

The Breeding of Prions on Islands off the Coast of Victoria

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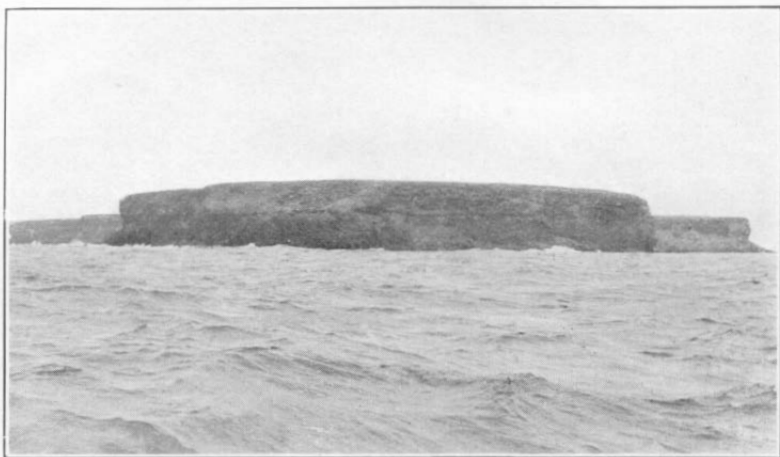
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The Prions constitute one of the most difficult groups of the Tubinares, because it is impossible to differentiate the various described species when observed at sea and it seems not at all improbable that the study of preserved museum specimens is, at present, leading somewhat to confusion. I imagine that the taxonomy of these birds is not likely to be well understood until we are familiar with their life histories, their habits and their segregation at their breeding stations. The examination of large numbers of wave-cast birds from the mixed winter flocks that assemble in the Bass Straits has, for me, only increased the difficulty of the problem; and it has, therefore, seemed well to concentrate on the various sparse observations that it is possible to make upon breeding birds in definite breeding colonies. Two such colonies I have visited and examined and both are situated on off-shore islands of the coast of Victoria.

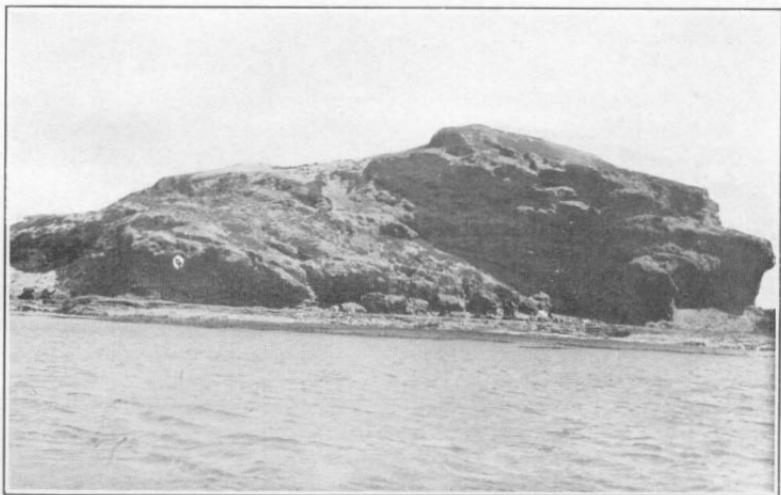
(1) The Lawrence Rocks

The Lawrence Rocks (known to the local fishermen as The Gannets, and apparently named originally by Baudin as Ile Du Dragon) lie $4\frac{1}{2}$ miles to the west of Portland in south-western Victoria. The outer island is well known locally as being the breeding ground of Gannets, the inner island is a bare rock and forms a rookery for thousands of Shags. The landing on the outer island is not by any means an easy one, except at very favourable times of wind and sea. After several unsuccessful attempts, I landed on November 28, 1935.

The outer island consists of a rise to seaward of well over 100 feet sheer from the rocky platform and a rise at the landward end of nearly the same height. The two rises are connected by a saddle which is composed of loose soil covered by a growth of *Mesembryanthemum*. The Gannets have occupied the seaward rise; the landward rise is bare rock. The saddle is tenanted by Penguins and a few Mutton-birds and by Prions (*Pachyptila turtur*). The Prion colony is not a large one. The area into which it is possible to make burrows is very restricted and most of the available sites are occupied by Penguins. At times a burrow of a Prion was seen to lead out from the much larger opening of a Penguin's nesting hole. The scarcity of soft ground on the island has, indeed, forced many of the Penguins to lay their eggs under rock ledges with practically no cover or protection. The entrance to a Prion's burrow is only about the size of a large rat hole and not large enough to permit exploration of the burrow with the hand without breaking



Lady Julia Percy Island, from the north.



