

in January, 1947; according to local fishermen this is the first season they have actually nested there. Landing was not possible owing to a heavy swell but I counted about 30 birds sitting

VIII.—GANNETS OF THE THREE KINGS.

By G. A. Buddle.

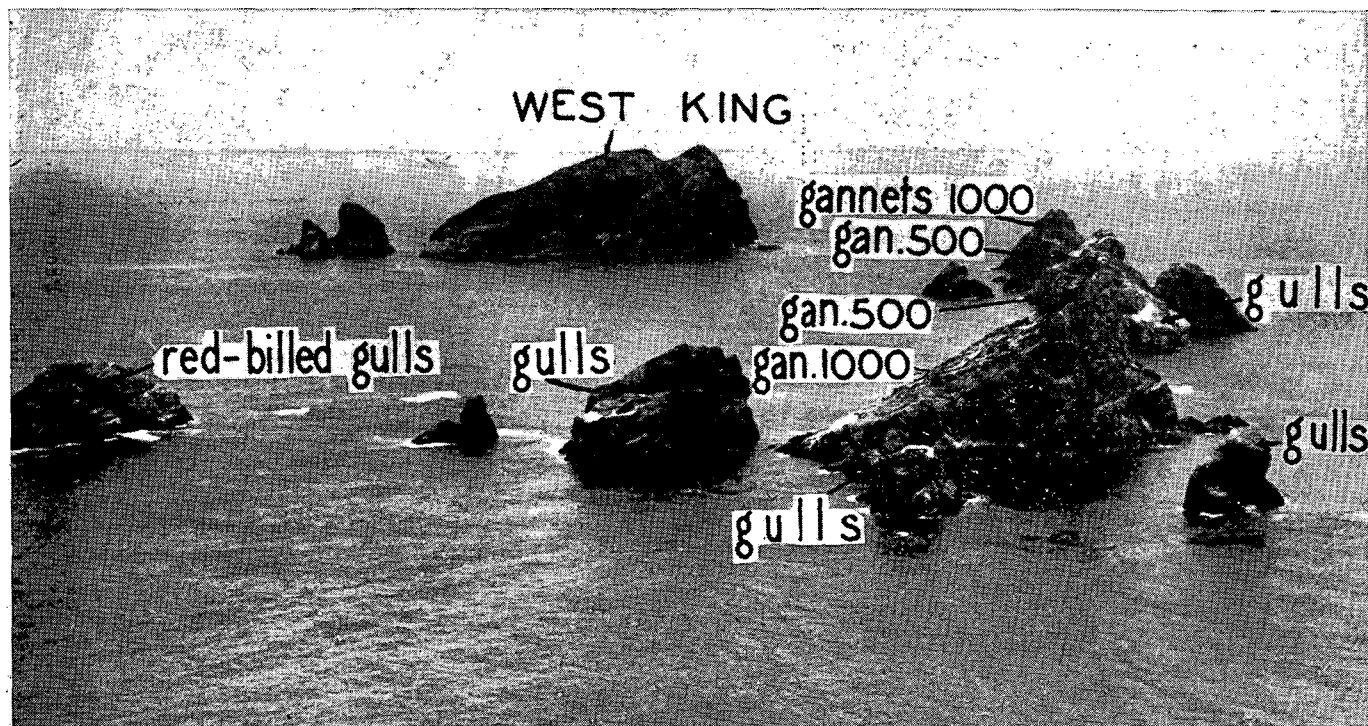
This report is a preliminary estimate of the gannet (*Morus serrator*) population of the Three Kings group made during a short visit from January 3 to 6, 1947. An accurate census as outlined in the instructions for 1946-47 census would entail an elaborate and costly expedition. At least five landings on separate islands or rocks would be necessary. These landings in all cases would be hazardous, not to say dangerous, and would be limited to certain combinations of weather and tide; while it is probable that not more than one landing a day would be feasible. Therefore an expedition with a mother ship would probably have to lay off the group for at least a fortnight to complete the task. Any proposal to base a camp on Great Island and make use of a dinghy and outboard for visiting the various gannetries would be inviting disaster and should not be considered.

