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CONTROLLING A GULL COLONY NEAR A NEW ZEALAND AIRPORT 1965-1984

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INTRODUCTION

In CAP384, "Bird Control on Aerodromes" 1976. When dealing with the principles of bird control it is stated that; "The layman's common suggestion to kill all birds is rarely practicable. Killing is offensive to many people, and in many cases, depending on the species and the methods used, it will be illegal. Even if it could be carried out it would merely create a vacuum which would rapidly be filled by other birds."

Blokpoel (1976) states, "Large-scale long-term killing operations are likely to be useful in only a few cases. Extermination of a certain colony of locally breeding birds may have greater justification and more effect. However, in general, elimination of birds from an airport by killing will draw in new birds with less "aircraft experience", which are thus potentially more hazardous than the birds they replace."

BACKGROUND

Caithness (1968), reported the details of a poisoning operation aimed at eliminating a breeding colony of the southern black-backed gull Larus dominicanus which were nesting on the Ahuriri Plain within 200 metres of Napier Airport, an important secondary airfield in New Zealand (Figure 1).

Prior to taking the decision to poison, the other options considered in this case study were habitat manipulation, or harassment. The latter had been tried over several earlier years, by pulling harrows and discs through the nesting area.

The gulls though renested immediately. Further, such an activity holds birds aloft and in the flight path of all aircraft using the airfield and was clearly more hazardous than by doing nothing. Habitat changes had also been considered. Because the surrounding land was similar to that being used by the gulls and indeed three satellite breeding colonies were associated B, C and D (Figure 1) all that could be expected was a shift to the margins of the altered habitat, and nothing would have been gained.

The colony from its establishment in 1940 had grown to 1,250 pairs by 1965. At that time 2,131 birds were poisoned and 56 others were shot, giving a minimal kill of at least 87.5%. The poisoning operation was clearly highly successful. However, there remained the uncertainty of how the future of the colony would shape up.

It was recognised at the outset that black-backed gulls are ancestral breeders, are long-lived and have delayed sexual maturity, at three-four years (Oliver 1955). Poisoning control then would need to continue for at least four years, so that as succeeding age classes of gulls reached maturity and survivors of the original operation or those that followed returned to breed, they too could be eliminated.

Another unknown though, was just how attractive this particular nesting area would be to gulls bred elsewhere. At least two other major colonies were established at Matapiro and Maraekakaho within 40 km (Figure 1) and one bird ringed at Maraekakaho as a chick was recovered poisoned at the airport colony during the initial poisoning operation.

RESULTS

Data presented in Figure 2 graphically demonstrate the sequence of events in attempting to "eliminate" this colony since 1965 to the present day.

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The gulls were poisoned for five successive years, after four years, the results were highly promising. Even the upsurge in numbers killed in the fifth year, 1970, was acceptable, as delayed maturity could account for this. Over the years 1971-1981, some few birds were poisoned in 1974, 1976 and 1981, in the other years, the odd bird was shot or they were entirely absent. The indications then were that after 16 years of control, the colony had been virtually eliminated.

In 1982, through circumstances beyond our control, we were unable to visit the colony until mid-December. At that time to our horror at least 88 nests representing a minimum of 176 breeding adults were present.

We elected to forego poisoning but prevent recruitment and killed 160 chicks and destroyed 24 eggs.

The following year 1983 was even more alarming here, we poisoned and shot a total of 253 adult gulls and destroyed 117 nests mostly containing eggs while a few had already hatched.

Numbers in 1984 dropped off with only 24 birds being killed.

Clearly, after 19 years of "control" it would be most unlikely, that any bird with ancestral associations with the colony would have escaped the sustained poisoning effort.

The only reasonable conclusion then, is that the habitat provides the visual cues to nomadic birds, that the site is an "ideal" nesting area.

Gulls are attracted to the Napier region the year round, there is a major estuary system nearby and the Napier port is an important east coast base for fishing vessels and their associated shore-based factories.

It is also clear that the task of at least containing this colony will be ongoing and without even one years respite.

The wisdom recorded in CAP384 (1976) and Blokpoel (1976), in placing serious doubt on the value of attempting to control populations of birds has been supported here. However, the question that remains, is, has the elimination of at least 3,136 adult gulls over the period seen any significant reduction in gull-aircraft incidents.

