REPORT OF STATE OF ALASKA

TO PACIFIC FLYWAY

NOVEMBER 1963

Prepared by

Peter E. K. Shepherd

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General

Extremely warm weather beginning in late April and continuing through most of May provided conditions which were highly favorable for a rapid development of waterfowl habitat over most of the State. High water in the Interior reached a peak nearly two weeks earlier than in 1962, but most lake ice did not melt until the third week in May. Water levels began to drop in late May and fluctuated a little until heavy rains in late July and early August brought lake levels up to the spring high water mark. This late summer flooding had no known adverse influence on the success of the nesting and brood season.

Prospects for the best breeding ground conditions in the past three years were good to excellent. An accelerated development of vegetation accompanied the warm and early spring - a phenological feature which is generally indicative of a good production year in the far north - and the commencement of nesting as well as the timing of the appearance of deserted male flocks early in June suggested at least a 7 to 10 day advance in the season.

Banding

The State of Alaska operated only one banding station during the summer of 1963. This station was located at the mouth of the Kashunuk River on the Yukon-Kuskokwim Delta. A total of 3,704 adult and sub-adult Black brant were banded by State and Federal personnel. Due to disastrous losses of local brant few young birds were available and therefore none were banded.

Production Studies

Ground breeding pair censuses were conducted at Minto Lakes from May 28 to June 7, 1963. Conditions for the ground counts were nearly the same as in 1962, although there was more water in some of the check plots prior to the 1963 census. These counts revealed a breeding drake population of 53.0 drakes per square mile. This figure was not significantly different from the 1962 count of 56.5 drakes per square mile.

Sex ratio counts of dabblers in deserted male flocks suggested that most species, with the exception of Shovelers, were experiencing a good production year. In late June approximately 50 percent of the Mallards, Pintail, and Green-winged teal were apparently still incubating off with broods. This is in contrast to the 1962 counts taken at some time which indicated only 26 percent of the hens were still nesting or had successfully raised broods. Insufficient counts of divers made an evaluation of the nesting progress of these species impractical.

The first Pintail brood was observed on the Minto study area June 14 and the following week many more Pintail and Mallard broods became evident. Two successive ground counts over the 9 four-square mile study plot revealed that

an average of 11 broods per square mile were produced in 1963: In 1962 an average of 6 broods per square mile was produced on the same plots. The mean brood size as calculated from 303 broods was 6.8 (Table 1), nearly one duckling larger than in 1962. Hatching success compiled from breeding pair censuses and brood counts was 26 percent in contrast to 16 percent for 1962. Total production (young plus adults) showed a 17 percent increase over 1962. These data suggested that on the study area, and probably over most of the Interior, a fair fall flight of waterfowl, especially dabblers, could be expected.

Miscellaneous Studies

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 the highest tides of the month were expected at this time, and the high tides of June 22 inundated the nesting flats. The inclement weather continued for nearly two weeks with a second storm of about the same intensity occurring June 29. 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.

Prior to the June 22 storm and high tides a complete check of the Kashunuk River study area was completed (Table 2). 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 state of incubation of most clutches indicated the peak of hatch would have occurred between June 23 and 27.

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.

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 because there was no drift scattered about the nesting flats. The second flight was made at the peak of the storm tide along the entire Black brant nesting area from Kashunuk River to Hazen Bay. 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 perhaps 30,000 to 40,000 brant, based on a fall population of 180,000 brant.

Aerial brood censuses conducted over previously established transects provided further evidence that the nesting losses to brant were extremely high. A comparison of 11 transects suggested the 1963 production was only 26 percent of the 1962 count. 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.

Table 1. MINTO LAKES BROOD COUNTS

Species	1961	1962	1963
Pintail	78 (5.2)	56 (5.4)	32 (5.9)
Mallard	17 (5.0)	16 (5.8)	27 (6.3)
Widgeon	123 (4.1)	48 (6.8)	94 (6.8)
Shoveler	21 (6.0)	18 (7.7)	10 (7.4)
G. W. teal	42 (5.9)	13 (6.0)	24 (8.0)
Scaup	73 (7.0)	73 (6.0)	90 (6.9)
Canvasback	17 (4.1)	36 (5.9)	4 (8.5)
Bufflehead		21 (4.9)	15 (7.0)
Goldeneye	4 (6.2)	1 (7.0)	7 (6.4)
Redhead	1 (5.0)	1 (8.0)	
Scoter	1 (5.0)	1 (5.0)	
TOTAL	437 (5.7)	284 (6.0)	303 (6.8)

