S. striata*) and our three native gulls *Larus dominicanus*, *L. scopulinus*, and *L. bulleri* frequently formed part of the Polynesian diet.

Whatever its status in the past and throughout the 19th century, the Caspian Tern is now firmly established in the North and South Islands. It deserves our study and attention; for although the species has a widespread distribution across the world, there are few lands in which it may be found in such numbers and with such reliability as in New Zealand.

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SHORT NOTE

Egg predation by Black-backed Gull

On 30 October 1991, in bright conditions, I was watching waterfowl from a hide on the shore of Matata Lagoon. An adult Southern Black-backed Gull (*Larus dominicanus*) alighted on the water about 40 metres from me, carrying in its beak a smallish brown egg. After a pause, the bird soared about 30 metres in the air, dropping the egg, which apparently broke on the surface of the water. The bird immediately followed and devoured it, the yolk content being clearly visible. With 8 x 30 binoculars and a colour photograph taken at a distance of about 40 metres, the egg appeared in size and colour to be that of a Banded Dotterel (*Charadrius bicinctus*).

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