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ALEUTIAN CANADA GOOSE NESTING SURVEY
AT CHAGULAK ISLAND, ALEUTIAN ISLANDS, ALASKA
SPRING 1984

by
FREDRIC G. DEINES (1)
and
SCOTT HATCH (2)

Key Words: Aleutian Canada goose
Aleutian Islands
Islands of Four Mountains Group
Chagulak Island
Nesting study
Egg measurements
Endangered Species
Distribution

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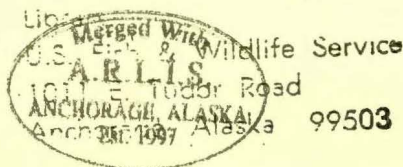
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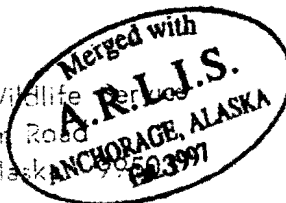
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TITLE

Aleutian Canada Goose Nesting Survey at Chagulak Island,
Aleutian Islands, Alaska -- Spring 1984

DATE September 30, 1984

I.D. NO.

AUTHOR(S)

Fredric G. Deines and
Scott Hatch

CITATION

OBJECTIVE - Collect five Aleutian Canada goose eggs from Chagulak Island. Also measure all eggs and gather information on nest site, nesting densities and general goose observations.

METHOD OF STUDY - One entire drainage basin on the west side of Chagulak Island was thoroughly searched for Aleutian Canada goose nests using techniques developed at Buldir Island. One egg from five different nests was collected for research purposes. Measurements of all eggs in each located nest were taken and general site conditions were recorded.

MAIN FINDINGS - Eight goose nests were found in the drainage on the west side of the island. Their average elevation was 245 meters above sea level and they had an average clutch size of 5.75 eggs per nest. Average length and width measurements for all eggs measured was 79.0 mm x 52.2 mm. The general nest site for geese on Chagulak appeared to be in a slightly different habitat than birds on Buldir. A total of 42 Aleutian Canada goose observations were made with one bird having a red leg band.

CONCLUSIONS - The Aleutian Canada goose population on Chagulak may be slightly higher than initially estimated. Nest site selection probably is unique to Chagulak, but could indicate that Aleutian Canada geese nesting requirements may not be as restrictive as initially thought. The bird with a red leg band indicates that the Chagulak population is probably wintering in California.

MANAGEMENT IMPLICATIONS - Determining the winter haunts of the Aleutian Canada geese breeding on Chagulak Island in the eastern Aleutian Islands could allow improved protection of this population of the endangered species' winter habitat and help protect the population from environmental impacts. If the Chagulak population also winters in the same area of California as the Buldir birds, no additional protection would be required on the wintering grounds.

ADDITIONAL REMARKS

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METHODS

One of the four significant goose habitat areas on Chagulak was visited on 14 and 15 June 1984. This area is located on the west side of Chagulak and was thoroughly searched for goose nests. The procedures used to search for the nests on Chagulak were patterned after those used during Buldir Island Aleutian Canada goose nesting studies. This technique basically involved lining up the six biologists abreast 5 to 10 meters apart (depending on terrain and fog) while walking through the goose nesting habitat searching for nests. As a bird was flushed from the vegetation, a detailed search was made in that vicinity to locate the nest. When a nest was found, the eggs were counted and one was collected until a total of five were taken. Standard measurements of all eggs in the nests were also taken. While an egg was being measured, those remaining in the nests were covered with down from the nest and a sweater or coat to help keep the eggs warm. The collected egg was then placed in a padded styrofoam container and hand carried from the side of the mountain down to an inflatable boat and out to an incubator on the charter vessel. A photograph of each nest and the surrounding area was also taken. Before leaving each nest all eggs were re-covered with goose down. All activities around the nest were performed as quickly as possible so the bird could return to its nest before the eggs cooled.

Eggs from two nests were floated to allow an estimate of their stage of development and the age of the embryo. Incidental observations of other geese in the area, especially banded birds, were also made while searching for nests. These observations were made with binoculars only and were secondary in importance to the egg collection effort.

RESULTS AND DISCUSSION

A total of eight Aleutian Canada goose nests were found in the western goose habitat area of Chagulak Island. The nests were located at elevations ranging from 158 to 302 meters above sea level (ASL). The average elevation at which nests were located was 245 meters ASL. All nests but one were found on a west facing slope. One nest was located on a south-southwest facing slope.

The vegetation and habitat in which each Chagulak Island goose nest was found (Table 1) appeared to be different from that used by geese nesting on Buldir Island. There were no nests found in what could be described as the lush Elymus/umbell habitat typical of Buldir. All nests found on Chagulak were located in more of a mixture of short grass vegetation types such as mossy/willow and Elymus/Claytonia. The exact reason for the apparent different choice of nesting habitat on the two islands is unknown, but it could be speculated that one or both are atypical. On the other hand both could be typical. It could also be speculated that the nesting requirements for Aleutian Canada geese throughout the

Table 1 - continued...

Nest No.	Slope Aspect	Approximate Elevation in Meters	Number of Eggs	Egg Measurements in mm	General Description
8	W	760	7	77.4 x 52.3 78.0 x 52.8 80.5 x 52.8 77.0 x 52.5 78.4 x 52.3 74.7 x 53.5 78.0 x 52.6	Nest immediately down-slope of 2' high moss covered boulder, vegetation: <i>Angelica</i> , <i>Heracleum</i> , <i>Elymus</i> , sedge, anemone, <i>Claytonia</i> and <i>Salix</i> moss (nest in midst of vegetated talus storm-petrel nesting area, GWGU also nesting in area).

Aleutian Island chain may not be as restrictive as initially thought and that many areas not thought to have good goose habitat could indeed have excellent habitat. One main similarity between Chagulak and Buldir nests, however, was the presence of some type of physical backdrop to each nest. This backdrop could consist of vegetation (large *Heraculum*), small or large boulders, or terrain features (small hummock). A more detailed study of this situation on Chagulak would be necessary before any conclusive comparisons could be made on nesting habitat selection.

The number of eggs per nest varied from 4 to 7 with the average clutch size being 5.75 eggs per nest (Table 1). This compares favorably with the results of the 1982 Aleutian Canada goose nesting study done on Buldir which indicated an average clutch size of 5.50 eggs per nest (Deines and Early 1982).

Measurements of the eggs in the eight nests varied from 72.3 to 84.4 mm for the length and 49.6 to 54.7 mm for the width. The average length and width measurements taken was 79.0 mm x 52.2 mm. Measurements taken of 144 eggs in 1976 on Buldir averaged 79.8 mm x 52.5 mm; with a range of 73.2 to 88.1 mm for the length and 47.8 to 57.4 mm for the width (Byrd and Woolington 1978). Such measurements were not obtained during the 1979 and 1982 Buldir nest survey.

A total of 42 observations of Aleutian Canada geese were made during the two days on Chagulak Island. The majority of the birds were either not banded or too far away to determine the presence or absence of leg bands. Most of the birds were observed in pairs or small flocks and exhibited some territoriality, however, one large flock of 16 birds was also observed. The number of potential duplicate observations made is unknown due to movement of the birds, changes in time or movement of observers. The birds were mainly seen in the higher mossy/willow habitat. The highlight of these observations was the sighting of a bird

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