DISTRIBUTION OF THE DUCK HARVEST IN CANADA AND THE UNITED STATES

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ABSTRACT

Marked differences are noted in the distribution of harvest of various duck species between and within Canada and the United States, on the basis of data obtained from mail questionnaire and wing collection surveys.

DISTRIBUTION OF THE DUCK HARVEST IN CANADA AND THE UNITED STATES

When managing waterfowl populations it is frequently important to know where the harvest of various species of ducks is likely to occur. This is true both within and between Canada and the United States where most of the North American waterfowl harvest is taken. Although data on the size and distribution of the duck kill have been available for a number of years in the United States, it was not until 1967 that national surveys were initiated to measure the kill in Canada. Data from three hunting seasons in Canada are now available. The purpose of this report is to present the distribution of the kill by species in the United States and Canada for the years 1967-69 based on mail questionnaire and wing collection survey data. Since there is some variation from year to year in the distribution of harvest among States and Provinces, data for the 3-year period were averaged. Unless there are major changes in hunting regulations, it seems likely that the distribution of the duck harvest during the next few years will be generally similar to the average distribution described in this paper.

Although the data-gathering methods employed in Canada and in the United States are similar, there are some differences. In the United States, mailing addresses were obtained and questionnaires sent to individuals who purchased duck stamps during the current year, while in Canada questionnaires were sent to individuals whose names and addresses were obtained when they purchased hunting permits during the previous year. In the United States, the kill reported by hunters is adjusted downward about 20 percent in recognition of a reporting bias (Atwood, 1956). No such adjustment is made in Canadian data. In Canada, however, it is estimated that the kill by natives is much greater than in the United States, and this kill is not included in either the Canadian or the United States estimates. Also, none of the harvest in the Yukon and Northwest Territories of Canada is measured. In addition, there are some differences in the questionnaires used in the two countries. For these reasons, it is likely that kill estimates are more comparable on a within-country than a between-country basis. Nevertheless, it is believed that the similarities and compensating differences in the two methods permit a reasonable approximation of the distribution of the duck kill by species between the United States and Canada. Information concerning the distribution of the duck kill by species between Canada and the United States is presented in table 1, together with the estimated annual harvest for both countries combined. The distribution of the kill within Canada and within the United States is presented in table 2. Although an estimated average kill by species in each State and Province is not presented in this report, it is possible to calculate it from data in the two tables.

Table 1 indicates striking differences among species in the proportion of the total kill occurring in Canada. The proportion for black ducks (42.7%) and common goldeneyes (48.4%) was much higher while the proportion for pintails (14.3%) and shovelers (15.5%) was lower

than the average for all species (23.2%). It is interesting to note that for the 3 years the second most important species in the combined Canadian-United States harvest was the green-winged teal.

Table 2 shows the distribution of the harvest by species within Canada and within the United States. The mallard harvest was more widely distributed throughout both countries than that of any other species. The black duck kill was strongly concentrated in eastern Canada and the Atlantic Flyway. It is apparent that the proportion of the total black duck kill in the United States occurring in the Mississippi Flyway has declined in recent years. It was estimated that during the period 1954 through 1962 (Geis, Smith, and Rogers, 1971) 38.8 percent of the United States black duck kill was taken in the Mississippi Flyway, but table 2 shows only 26.2 percent for the period 1967 to 1969.

The gadwall harvest was heavily concentrated in Alberta and in the Central Flyway. The American widgeon harvest was unique in that the average kill in British Columbia was greater than in any other Canadian Province, while over half of the kill in the United States was concentrated in the Pacific Flyway. The green-winged teal harvest tended to be widely scattered. In Canada, however, the largest harvests were in British Columbia, Ontario, and Quebec; in the United States they were in California, Louisiana, and Texas. The blue-winged teal harvest in Canada is interesting in that it occurred chiefly outside the known important production areas. Seventy-two percent of the Canadian kill occurred in Ontario and Quebec, suggesting an eastward movement from the principal production areas in the Prairie Provinces. Major blue-winged (and cinnamon) teal harvest areas in the United States were Minnesota (28% of the U.S. kill), followed by California (16%) and Wisconsin (11%).