The graph line in Figure 2. shows the number of incidents recorded each year 1965-1983 inclusive. The numbers are small, to the stage that statistical treatment is not justified. Nevertheless, by eye, accepting that quite varied annual fluctuations will always occur, we have recorded as many as 15 incidents (1976) when the colony proper was at least in very low numbers.

The dilemma then, is to decide whether or not we have actually achieved anything in the way of reducing the gull hazard at Napier Airport? The 12 incidents experienced in 1965 prior to the initial control operation which killed 2,187 birds, were recorded in only the later half of the year. So, could have theoretically been double that number.

CONCLUSION

We could ask, how serious would the bird hazard have been had we never attempted to control the gulls? We of course will never know.

I conclude then, that the control of this colony of black-backed gulls must be ongoing, as it would be a brave, perhaps foolhardy decision to withdraw now.

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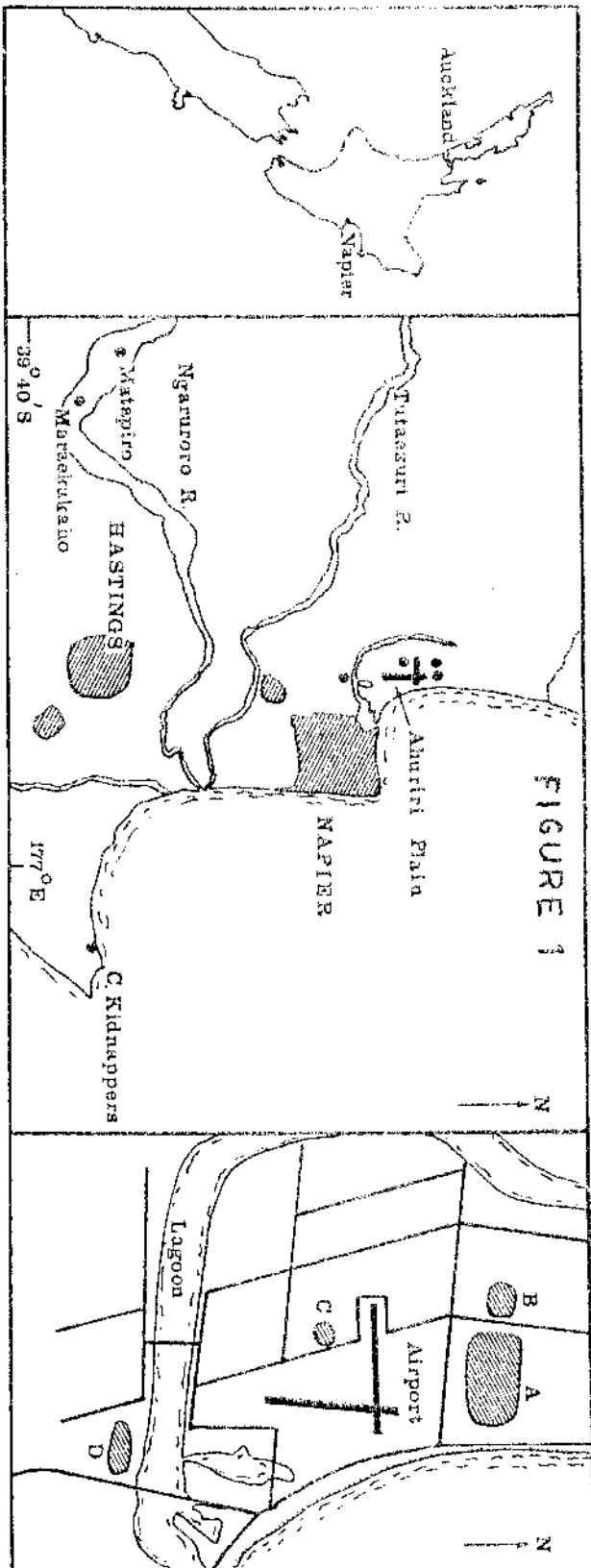


FIGURE 2
NUMBER OF GULLS KILLED AND NUMBER OF GULL/AIRCRAFT INCIDENTS
NAPIER AIRFIELD 1965 - 1983