Table 2. COMPARISON OF NESTING DENSITIES ON THE KASHUNUK RIVER STUDY AREA

Species	1961	1962	1963
Black brant	260	332	293
Cackling goose	49	67	60
Emperor goose	0	1	1
Unidentified goose	0	4	2
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
Greater scaup	0	1	1
Little brown crane	0	0	1
TOTAL	355	442	390

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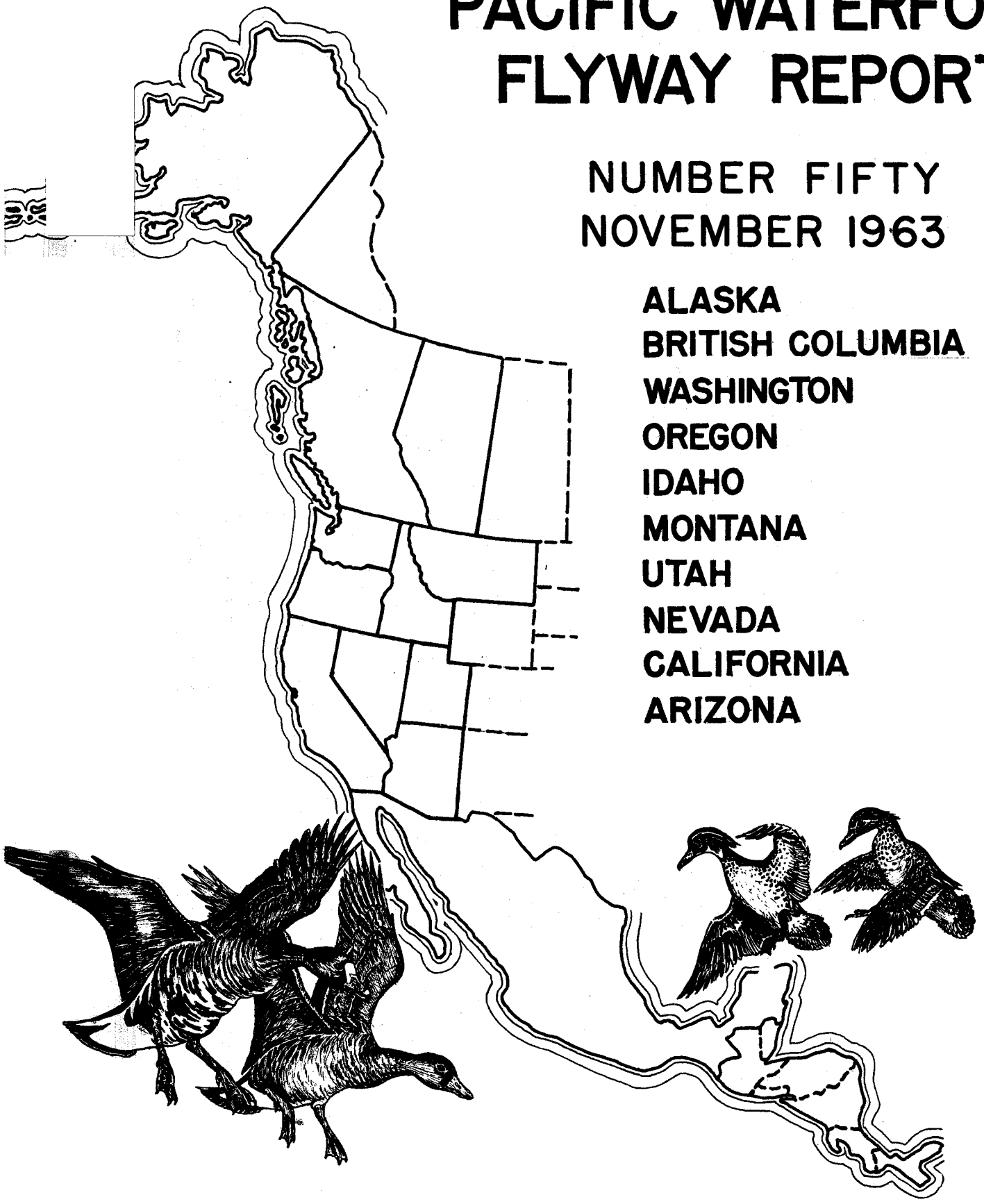

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