The shoveler harvest was taken in the west in both Canada and the United States. Major harvest areas were Alberta in Canada and California in the United States, each with about 40 percent of the respective national total. The Pacific Flyway averaged 59 percent of the total U.S. shoveler harvest. The pintail harvest was concentrated in the west even more than that of the shoveler. Alberta and British Columbia accounted for 51 percent of the Canadian harvest, while the Pacific Flyway took 71 percent of the U. S. harvest. Over half of the entire U. S. pintail kill occurred in California. Texas and Louisiana were the only significant harvest areas outside the Pacific Flyway.

As would be expected, wood ducks were harvested mostly in eastern North America. Practically the entire Canadian kill was taken in Ontario and Quebec (95.8%), while within the United States, Louisiana, Minnesota, Wisconsin, and New York were major harvest areas. In Canada the redhead was harvested mostly in Manitoba and Ontario; the leading harvest areas in the United States were Minnesota, Texas, and Michigan. The canvasback harvest in Canada was well distributed among the three

Prairie Provinces and Ontario. In the United States, it was widely distributed; California (13.9%), Maryland (10.4%), and Texas (8.4%) were the chief harvest areas. The kill of greater scaup in Canada was concentrated in Ontario and Quebec, while within the United States it occurred chiefly in New York (23.0%), California (18.5%), and Michigan (14.5%). Except for the black duck, the greater scaup is the only species with a larger harvest in the Atlantic than in other flyways.

The kill of lesser scaup was more concentrated in the central portions of Canada and the United States. Manitoba and Ontario were the major Canadian harvest areas, while Minnesota hunters took more than twice as many lesser scaup as hunters in any other State. The ringneck harvest in Canada was mostly in Ontario (63.3%), while in the United States Minnesota was the most important harvest area with one-third of the total; Florida had 15.3 percent. The kill of common goldeneyes in Canada occurred largely in Ontario (46.3%) and Quebec (27.4%). In the United States, the goldeneye harvest was widely distributed although the greatest kills occurred in Minnesota (13.9%), New York (9.8%), Wisconsin (8.7 %), Washington (8.6%), and Michigan (8.1%). In Canada, Ontario was the chief harvest area for bufflehead (61.5%). This species was taken in relatively small numbers throughout the United States with the greatest harvest in Minnesota (13.6%) and Michigan (11.9%). The ruddy duck harvest in all areas was small; the greatest harvest in Canada was in Ontario, while within the United States the largest harvest (30.6%) was in California.

Data for the ruddy duck emphasize the importance of having information on the distribution of the harvest as well as the more commonly available data on species composition of the kill in each State. Although California is the most important harvest area for the ruddy duck in the United States (with a kill over three times that in any other State) the ruddy duck makes up less than 1 percent of the California duck harvest.

REFERENCES

Atwood, Earl L.
1956. Validity of mail survey data on bagged waterfowl. Journal of Wildlife Management, vol. 20, no. 1. p. 1-16.

Geis, Aelred D., Robert I. Smith, and John P. Rogers.
1971. Black duck distribution, harvest characteristics, and survival. U. S. Bureau of Sport Fisheries and Wildlife, Special Scientific Report--Wildlife No. 139. 241 p.

Table 1.--Average distribution of the duck harvest between Canada and the United States during the 1967-69 hunting seasons based on mail questionnaire and wing collection data

Species	Percent of harvest in-- Canada	United States	Total	Average harvest* 1967-69
Mallard	27.1	72.9	100.0	4,766
Black duck	42.7	57.3	100.0	675
Gadwall	18.4	81.6	100.0	662
American widgeon	18.4	81.6	100.0	1,080
Green-winged teal	18.4	81.6	100.0	1,578
Blue-winged teal	30.0	70.0	100.0	681
Shoveler	15.5	84.5	100.0	490
Pintail	14.3	85.7	100.0	1,479
Wood duck	15.1	84.9	100.0	835
Redhead	23.4	76.6	100.0	220
Canvasback	19.0	81.0	100.0	130
Greater scaup	32.3	67.7	100.0	156
Lesser scaup	22.1	77.9	100.0	475
Ring-necked duck	22.3	77.7	100.0	463
Common goldeneye	48.4	51.6	100.0	175
Bufflehead	28.9	71.1	100.0	170
Ruddy duck	8.6	91.4	100.0	60
All ducks	23.2	76.8	100.0	14,340
License buyers (potential hunters)	16.8	83.2	100.0	2,306**

* in thousands.

