

CONTRIBUTIONS TO THE GANNET CENSUS.

IX.—FURTHER VISITS TO WAIHEKE GANNETRY.

By V. I. CLARK and T. M. ROBERTS.

Horuhoru (Gannet Rock, Waiheke) was visited on December 29, 1946, and again on February 21, 1947, to observe breeding gannets (*Moris serrator*).

On December 29 our time on the rock was limited so that only on North Stack were the contents of nests analysed. The main rock was divided into three areas for counting the total occupied and new-empty nests. The proportions of eggs, chicks and empty nests in these areas seemed to be approximately the same as at North Stack, where the figures were: New nests, 21; chicks, 35 (1 light down, 34 all white); eggs, 38; total, 94 nests.

On February 21 counts were made of the chicks that remained and of the visible dead chicks in the same areas. All the young were feathered, but not quite to the flying stage, but the dead chicks included some in down.

The counts may be summarised as a table, using the areas designated on Fleming's map (N.Z. Bird Notes, Vol. 2, No. 5, p. 110):—

	Total Nests, Dec. 29, 1946	Feathered Chicks Feb. 21, 1947
South Group	35	9
Central Group	144	30
North and North Central	43	8
North Stack	94	8
Total Occupied Nests	316	Surviving Chicks 55
Dead Chicks	2	8 (6 in Central gp.)

X.—SUMMARY OF CENSUS WORK AT WAIHEKE. 1946-47.

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The accompanying diagram summarises the Horuhoru gannet counts made by Fleming, Cunningham (N.Z. Bird Notes, Vol. 2, No. 5, p. 109), Clark and Roberts (ante), during the 1946-47 breeding season. For the October and December visits, the data plotted have been obtained by applying the proportions of recognisable empty nests, eggs, and chicks in sample counts to the total counts, a procedure justified by the observers' belief that their samples were representative of the whole gannetry, and valid within certain limits.

Features to be noted are:—The high initial population, the great loss of eggs and abandonment of nests during the season, the suggestion of further laying in December (depending on the validity of the sample counts), and the steady mortality of chicks during the latter part of the season. About 58% of the chicks present on December 1 had disappeared by February 21, some possibly by leaving the colony as flying juveniles, but most undoubtedly by death. The death rate of chicks appears to be from 3% to 7% per week. There was an extremely low percentage of nesting successes: for every 100 pairs of gannets which prepared to nest in September, only 4 or 5 chicks can have survived. The reasons for such poor success, and whether it is a normal phenomenon,