

**REPORT OF STATE OF ALASKA**  
**ON THE 1963 BLACK BRANT PRODUCTION**

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Summary

Better than average weather conditions enhanced the progress of the 1963 Black Brant nesting season until late June. On June 22 a northwest storm completely inundated the Black Brant nesting habitat for at least one tide. A conservative estimate of the losses from this storm would be 80 percent of the annual production or 30,000 to 40,000 brant based on a fall population of 180,000 brant. Consequently a very poor fall flight of local brant is expected to depart Alaska.

Progress of the Nesting Season

Black Brant investigations were conducted on the Yukon-Kuskokwim Delta as a continuation of studies begun in 1961. All indications from the start of incubation, which was one week earlier than in 1962, pointed to a good nesting season for brant. The weather from the onset of egg laying and incubation was warm and mild, continuing until early June. On June 20 a series of low pressure areas moved into the Bearing Sea bringing rain and northwest winds of light gale force. Unfortunately at this time the highest tides of the month were expected and the high tides of June 22 rose to an unpredicted height. This inclement weather continued for nearly two weeks with a second storm of about the same intensity starting a week later. As a consequence of these storms the entire nesting habitat of the Black Brant was inundated completely for at least one tide during the first storm and may have been covered at other times.

Nesting Study Area Survey

Prior to the June 22 high tides a complete check of the Kashunuk River study area was completed (Table 1). A slight decrease in the number of nesting brant was revealed, but not enough to suggest a significant change in the breeding population. Clutch sizes were the same as in previous years and before the storm averaged 3.6 eggs per clutch. The stage of incubation of most clutches indicated the peak of the hatch would have occurred between June 23 and 27.

Evaluation of the Storm Damage

Early in the morning of June 22 it became apparent that the steady northwest winds were causing extreme high tides on the coastal flats. In order to observe the effects of these high tides two flights were made over the nesting habitat of the brant. The first flight was at 3:00 a.m. June 22, and the second was at 1:00 p.m. June 22. Both flights were made in a Fish and Wildlife Service Cessna 180 piloted by Refuge Manager, James G. King.

Table 1. Comparison of nesting densities on the Kashunuk River study area.

<u>Species</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>
Black brant	260	332*	293
Cackling goose	49	67	60
Spectacled eider	36	26	22
Common eider	2	1	1
Steller's eider	1	5	1
Pintail	7	3	5
Old squaw	0	2	3
Emperor goose	0	1	1
Greater scaup	0	1	1
Little brown crane	0	0	1
Unidentified goose	<u>0</u>	<u>4</u>	<u>2</u>
Total	356	442	390

The midnight tide of June 22 had receded by the time we reached the tidal flats; however, it appeared that little damage had occurred during this tide as there was no drift scattered about the nesting flats. The second flight was made along the entire nesting area from the Kashunuk River to Hazen Bay at the peak of the storm tide. Extensive windrows of debris consisting of huge logs, sticks, thousands of eggs, and downy brant covered the drift lines above the level of the nesting flats. Very little, if any, of the nesting habitat was above water and most was covered with a foot or more of sea water. There was little doubt in our minds that nearly all the brant nests along the coastal flats were completely or partially inundated for part of this tide. A conservative estimate of the losses from this storm would be 80 percent of the annual production or 30,000 to 40,000 brant, based on a fall population of 18,000 brant. On June 23 a ground check was made over the Kashunuk study area. The damage wrought by the storm tide was appalling--eggs of Black Brant, Cackling Geese, Common Eider and other species lined the beaches in windrows. Examination of these eggs proved that many were pipped or in late stages of incubation. Downy Brant either drowned or dead from exposure were scattered along drift lines or in abandoned nests. Brant were noted incubating pipped eggs, but most contained dead embryos; however, some eggs that were obviously covered for part of the storm tide contained live embryos that were hatching.

One hundred and two nests of Black Brant, Cackling geese, Spectacled Eider, Emperor geese, and Old Squaw were rechecked of the 390 nests found previously. Many of the completely destroyed nests were never found, thus biasing these figures toward the surviving nests. Of the rechecked nests 43 percent were destroyed outright. The average clutch size of the remaining nests were reduced from 3.6 eggs to 1.9 eggs per nest. Moreover, it was apparent that many of the remaining eggs would not hatch due to chilling and desertion. A final check of the study area on June 30 revealed practically no active nests nor any sign of renesting attempts.

Aerial brood censuses conducted over previously established transects provided further evidence that the nesting losses were extremely high. A comparison of 11 transects suggested that the 1963 brood production was 26 percent of the 1962 counts. The only transect which even approached 50 percent of the 1962 brood count was the one covering the Kashunuk study area which is higher than most of the remaining brant habitat. Ground brood counts on the Kashunuk River at hatching showed a reduction in brood size from 3.5 young in 1962 to 2.9 in 1963. The average brood size as observed from the air was 2.1 goslings compared to 2.9 in 1962.

#### Forecast

A poor fall flight of local Black Brant is expected.

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