** average license sale in thousands, U. S. and Canada combined.

Table 2.--Average distribution of the duck harvest by species in Canada and the United States, 1967-69, expressed as a percentage of the national total [T = trace]

	MALLARD		BLACK DUCK		GADWALL	
	Average	Range	Average	Range	Average	Range
CANADA:						
British Columbia	11.5	8.1-13.4	0		1.0	0.8- 1.3
Alberta	29.5	26.7-31.2	0		50.1	47.6-51.4
Saskatchewan	22.1	18.6-24.3	0.1	0 - 0.1	31.5	26.6-35.8
Manitoba	13.8	9.6-17.5	0.3	T - 0.5	14.7	9.3-18.5
Ontario	19.9	17.1-22.5	44.6	39.9-51.8	2.3	1.6- 2.8
Quebec	3.0	2.2- 4.1	29.5	25.8-31.8	0.4	0.3- 0.5
Nova Scotia	0.1	T - 0.1	8.7	7.8- 9.7	0	
P. E. I.	T	T - T	1.9	1.6- 2.5	0	
New Brunswick	0.1	T - 0.1	7.9	6.0- 8.9	0	
Newfoundland	T	T - T	6.9	5.4- 8.4	0	
TOTAL	100.0		99.9		100.0	
PACIFIC FLYWAY:						
Alaska	0.5	0.3- 0.6	0		0.1	0.1- 0.2
Washington	7.5	5.9- 9.7	0		1.5	1.3- 1.7
Oregon	4.2	3.8- 4.7	0		1.8	1.4- 2.6
Idaho	5.9	5.5- 6.6	0		1.7	1.5- 2.1
Montana	2.5	2.1- 2.9	0		1.1	0.5- 2.0
Wyoming	0.2	0.2- 0.2	0		0	
California	8.8	7.6-10.1	0		9.6	5.8-12.3
Nevada	0.9	0.7- 1.2	0		1.6	1.3- 2.1
Utah	2.4	1.9- 3.2	0		5.7	3.2- 8.0
Colorado	0.5	0.4- 0.5	0		0.1	0.1- 0.1
Arizona	0.2	0.2- 0.3	0		0.6	0.4- 0.8
New Mexico	0.1	0.1- 0.1	0		0.1	T - 0.2
TOTAL	33.7		0		23.9	
CENTRAL FLYWAY:						
Montana	0.6	0.5- 0.7	0		0.3	0.2- 0.5
North Dakota	3.7	3.2- 4.1	0.1	T - 0.1	8.5	6.5-10.4
South Dakota	3.1	2.6- 3.5	T	0 - 0.1	5.9	4.3- 8.6
Wyoming	0.5	0.3- 0.8	0		0.5	0.3- 0.7
Nebraska	3.3	2.9- 3.6	T	0 - T	2.7	2.2- 3.4
Colorado	2.0	1.8- 2.2	0		1.4	1.2- 1.8
Kansas	2.5	2.3- 2.9	T	T - 0.1	3.8	3.0- 4.4
New Mexico	0.2	0.2- 0.2	T	0 - T	1.0	0.5- 1.4
Oklahoma	1.4	1.2- 1.7	T	0 - T	3.3	1.8- 4.5
