

*SUTTON—Island-Sanctuaries in the Coorong.***Inspection of Some Island-Sanctuaries in the Coorong.**

By J. Sutton.

Sixteen islands in all were inspected, and the details are shown below. Islands numbered 1 to 4 are situated off Hack's Point and are part of the main sanctuary from the Needles to Stony Well. The other twelve islands are between Wood's Well and Salt Creek.

Island No. 1, Cow Island.

The tracks of a fox were seen near the water's edge. There were rabbits on the island. The species of birds seen on or about the island were:—Pied Cormorant, Pelican, Caspian Tern, Fairy Tern, Silver Gull, Pied Oystercatcher, Spur-winged Plover, Hooded Dotterel, Red-capped Dotterel, Banded Stilt, Curlew Sandpiper, Red-necked Stint, Sharp-tailed Sandpiper, Black Swan, Grey Teal, Welcome Swallow, Magpie-Lark, Singing Honeyeater, Raven. A nest of a Hooded Dotterel containing one egg was found.

Island No. 2, Long Island, locally called Bull Island.

A fox was seen, as well as some rabbits. The species of birds seen on or about the island were:—Pied Cormorant, Caspian Tern, Fairy Tern, Silver Gull, Pied Oystercatcher, Spur-winged Plover, Red-capped Dotterel, Banded Stilt, Sharp-tailed Sandpiper, Black Swan, Mountain Duck, Grey Teal, Welcome Swallow, Willie Wagtail, Grey Shrike Thrush, White-fronted Chat, Singing Honeyeater, Pipit. A nest of a Red-capped Dotterel contained two eggs.

Banded Stilts.—An immense flock was seen on the first island. They flushed and joined another immense flock from the second island, where they alighted and stood in the shallow water near the shore line, thickly distributed over a distance of at least 350 yards. They flushed again as we approached the latter island, and finally divided into two very large flocks. One division flew to the shore of Younghusband Peninsula, just opposite that island, and the other portion went to the north. We saw numbers of them in flight at a fairly close range, and half were without the pectoral band of chestnut, and in many of the others the band was indicated by a dusky mark. (Young birds have no pectoral bands.) Dr. Morgan and Mr. McGilp, who saw the species at a nesting site at Lake Callabonna on 11th

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January, 1931 (see "S.A. Ornithologist," Vol. XI., pp. 37-61) estimated that there were at least 50,000 in the combined flocks. It was a wonderful sight when they rose and joined in the one body of birds; the second flock slightly overlapped the other at first, then all spread out at the usual spacing. A very faint musical barking call by some of the birds was heard at times. Small flocks were seen later during the day farther to the south.

Island No. 3, Round Island.

No foxes or rabbits were seen. No nests were found. The species of birds seen on or about the island were:—Hoary-headed Grebe, Pied Cormorant, Caspian Tern, Fairy Tern, Pied Oystercatcher, Red-capped Dotterel, Curlew Sandpiper, Red-necked Stint, Sharp-tailed Sandpiper, Grey Teal, Musk Duck, Singing Honeyeater.

Island No. 4, locally called Swan Island.

No foxes or rabbits were seen. The species of birds seen on or about the island were:—Little Black Cormorant, Crested Tern, Fairy Tern, Silver Gull, Pied Oystercatcher, Spur-winged Plover, Sharp-tailed Sandpiper, Black Swan, Mountain Duck, Chestnut Teal, Grey Teal, Ducks sp., Singing Honeyeater. Nests were found of the Spur-winged Plover, Silver Gull, Black Swan, and Mountain Duck.

Spur-winged Plover.—On the ground in very low samphire, nest made of dry samphire sticks. Three eggs, one of which was very dark in colour, the second not so dark, the third lighter still.

Silver Gull.—A nest of the season, but it contained no eggs.

Black Swan.—Nesting on all parts of the island. A fair number of incomplete and deserted nests were seen. 142 nests contained eggs or young—one with a chick, 11 with one egg each, 17 with two eggs each, 20 with three eggs each, 29 with four eggs each, 40 with five eggs each, 21 with six eggs each, 2 with seven eggs each, and one with eight eggs. Seven single eggs were lying about, two of them on the beach.

