A New Sub-species of Cormorant from Western Australia

By D. L. SERVENTY, Cronulla, New South Wales

In an earlier paper[2] I pointed out that the population of Pied Cormorants (*Phalacrocorax varius*) inhabiting the Abrolhos Islands, off Geraldton, Western Australia, was doubly isolated from the mainland birds. Not only did the Abrolhos birds breed in the early summer, whereas all the other known colonies in Western Australia nested in the autumn, but the distance of the islands from the mainland, between 30 and 40 miles, precluded much interchange of populations among these essentially inshore birds.

The possibility of a racial differentiation of the island birds presented itself. When I was discussing the matter with Mr. W. B. Alexander, at Oxford, he told me that his visit to the islands in 1913 was shortly after he had arrived from England and before he had time to make himself familiar with the characteristics of local birds, but he did recall an impression that the Abrolhos Cormorants were *red* about the face, whereas yellow was the most conspicuous colour in the mainland birds.

It is rather unfortunate that, despite the several collecting expeditions which have been made to the Abrolhos, practically no attention has been paid to the Cormorants and there are no specimens of the insular form of the Pied Cormorant in the Rothschild-Mathews Collection at the American Museum of Natural History nor in the H. L. White Collection at the National Museum, Melbourne—the two most comprehensive collections of Australian material. The only specimen, indeed, which I can trace as existing in any museum, is a mounted bird in the exhibition gallery of the Western Australian Museum, which was collected by Mr. O. H. Lipfert in 1894. It shows the very feature noted by Mr. Alexander and confirmed as being general by the collector, and, therefore, merits recognition as a distinctively-marked race:

Phalacrocorax varius nitidus subsp. nov.

Differing from all described Australian and New Zealand populations in that the base of the mandible is *light red* at the sides instead of being pallid (whitish to flesh-colour; "ashy-white" (North); altering to yellowish in the dried skin). Otherwise the race agrees with published descriptions in plumage and general dimensions.

Type: Western Australian Museum Coll., no. 288, ♂; wing, 295 mm.; tail, 137; culmen, 81; tarsus, 61; in front of eye orange, below eye bluish-green, light red at base of mandible,

iris sea-green; body plumage and wing-quills fresh, tail feathers worn; collected by Otto H. Lipfert, Abrolhos Islands, Western Australia, November, 1894.

The coloration of the bare parts was supplied by the collector, who also mounted the type for exhibition in January, 1895, and coloured the head parts himself. As they appear now, he tells me, the green is not quite accurate, as it lacks any bluish tone. The other colours approximate to what they were in nature. During my investigation of the feeding habits of Cormorants in south-western Australia I examined 213 freshly-killed mainland birds, and, although the coloration of the bare parts of the head varied in brilliance, according to the time of the year, no specimen resembled or in any way approached the Abrolhos condition.

Mr. Lipfert said that the birds were very wary and impressed him as being different from those of the mainland. He had noted their larger size.

The same points are made by Richard Helms, who visited the Abrolhos in company with Mr. Lipfert. He states:[1] ". . . the Pied Cormorant, *Graculus varius*. It is closely allied to the cormorant or shag of the Swan River, and cannot be distinguished from it when flying, except by its slightly larger size. On close examination it is, however, found to differ also by its longer beak, the naked parts about the head, and the speckled plumage of the back; moreover it is an extremely shy bird."

That *P. v. nitidus* is a larger bird than those of the mainland, claimed by these two observers, is suggested, rather than proved, by the measurements I have been able to get together, and then only for the culmen length. Unfortunately Cormorant material in Australian museums is scanty, and some of it characterized by inadequate data. Mathews states that there is no difference between male and female, but I have shown[2] that there is a decided difference in weight, though the ranges overlap. There are 16 sexed skins in the H. L. White Collection at the National Museum, the South Australian Museum and the Western Australian Museum, and the average dimensions, with observed extremes, for culmen and wing-length are as follows:

	♂ (10)	♀ (6)
culmen . .	75 mm. (70—78)	70 mm. (63—77)
wing . . .	310 mm. (295—320)	294 mm. (275—320)

Thus in the type specimen of *nitidus* the culmen is notably long, but it is matched by an unsexed example from Adelaide in the Western Australian Museum (no. 10908). The wing-length is small. A series of measurements, both of the new race and of mainland birds from various districts, is necessary before any generalization may be safely drawn about these dimensions. Analysis of the measurements

at my disposal suggests the possibility of the average culmen length increasing slightly from east to west across Australia.

REFERENCES

1. Helms, R. "Houtman's Abrolhos," *Journ. Dept. Agric. West. Austr.*, vol. 5, pt. 1, 1902, pp. 33-55; reprinted from the *Producers' Gazette.*
2. Serventy, D. L. "Notes on Cormorants," *The Emu*, vol. XXXVIII, 1939, pp. 357-371.

Some Birds of Womboyne Inlet

By N. J. FAVALORO, Mildura, Victoria

The comparatively-recent record of the Eastern Bristle-bird (*Dasyornis brachypterus*) at Womboyne, New South Wales (*Emu*, vol. XXXVI, p. 56), induced me to spend a holiday in that locality last October (1939) in the hope of observing that rare bird. Although seven days were spent there—from October 13 to 20—the Bristle-bird was neither seen nor heard by me, but several other records made the long trip of 725 miles from Mildura well worth the time spent upon it.

I do not intend to submit a complete list of the species observed, but merely to deal briefly with the more interesting forms inhabiting the various types of country extending from the guest house to the entrance of the lake and beyond to the Cape Green light-house.

It was most gratifying to find that the disastrous bushfires of the summer of 1938-1939 had not worked so much havoc in this district as they might have done, although extensive tracts of the tea-tree belts on the southern and eastern sides of the lake had been destroyed. Kangaroos and wallabies were seen in surprising numbers everywhere and generally speaking they showed no fear when approached quietly.

The Wonga Pigeon (*Leucosarcia melanoleuca*) was common in the scrub and along the tea-tree fringes. Six birds were feeding together near the track leading from a deserted shack to the light-house and several other pairs were noted further along the bush path. This particular patch of scrub is very rich in bird life, and, being so inaccessible, is rarely visited by tourists. Consequently the so-called sportsman has not made his mark in this locality. The Pigeons had not commenced nesting at that time. Mr. Jones, the guest-house proprietor, informed me that nests were often found by him towards the end of November.

Just outside the entrance of the inlet Australian Gannets (*Sula serrator*) were nearly always present. On one occasion ninety-eight were counted: they were busily