Texas	2.9	1.9- 3.8	0.3	0.1- 0.6	13.0	8.3-20.8
TOTAL	20.2		0.4		40.4	
MISSISSIPPI FLYWAY:						
Minnesota	6.8	5.9- 8.2	1.0	0.9- 1.0	3.5	3.2- 3.8
Wisconsin	3.8	3.2- 4.2	3.1	2.6- 3.4	1.3	1.0- 1.4
Michigan	2.3	2.2- 2.5	5.4	3.4- 7.3	0.3	0.2- 0.4
Iowa	2.5	1.6- 3.4	0.4	0.2- 0.6	1.6	0.9- 2.4
Illinois	4.1	3.2- 5.4	3.0	1.4- 5.2	1.4	0.7- 2.4
Indiana	0.5	0.5- 0.5	1.5	1.2- 1.6	0.2	0.1- 0.2
Ohio	0.9	0.7- 1.0	3.0	2.7- 3.2	0.2	0.1- 0.3
Missouri	2.8	2.1- 3.1	0.2	0.1- 0.3	0.9	0.8- 1.1
Kentucky	0.3	0.3- 0.4	1.3	0.8- 1.8	0.2	0.2- 0.2
Arkansas	5.4	4.7- 6.0	0.5	0.3- 0.7	2.9	1.2- 4.4
Tennessee	1.5	1.4- 1.5	3.9	2.6- 5.4	1.0	0.6- 1.2
Louisiana	5.1	4.2- 6.6	1.1	0.5- 1.7	16.2	14.5-18.1
Mississippi	1.4	1.0- 1.9	1.0	0.7- 1.2	0.9	0.7- 1.0
Alabama	0.4	0.4- 0.4	0.8	0.3- 1.0	1.0	0.7- 1.3
TOTAL	37.8		26.2		31.6	
ATLANTIC FLYWAY:						
Maine	0.1	T - 0.1	9.3	8.1-10.2	T	T - T
Vermont	0.1	T - 0.1	1.7	1.5- 2.0	T	0 - T
New Hampshire	0.1	T - 0.1	2.2	2.0- 2.5	T	0 - T
Massachusetts	0.3	0.2- 0.4	9.1	7.9- 9.9	0	
Connecticut	0.2	0.2- 0.3	3.3	2.3- 4.1	T	T - T
Rhode Island	T	T - 0.1	1.7	1.5- 2.1	T	T - T
New York	2.1	1.3- 2.8	10.9	9.8-11.6	0.2	0.1- 0.3
Pennsylvania	1.5	1.2- 1.8	3.6	3.1- 4.3	0.1	0.1- 0.1
West Virginia	T	T - T	0.2	0.1- 0.3	T	T - T
New Jersey	0.6	0.5- 0.9	10.7	10.1-11.4	0.1	0.1- 0.1
Delaware	0.4	0.2- 0.5	2.7	2.4- 3.3	0.1	T - 0.1
Maryland	0.8	0.5- 1.0	5.2	3.8- 6.6	0.5	0.4- 0.6
Virginia	0.6	0.5- 0.8	5.5	4.3- 7.5	0.7	0.2- 1.1
North Carolina	0.4	0.3- 0.4	3.3	3.0- 3.8	0.6	0.4- 0.9
South Carolina	0.7	0.5- 0.9	2.8	2.4- 3.1	1.2	1.0- 1.4
Georgia	0.2	0.1- 0.3	0.7	0.6- 0.8	0.2	0.1- 0.3
Florida	0.1	0.1- 0.1	0.4	0.3- 0.6	0.4	0.3- 0.5
TOTAL	8.0		73.3		4.1	
U. S. TOTAL	99.9		99.9		100.0	