Mountain Duck.—Two nests were in small caverns in low cliffs, one of them was 9 feet from the entrance; and two eggs could be seen. In the other cavern only the down in the nest was visible.

Crested Tern.—An adult bird was found alive, but could not stand up, though no apparent injury to the legs could be found: Iris, very dark brown, almost black; bill, dull yellowish green;

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feet, dull black; tibia, black; tarsus, dark brown in front, black behind; inside mouth, yellowish green.

Island No. 5, Gull Island.

This island was infested with rabbits. The species of birds seen on or about this island were:—Pelican, Caspian Tern, Fairy Tern, Silver Gull, Pied Oystercatcher, Spur-winged Plover, Red-necked Stint, Sharp-tailed Sandpiper, Welcome Swallow, White-fronted Chat. Only Silver Gulls were nesting here, 230 nests—33 with one egg each, 103 with two eggs each, 87 with three eggs each, one with four eggs, one with two eggs and a stone about the size of an egg, one with three eggs (one of which was half the usual size), two with a chick and an egg each, one with a chick, one with two chicks. In one nest an egg was being perforated by the occupant, and the egg-tooth could be seen working, and in another egg the hole had been made.

1 Island No. 6.

No rabbits were noted. The species of birds seen on or about this island were:—Pied Cormorant, Pelican, Caspian Tern, Fairy Tern, Silver Gull, Pied Oystercatcher, Red-capped Dotterel, Sharp-tailed Sandpiper, Black Swan, Grey Teal, White-fronted Chat.

Black Swan.—Two nests, one with four eggs, the second with two eggs and another egg just outside the nest.

White-fronted Chat.—A nest with two chicks.

Pelican.—An egg recently laid was found on the sand near the water's edge.

Pied Oystercatcher.—A young bird, with plumage of brownish colour, was found lying flat on the sand beside a stone.

Island No. 7, northernmost of the Pelican Islands.

There were rabbits on this island. The species of birds seen on or about this island were:—Pied Cormorant, Pelican, Fairy Tern, Silver Gull, Pied Oystercatcher, Spur-winged Plover, Red-capped Dotterel, Banded Stilt (two flocks—1,500, 75), Sharp-tailed Sandpiper, Black Swan, Chestnut Teal, White-fronted Chat, Singing Honeyeater. Nests were found of Pied Oystercatcher, Red-capped Dotterel, Black Swan, and a White-fronted Chat was seen carrying food.

Pied Oystercatcher.—Nest with three eggs.

Red-capped Dotterel.—One with two eggs.

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Black Swan.—Two nests, one with three eggs, the other with two eggs.

Pelican.—A number of eggs were lying about with a large irregularly-shaped hole in each, and the contents all gone. Possibly this was the work of Ravens or Silver Gulls, as it is not likely that a human destroyer would bother about making a hole in an egg.

Pied Cormorant.—There were many old nests of this species in the nitraria bushes.

Island No. 8, the largest of the Pelican Islands.

There were rabbits on this island. Upon this island the Fisheries and Game Department had erected two notice boards, on the north and south ends. At the south end the notice was complete, but at the north end the upright post only remained. The species of birds seen on or about this island were:—Pied Cormorant, Pelican, Caspian Tern, Silver Gull, Pied Oystercatcher, Spur-winged Plover, Banded Stilt (a flock of 500), Black Swan. Nests were found of the Pelican, Silver Gull, and Black Swan.

Pelican.—14 nests with two eggs each, and 10 eggs in singles were lying about, but in no apparent nest.

Silver Gull.—19 nests—5 with an egg each, 6 with two eggs each, 7 with three eggs each, one nest with two chicks.

Black Swan.—77 nests—2 nests with an egg each, 7 with 2 eggs each, 6 with 3 eggs each, 23 with 4 eggs each, 21 with 5 eggs each, 12 with 6 eggs each, 5 with 7 eggs each, 1 with two newly-hatched young. In a clutch of five eggs, one of them was a third of the usual size. In one clutch of five eggs two chicks were poking out of their eggs. In a set of four one chick was out, one was working out of the egg, and one egg was chipping. A dead Swan was seen.