Outer island, Lawrence Rocks, from the north.

in the tunnel. Only three burrows were opened. The first was about two feet in length and at the end was a roomy chamber, lined by a few dried twigs of *Mesembryanthemum*, in which a male bird was sitting on a single egg. The second burrow was long and winding in its course: at the end was what might almost be termed a nest—formed of dried twigs—containing a single, very clean, egg, but no sitting bird. The third burrow led off from a Penguin's entrance and ran straight for about two feet just beneath the surface covered by a growth of *Mesembryanthemum*. It contained a female bird sitting on a dirty egg in an unlined chamber. The whole area of the colony was examined, but no more burrows were disturbed. It is difficult to compute the numbers of any species of Petrel breeding on an island, for the advent of night is likely to upset any estimate made during a short day time visit, but I imagine that there are not more than 100 breeding pairs on the island, and in that estimate is included a small detached colony that occupies a restricted area on the south side of the saddle. Not only is the colony a small one which has to compete with the Penguins and the Shearwaters for nesting sites, but it is apparent that the Prions, more than any other birds on the Rocks, are the victims of the Black-cheeked Falcons (*Falco peregrinus*) that breed there. The colony would seem to be considerably smaller than when it was visited by Dr. W. MacGillivray in December, 1900, for he speaks of the burrows of the Prions as being present in "hundreds."

The two birds taken from the burrows, although such gentle-looking creatures, made the most determined efforts to tear each other to pieces, and concentrated all their efforts on a death struggle in preference to making an attempt to escape. They uttered no sound during that day, nor during the succeeding night, although for most of the time they seemed to have no other ambition than to fight to the death. The measurements, in millimetres, of these two birds are as follow:

		Wing	Tarsus	Bill
(1)	♂ . . .	169	31	23 × 10 5
(2)	♀ . . .	171	32	22 × 10

The three eggs taken measured 43×32 , 43×32.5 and 40×29 . The average was 42×31.1 , which is not far from the average (43×31) of three eggs in the National Museum Collection taken on North East Island in the Kent Group, Bass Straits. Two of the eggs taken on November 28 were within a day or two of hatching, but the third had only recently been laid.

(2) Lady Julia Percy Island

On this island, which lies off the south coast of Victoria some twelve miles from Port Fairy (S $38^{\circ} 24'$, E 142°) and from which the Lawrence Rocks may be seen to the west-

ward in clear weather, the McCoy Society camped from January 10 to February 22, 1936. At the time the members of the Society were camped on the island the breeding season of the Prions was definitely over, but birds continued to come in to their nesting sites for the first two weeks following January 10. The birds appeared to breed (like the Diving Petrels) between and beneath the great volcanic boulders of the talus slopes of the island and none was detected on the island plateau where the Mutton-birds made their burrows. During the first ten days following our arrival on the island, the Prions came in regularly every night and crept to their nests beneath the boulders, but during February they were less regular and, by the time the camp was broken up on February 22, they had ceased to arrive at the island. No eggs were found in their deep retreats beneath the boulders, but eight adult birds were captured and preserved as skins and two were preserved in spirits.

The measurements, in millimetres, of these birds are as follow:

			Wing	Tarsus	Bill
(1)	♂	174	31	23 × 11
(2)	♂	170	30	23 × 11
(3)	♂	170	31	23 × 10 5
(4)	♂	171	32	23 × 11
(5)	♂	175	32	24 × 11
(6)	♂	165	32	23 × 10 5
(7)	♀	166	32	23 × 10 5
(8)	♀	172	32	23 × 11

The birds breeding on Lady Julia Percy Island are of a morphological type identical with the birds breeding on the Lawrence Rocks, but their choice of a nesting site is strangely different. No nesting burrow was made anywhere in the earth on the island plateau, where abundant suitable sites were available. All the birds made their homes beneath and between the huge masses of rock which have fallen from the cliffs above. It seems strange that, on two islands so close together, the Prions should, in the one case, contend for burrowing sites with Penguins and Shearwaters and, in the other, disregard the wide area into which burrows can be made, and live in chinks beneath rocks at the foot of the cliffs. It might be suggested that the myriad rabbits on Lady Julia Percy Island were the determining factor and that, while the Mutton-birds and Penguins can keep the rabbits at bay, the Prions might be unable to do so. Whatever the cause may be it is very definite that in one island the bird excavates characteristic burrows in the earth, and in the other it retreats beneath rocks and makes no burrows.