South-West King.—This island is roughly triangular in shape, rising to a height of 607 feet at the north and west end, with precipitous cliffs sloping gradually to a low point about 50 feet in height at the southern end. Here a reasonable landing can be made under suitable conditions of tide and weather, and the cliffs climbed to the commencement of the gradual slope, the lower parts of which are covered by a large colony of red-billed gulls (*Larus novaehollandiae*); the slope is bounded on the east by a cliff along the edge of which the gannet colony is situated. It comprises a bare strip of sloping rock 5 to 20 yards in width, with dense scrub of karamu and ngaio, kawakawa, etc., at the back. It is split into four sections by intrusions of the scrub to the cliff edge; the lower one contained ten nests, the second 20, and the third and fourth together about 150, making a total of 180 nests or eggs.

In this colony (3/1/47) there was one young with a few mottled feathers and six downy young. A good number of nests or eggs appeared to have been destroyed or deserted. I considered that, in view of the number of birds circling in the area, there should have been a much greater number of occupied nests.

Some distance round the cliffs to the west was another small colony of about 20 nests, and still further to the north-west, high up on a cliff ledge (both inaccessible) was another of the same size. This makes a total of 220 nests, but I should put the gannet population of the island at a minimum of 750 birds, considering the number wheeling and circling in the area. This colony has the appearance of being on the increase. In the upper sections the birds are gradually increasing the nesting area by working back from the scrub, some of the occupied nests being at least 15 feet in from the edge of the cover, which is, in this area, mostly kawakawa and karamu.

Princes Islands.—This group of rocks presents great difficulty even in making an estimate. There are at least four colonies on isolated rocks, and in all cases they are intermingled or at least adjoining red-billed gull colonies, and in normal weather it is difficult to approach close enough to determine the areas even with the aid of field glasses.



PRINCES ISLAND and WEST KING from summit of South-West King, showing location of some of the Three Kings Gannetries and Red-Billed Gull Colonies, 3/1/1947.

Photo. G. A. Buddle.

Major Johnson and myself landed for a couple of hours on the second large rock counting from the West Island end of the chain (the one with a large hole in the wall). There is a little stunted karamu and grass, flax and tussock, but otherwise bare rock. Red-billed gull colonies are on the lower north-west slopes and also all over the south-east slopes, while the gannets occupy the bulk of the top plateau. There are very few nests, most of the eggs being laid in depressions on the bare rock. A complete count was impossible owing to part of the colony being inaccessible and out of sight. By count of the accessible area and an estimate of the small hidden area we made 250 nests, eggs and young (3 p.m., 5/1/47). Of the young, two were showing pin feathers and 12 were small downy chicks. Red-billed gulls nesting on this island outnumbered gannets by four or five to one, and the nesting areas overlapped, therefore I would suggest that any count from aerial photographs, unless the two species can be differentiated, should be treated with grave suspicion, and this applies to the whole of the colonies in the group, including S.W. Island. Taking the whole group into account, red-billed gulls probably outnumber gannets by 20 to 1. Unfortunately, owing to weather conditions, it was not possible to land on any other of the Princes rocks, but an estimate was made by comparison with the count made on Hole-in-the-wall Island, and approximate figures are given on the attached photograph, but again, even sailing by as close as practicable, it was difficult to accurately delimit the gannet areas from the gulls, and the figures are likely to be high.

West King, North-East King and Great King.—Made a close circuit of the islands, but saw no nesting colonies of either gannets or gulls.

Summary of total gannet population of Three Kings group:—

S.W. Island	750 birds
No. 1 Princes Island	1000 "
No. 2 Princes Island	500 "
No. 3 Princes Island	500 "
No. 4 Princes Island	1000 "
Total	3750 birds

General.—No birds of this year were seen on the wing in the area; not more than 20 live young were counted, but the remains of a considerable number of dead birds were noted. Nests were in the majority of cases non-existent, and those seen were much less substantial than is usual, probably owing to a lack of suitable seaweed in the area. The eggs were usually laid in a depression on the bare rock, and my impression is that there would be a very low percentage of successful rearing of young in this area.