The majority of the Swans went off the nests and walked down to the shore as we approached the island. A Raven was seen to fly to a just-vacated nest, and the Swan turned back and chased the Raven, but walked away again as we got nearer. The Raven flew down again when the Swans had all left, and a little later was seen to fly away with a part of a broken egg in its beak. A Swan's nest with five eggs was at the edge of the Pelicans' site.

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Island No. 9, one of the Pelican Islands.

There were no rabbits on this island. The species of birds on or about the island were:—Pied Cormorant, Pelican, Caspian Tern, Silver Gull, Grey Teal. Nests were found of Pied Cormorant, Pelican, and Black Swan.

Pied Cormorant.—On a low cliff there were 75 nests, 24 of which were occupied; 18 contained young of various sizes, three being the greatest number in any one nest. A number of the young in the nests appeared to me to be dying, and many dead young in and out of the nests were seen in this colony. Six of the nests contained eggs, and the contents of one egg seemed to have been freshly eaten. A mullet, about five ounces in weight, as well as several lots of whitebait, were near nests with young, and as soon as the adult Pied Cormorants flushed on our approach some six Silver Gulls, which were flying about, dropped down and appeared to eat some of the fish food. At the shore line of this cliff was a great number of dead young Cormorants, apparently deliberately taken from the nests and thrown there. On the north-west corner of the island there was a group of 25 nests, which were in course of construction, the nesting material being green, mostly samphire. The young Cormorants, when approached closely, agitated their throats greatly.

Pelican.—193 nests, two with three eggs each. There were many single eggs lying about, but in no apparent nest. Sixteen half-grown Pelicans were huddled together at the highest and farthest point of the low cliff; seven of these took to the water later.

Black Swan.—5 nests—two with four eggs each, and three with five eggs each. In the case of one clutch of five there was another egg just out of the nest.

A Pelican's nest was found which contained an egg of a Pelican and an egg of a Black Swan.

Island No. 10, one of the Pelican Islands.

There were no rabbits on this island. The species of birds on and about the island were:—Pelican, Pied Oystercatcher, Spur-winged Plover, Red-capped Dotterel, Sharp-tailed Sandpiper, Black Swan, Chestnut Teal, Grey Teal. Nests were found of Pelican and Black Swan.

Pelican.—92 nests were found, mainly containing one egg. In eight instances the nests were partly constructed of portions of the dried carcasses of Pelicans, in one case almost a complete

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skeleton was so used. There was a number of stray single eggs of Pelicans lying about. Twenty dead Pelicans were found on this island. They had been dead for a considerable time, so it was impossible to decide whether they had been deliberately destroyed.

Black Swan.—Nest with two eggs. Part of the outside nesting material was a dried up dead Pied Cormorant.

Island No. 11, opposite Policeman's Point.

There were no rabbits on this island. The species of birds on and about this island were:—Pied Cormorant, Pelican, Caspian Tern, Fairy Tern, Silver Gull, Pied Oystercatcher, Spurred-winged Plover, Red-capped Dotterel, Red-necked Stint, Sharp-tailed Sandpiper, Black Swan. Nests were found of Pelican, Pied Oystercatcher, Black Swan.

Pelican.—A young Pelican was found in a nest. Its head and neck were bare, and its back showed the down just appearing. Its skin was a fleshy pink colour. It uttered a two-note nasal call. Some disused Pelicans' nests, as well as a number of broken eggs, were seen. There were also several eggs lying about unbroken.

Pied Oystercatcher.—A nest with two eggs.

Black Swan.—Four nests, two with four eggs each, and two with an egg each.

Pied Cormorant.—125 nests made of sticks were empty, and had been used this year.

Island No. 12, Trevarrow's Island.

There were rabbits on this island. A very dark-brown Snake, about 4 feet long, was seen. It escaped in the herbage. The species of birds on and about this island were:—Pied Cormorant, Pelican, Caspian Tern, Fairy Tern, Silver Gull, Pied Oystercatcher, Hooded Dotterel, Red-capped Dotterel, Banded Stilt (a flock of 1,000), Welcome Swallow. Nests were found of Silver Gull, Pied Oystercatcher, Hooded Dotterel, Red-capped Dotterel.

