

PHOTOGRAPHIC STUDIES OF BIRDS IN N.Z.

It is intended to publish as opportunity offers a series of photographic studies of birds in New Zealand, accompanied by suitable text. The first two photographs appear in this issue. In this regard, the society is indebted to the generous offer of Mr. K. V. Bigwood, of Christchurch, to supply a series of photographs, gratis, from his collection, for reproduction in Bird Notes.

KING SHAG.

Plate VII.

Inhabiting a restricted area at the northern end of the South Island, the king, Marlborough, or carunculated shag (*Leucocarbo carunculatus*) is the rarest species of shag in New Zealand, its numerical strength probably being under 100 individuals. It is a protected bird and every effort is being made by the authorities to ensure its survival, though a reported decrease in its numbers in recent years is not reassuring.

A study of the photograph, a bird standing beside its nest on its breeding rock at the entrance to Queen Charlotte Sound, shows clearly the distinctive colouration of this species, which is not to be confused with the large pied shag (*Phalacrocorax varius*) also of black and white plumage. It will be noticed that the black on the head of the king shag extends to below the bill, whereas in the large pied shag only the top of the head is black, the sides of the face and neck being white, as well as the underparts. In addition, the king shag has a white bar on the wing and a white patch on the back.

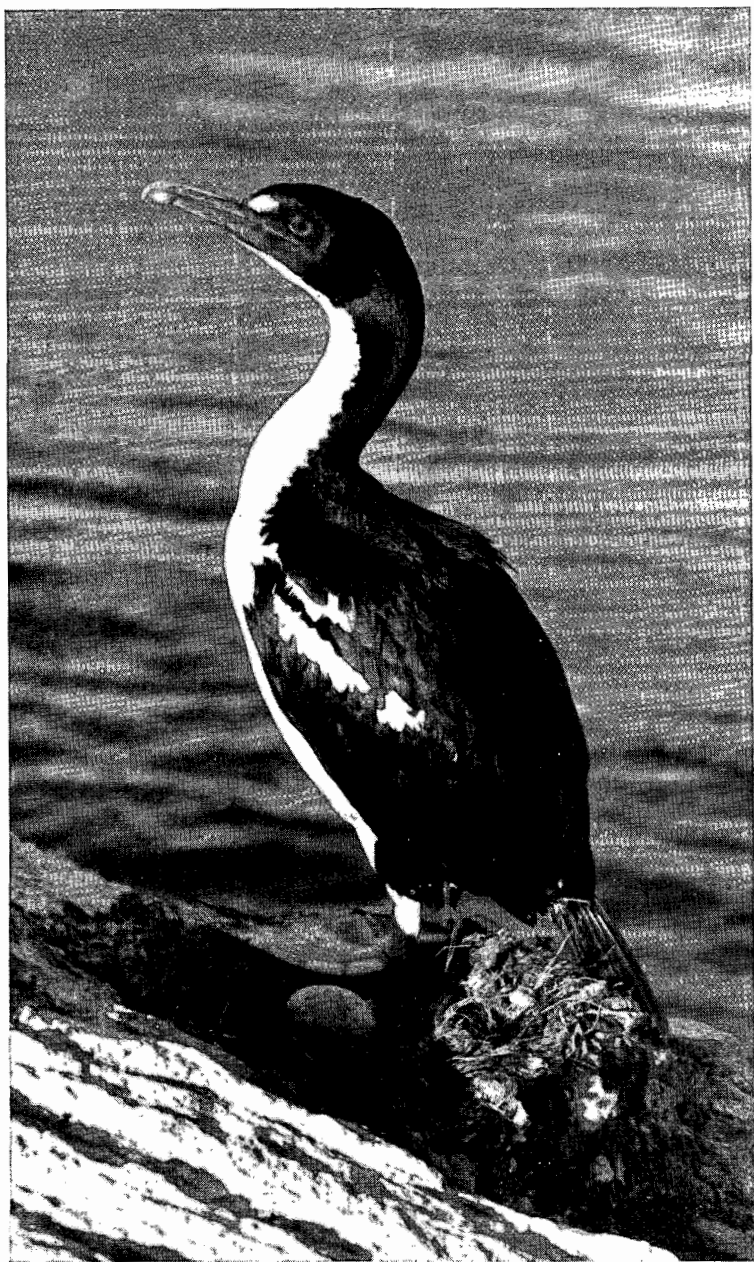
The king shag is essentially a marine-feeding bird and appears to be sedentary in its habits. I visited its breeding rock on November 26, 1939, when a persistent sickening swell had its maximum effect. Only two nests were then in occupation, each containing a single egg. A juvenile, with a little down on its neck, remained on the rock and the rest of the birds, about 25, flew into the water. Before reaching the rock, king shags in ones or twos flew past the launch towards Cooper's Island, as often as not circling the launch en route. At least a dozen birds headed in that direction. On the rock itself was a dead adult and a dead half-grown young, the remains matted on to the slippery surface. White-fronted terns (*Sterna striata*) had nests, in some cases with young just hatched, all over the highest parts of the rock. Two red-billed gulls (*Larus novaehollandiae*) were the only other birds seen on the rocks.

BLACK BILLED GULL.

Plate VIII.

More familiar in the South Island than it is in the North, the black-billed gull (*Larus bulleri*) closely resembles the red-billed gull (*L. novaehollandiae*). In the fully adult bird the colour of the bill, together with the distinctive wing markings, distinguish the two species, but care must be taken not to confuse the juveniles, in which the above characters do not hold good. In the adult black-billed gull, the black markings on the primaries, on the upper surface, run along the ends; in the red-billed gull, there is a distinctive black bar across the wing, near the tip—the black markings being along the wing edge in *bulleri* and across the wing in *novaehollandiae*, but these markings only show up when the birds are in flight. The photograph in this issue shows a black-billed gull standing besides its nest in the Lake Ellesmere area, Canterbury.

The black-billed gull has been recorded as breeding inland on riverbeds in Canterbury, Otago and Southland. In the North Island, the only two known breeding places are at Rotorua, in the Auckland district, and at Porangahau, on the Hawke's Bay coast. It has been recorded, however, in the North Island as a visitor to estuaries and harbours, but much more information is required of its distribution and breeding range, especially in the North Island.—R.H.D.S.



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KING SHAG AND NEST.



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BLACK-BILLED GULL AT NEST.