Gannets at Sea.—The following table gives the number of gannets counted at sea on the trip to the Three Kings and return to Auckland:

	No. of Gannets.	
27/12/46—Auckland to Leigh	150	Fresh S.W.; overcast.
28/12/46—Leigh to Deep Water Cove	1	Strong westerly; overcast.
29/12/46—Deep Water Cove to Cavalli Island	80	Light N.W.; overcast.
30/12/46—Cavalli Island to Mangonui . . .	5	Light N.W.; overcast.
2/1/47—Mangonui to Tom Bowling Bay . .	50	Light S.S.W.; clear.
7/1/47—Waikuku to Hohoura	—	S.W.; clear.
8/1/47—Hohoura to Mangonui	45	Light N.E.; hazy.
11/1/47—Mangonui to Whangaroa	3	Light N.; clear.
12/1/47—Whangaroa to Russell	30	Light N.; variable.
13/1/47—Russell to Deep Water Cove . . .	12	Light E.
14/1/47—Deep Water Cove to Whangaruru .	—	Strong S.E.; overcast.
17/1/47—Whangaruru to Kawaitu	17	Light S.E.; clear; changing to S.W.
18/1/47—Kawaitu to Auckland	—	

are problems which require more data, in other years and at other gannetries, for their solution.

GANNETS OF THE THREE KINGS (Vol. 2, No. 6, p. 130).—Correction: It was stated that there were no nesting colonies of gannets or gulls on West King, North-east King and Great King. Actually, there are several very large breeding colonies of red-billed gulls (*Larus novaehollandiae*) on Great King.—G. A. Buddle.

MAHUKI GANNETRY, GREAT BARRIER.—(Vol. 2, No. 6, plate 1) The lower photograph was taken on 28/2/34, and not on 28/11/34 as stated.

NUMBER OF KEAS.—The following figures, supplied by courtesy of the Department of Internal Affairs, whose permission I have to publish them, were compiled by the Department of Agriculture from the amount of the subsidy paid to county councils and represent the number of keas (*Nestor notabilis*) destroyed on which bounties were claimed. Figures are given for 1943, 1944 and 1945 in that order, followed by the total in each case:—Nelson: Waimea C.C., nil, nil, 84, 84. Marlborough: Marlborough C.C., nil, nil, 49, 49. Westland: Westland C.C., 175, 387, 757, 1319. Canterbury: Amuri C.C., 246, 57, 58, 361; Tawera C.C., nil, 6, 96, 102; Selwyn C.C., 59, 93, 160, 312; Ashburton C.C., 77, 27, 166, 270; McKenzie C.C., nil, nil, 255, 255. Otago: Waitaki C.C., 122, nil, 139, 261; Vincent C.C., 592, 207, 265, 1064; Lake C.C., 1059, 888, 795, 2742. Totals: 2330, 1665, 2824, 6819.—J. M. Cunningham.

BIRDS AT HALKETT.—Birds recorded at Halkett, Canterbury, 15-18 miles west of Christchurch (see classified notes for scientific names): Observed in the district every day: Black-backed gull, blackbird, chaffinch, circl bunting (?), goldfinch, greenfinch, harrier, hedge-sparrow, white-backed magpie, little owl, pipit, Californian quail, redpoll, rock pigeon, skylark, sparrow, starling, thrush, yellow-hammer. Seen seasonally or occasionally: Black-billed gull, Canadian goose, Caspian tern, fantail, grey warbler, kingfisher, pheasant, pied stilt, black shag, black swan, black-fronted tern, white-eye, grey duck, rook, banded dotterel. Seen rarely: Pukeko, shining cuckoo. Birds that fly in late afternoon or evening towards Waimakariri River bed from paddocks: Black-backed gull, black-billed gull, white-backed magpie, Caspian tern, black-fronted tern, Canadian goose, sometimes grey duck and black swan.—Halkett School Group.

CRESTED GREBE IN SALT WATER.—This morning, 30/10/47, I was surprised to see a crested grebe (*Podiceps cristatus*) swimming and diving in the Heathcote Estuary. The bird swam with the outgoing tide for about 50 yards, doing an occasional dive, and then swam back, passing within twenty yards of me and performed a dive right in front of myself and a neighbour. Its crest was bright chestnut when viewed from the front and the bird looked to be in good condition. There had been three days of strong southerly wind, with a very cold atmosphere and almost continuous rain—this no doubt was responsible for this most unusual visitor. Dr. R. A. Falla can find no previous record of grebes in salt water in New Zealand.—G. Guy, Christchurch.