Silver Gull.—61 nests—three with one egg each, 26 with two eggs each, 31 with three eggs each, one with two chicks. Four very young Silver Gulls were seen making for the beach as we approached one place. They all took to the water. Three dead Silver Gulls were seen.

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Pied Oystercatcher.—A nest with two eggs. A young bird was found flat amongst some short dark grass. The markings on its head and back showed much black colour. Its beak was an olive-green colour with a sharp-pointed black tip. When picked up it called similarly to an adult bird, and when released ran fast towards the water's edge.

Hooded Dotterel.—Nest in a hollow scraped in the sand, about 40 yards from the water, beside a piece of limestone, lined with fragments of white shells and six pieces of bone. Diameter of nest, 11.5 cm.; depth, 2.5 cm. Four eggs—the usual clutch is two or three.

Red-capped Dotterel.—Two nests with two eggs each.

Crested Terns.—Two recently-dead birds were seen.

Island No. 13, opposite Jones's Camp.

The tracks of a fox were seen, but no rabbits were noticed. The species of birds on or about the island were:—Pelican, Caspian Tern, Fairy Tern, Silver Gull, Pied Oystercatcher, Spur-winged Plover, Red-capped Dotterel, Red-necked Stint, Sharp-tailed Sandpiper, Black Swan, Chestnut Teal, Grey Teal, Rock-Parrot, White-fronted Chat, Pipit. Nests were found of Silver Gull, Pied Oystercatcher, White-fronted Chat.

Silver Gull.—85 nests—4 with a chick each, 3 with two chicks each, two with an egg and two chicks each, 9 with an egg each, 35 with two eggs each, 31 with three eggs each, one with five eggs, the fifth egg was pushed to the side of the nest and was quite cold, whilst the other four were warm—as they all were of a warm brown colour and of uniform type they were presumably laid by the one bird. Fifteen young birds, of various sizes, were running about, and some of them took to the water. A young bird was dead, crushed between two stones, two eggs were in a nest alongside it. Two young had recently died. In one nest an adult bird and two chicks were dead.

Pied Oystercatcher.—In a nest in Cape Dandelion (*Cryptostemma calendulaceum*) were three eggs, two of which were light greenish grey in colour, and the third brownish. All had the black blotches.

White-fronted Chat.—Two nests, one with three eggs, the other with two eggs.

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Island No. 14, Wild Dog Islands (M).

There were rabbits on this island. The species of birds on or about the island were:—Caspian Tern, Fairy Tern, Silver Gull, Pied Oystercatcher, Spur-winged Plover, Red-capped Dotterel, Curlew Sandpiper, Red-necked Stint, Sharp-tailed Sandpiper, Black Swan, Grey Teal, Welcome Swallow, White-fronted Chat, Pipit. No nests were found.

Island No. 15, Wild Dog Islands (L).

There were rabbits on this island, and nine horses were grazing there. The species of birds on or about the island were:—Caspian, Crested, and Fairy Terns, Silver Gull, Pied Oystercatcher, Spur-winged Plover, Red-capped Dotterel, Sharp-tailed Sandpiper, Stints and Sandpipers sp., Pipit. Nests of Fairy Tern and Silver Gull were found.

Fairy Terns.—They were nesting in three places. The first colony, and the largest, was on the rocky point, where they were nesting in 1929 ("S.A. Ornithologist," Vol. X., p. 190). The second was close to that in sand, and the third about 100 yards away in coarse sand. In the first colony were 45 nests with an egg each, 124 with two eggs each, and some 20 "scrapes"; in the second were four nests with an egg each, one with two eggs, and some 25 "scrapes"; in the third were 7 nests with an egg each, 14 with two eggs each, and some 50 "scrapes." Mr. W. M. Morgan waited to take photographs after the rest of us left. The birds flew at once to the nests, and in many cases the mate squatted beside the sitting bird. He saw birds bringing a fish in their bills arrive at the ternery and feed their mates on the nests. In the third colony there was a small mullet, about two inches long, lying on the sand, and I regretted later that I had not examined the fish to see where it was pierced when plunged upon from a height by the bird. As soon as the Terns—Fairy, Crested, and Caspian—emerge from the water the fish is held crosswise in the bill. It is swallowed headforemost, but I have never yet been able to see how the fish is turned in that direction.

Silver Gulls.—55 nests—7 with an egg each, 21 with two eggs each, 9 with 3 eggs each, 11 with a chick each, 2 with two chicks each, 3 with a chick and an egg each, one with two chicks and an egg, one with two eggs and a stone almost the size of an egg.

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Island No. 16, Wild Dog Islands. (K).

There were rabbits on this island. The species of birds on or about the island were:—Pelican, Caspian Tern, Silver Gull, Pied Oystercatcher, Red-capped Dotterel, Red-necked Stint, Sharp-tailed Sandpiper, Black Swan. Nests of Caspian Tern and Silver Gull were found.

Crested Terns.—Two recently dead were noted.

Silver Gulls.—128 nests—15 with an egg each, 50 with two eggs each, 25 with three eggs each, 3 with three chicks each, 5 with two chicks each, 13 with a chick each, 4 with two chicks and an egg each, 3 with two eggs and a chick each, 8 with a chick and an egg each, 1 with 3 eggs and a stone, 1 with two eggs and a stone.

Caspian Tern.—A colony was found nesting in the sand at the base of a low rocky point at the north-eastern end of the island. 27 nests had an egg each, 17 had two eggs each, and there were 30 "scrapes." The majority of the eggs showed a ground colour of light stone, while in others it was brown or dark stone, or grey to a light greenish blue. All the eggs were freckled, spotted, or blotched with very dark brown to black, some of which appeared to be below the surface. In some instances the two eggs of a set were dissimilar in colour and marking, while other sets showed uniformity. One set was almost lavender grey in ground-colour, with a few very fine submerged markings.

Both North and Campbell state that in Australia these birds nest in separate pairs, and that has hitherto been the experience of other oologists of my acquaintance. I believe that this is the first occasion on which these birds have been recorded as nesting in a colony in Australia.

Specimen.—A Caspian Tern was found at the edge of the ternery, and had been choked in trying to swallow a mullet, about five ounces in weight, which was protruding from the bill. The head of the fish was in the upper part of the gullet and was partly digested. Iris, very dark brown; bill, red, blackish at tip; legs and feet, black; inside mouth, red; total length, 23½ inches; spread, 4 feet 6 inches; weight, 1½ lb.; stomach contents; a few fair-sized fish bones.

On 18th October this ternery was again visited by Dr. A. M. and Mr. W. M. Morgan. There were 48 nests with eggs, four of them with three eggs each. The "scrapes" were then not laid in. The nests were all scooped in coarse shelly sand at varying distances apart, from 18 inches up to 4 or 5 feet. The cup is

an inverted cone, varying from 26 to 27 cm, in diameter, and 8 cm, deep in the middle. No nesting material is added. Two more Caspian Terns were dead at the ternery, one with the head only of a fish stuck in its throat, the other part probably eaten by Silver Gulls. The second bird had its throat full of maggots.

Summary of the 1,394 occupied nests found on the sixteen islands:—Pied Cormorant, 24; Pelican, 300; Caspian Tern, 48; Fairy Tern, 195; Silver Gull, 579; Pied Oystercatcher, 4; Spur-winged Plover, 1; Hooded Dotterel, 2; Red-capped Dotterel, 4; Black Swan, 233; Mountain Duck, 2; White-fronted Chat, 3.



W. M. Morgan.
Caspian Tern (*Hydroprogne caspia*).



W. M. Morgan.
Black Swan (*Chcnopsis atrata*).



W. M. Morgan.

Black Swan. One chick out, lying flat and drying, another chick coming out, and the two nearest eggs show the perforation by the egg-tooth.



W. M. Morgan.

Fairy Tern (*Sterna nereis*).



W. M. Morgan.

Red-capped Dotterel (*Charadrius ruficapillus*).



W. M. Morgan.

Pied Oystercatcher (*Haematopus ostralegus*).



W. M. Morgan.

Hooded Dotterel (*Charadrius cucullatus*).



W. M. Morgan.

Caspian Tern (*Hydroprogne caspia*) choked to death
in trying to swallow a 5-ounce mullet.