Table 2.--Average distribution of the duck harvest by species in Canada and the United States, 1967-69, expressed as a percentage of the national total [T = trace] (continued)

	AMERICAN WIDGEON		GREEN-WINGED TEAL		BLUE-WINGED TEAL	
	Average	Range	Average	Range	Average	Range
CANADA:						
British Columbia	31.4	21.4-41.8	19.1	17.3-20.8	0.9	0.3- 1.5
Alberta	26.6	22.0-33.6	6.3	5.5- 6.8	7.8	0.7-15.8
Saskatchewan	17.9	15.3-21.3	4.5	2.8- 5.8	4.0	0.2- 7.3
Manitoba	10.6	9.4-11.7	8.2	4.9-11.0	7.4	0.2-15.6
Ontario	10.1	7.6-12.2	25.1	23.1-26.6	40.4	33.4-53.3
Quebec	3.0	1.8- 4.0	19.3	14.6-26.3	31.4	20.5-38.7
Nova Scotia	0		5.1	4.1- 6.2	0.7	0.6- 0.9
P. E. I.	0.1	T - 0.2	3.4	3.3- 3.5	2.7	2.3- 3.2
New Brunswick	0.3	0.2- 0.4	4.0	2.1- 5.4	4.5	2.6- 6.3
Newfoundland	0.1	0 - 0.1	5.1	4.7- 5.7	0.4	0.1- 0.6
TOTAL	100.1		100.1		100.0	
PACIFIC FLYWAY:						
Alaska	1.0	0.8- 1.4	0.8	0.5- 1.0	0.1	T - 0.2
Washington	12.2	8.0-17.3	4.9	4.1- 5.6	0.6	0 - 1.4
Oregon	8.4	6.8-10.8	3.6	3.1- 4.5	0.3	0.2- 0.4
Idaho	2.8	2.2- 3.8	1.3	0.9- 1.6	0.2	0.1- 0.4
Montana	1.2	0.9- 1.8	0.5	0.3- 0.8	0.4	0.2- 0.6
Wyoming	0.1	T - 0.1	T	0 - T	T	0 - 0.1
California	25.9	22.6-30.1	24.0	22.6-24.9	16.0	10.6-21.0
Nevada	0.7	0.6- 0.9	1.5	1.2- 2.1	0.8	0.4- 1.0
Utah	2.4	2.1- 2.8	4.3	2.5- 6.4	2.5	1.0- 4.2
Colorado	0.1	T - 0.1	0.1	0 - 0.1	0.1	0 - 0.2
Arizona	0.5	0.5- 0.6	1.0	0.9- 1.1	0.7	0.4- 0.9
New Mexico	T	T - 0.1	T	0 - T	T	0 - 0.1
TOTAL	55.3		42.0		21.7	
CENTRAL FLYWAY:						
Montana	0.2	0.1- 0.2	0.1	0.1- 0.1	0.2	0.1- 0.3
North Dakota	2.0	1.9- 2.1	1.1	0.9- 1.3	4.2	2.9- 5.1
South Dakota	1.6	1.4- 1.9	1.4	1.4- 1.4	3.0	2.6- 3.3
Wyoming	0.3	0.1- 0.4	0.1	0.1- 0.1	T	0 - 0.1
Nebraska	1.5	1.3- 1.6	2.4	2.3- 2.5	2.8	1.3- 4.5
Colorado	0.7	0.7- 0.8	0.6	0.4- 0.8	0.1	0.1- 0.2
Kansas	1.6	1.2- 2.2	3.2	2.1- 4.6	1.1	0.2- 1.8
New Mexico	0.3	0.2- 0.4	0.2	0.2- 0.3	T	0 - 0.1
Oklahoma	1.1	0.5- 1.8	1.4	0.5- 2.4	0.8	T - 2.0
Texas	6.1	3.1-10.2	9.7	7.6-13.5	2.6	2.1- 3.3
TOTAL	15.4		20.2		14.8	
MISSISSIPPI FLYWAY:						
Minnesota	5.8	5.7- 6.0	6.9	6.0- 8.1	28.0	24.5-30.6
Wisconsin	3.2	2.6- 3.8	3.0	2.7- 3.4	11.0	6.6-17.0
Michigan	0.8	0.6- 1.2	1.5	1.3- 1.7	2.8	2.4- 3.4
Iowa	1.1	0.8- 1.4	1.9	1.4- 2.3	1.8	0.6- 3.1
Illinois	1.2	0.9- 1.5	1.1	1.0- 1.2	0.5	0.3- 0.9
Indiana	0.2	0.1- 0.3	0.2	0.1- 0.3	0.1	T - 0.1
Ohio	0.4	0.2- 0.8	0.7	0.7- 0.8	0.8	0.3- 1.1
Missouri	0.9	0.5- 1.2	0.9	0.8- 1.0	0.3	0.1- 0.5
Kentucky	0.1	0 - 0.1	T	T - T	T	0 - T
Arkansas	0.6	0.4- 0.9	0.8	0.4- 1.3	0.1	0 - 0.1
Tennessee	0.7	0.5- 1.2	0.2	0.1- 0.4	0	
Louisiana	6.8	5.0- 8.2	10.3	9.2-11.9	8.7	6.9-11.1
Mississippi	0.5	0.4- 0.6	0.6	0.4- 0.7	0.1	0.1- 0.2
Alabama	0.5	0.4- 0.6	0.4	0.3- 0.5	0.1	T - 0.1
TOTAL	22.8		28.5		54.3	
ATLANTIC FLYWAY:						
Maine	T	T - T	0.8	0.4- 1.0	0.9	0.4- 1.3
Vermont	T	0 - T	0.2	0.1- 0.2	0.2	0.1- 0.3
New Hampshire	T	0 - T	0.1	T - 0.2	0.2	0.1- 0.3
Massachusetts	0.1	T - 0.1	0.3	0.2- 0.5	0.1	T - 0.2
Connecticut	T	T - 0.1	0.2	0.1- 0.3	0.1	T - 0.1
Rhode Island	T	T - 0.1	T	T - 0.1	T	0 - T
New York	0.7	0.1- 0.2	1.3	0.8- 1.9	2.4	1.4- 3.8
Pennsylvania	0.2	0.1- 0.2	0.4	0.4- 0.5	0.7	0.6- 0.7
West Virginia	T	0 - T	T	T - T	T	0 - T
New Jersey	0.4	0.3- 0.4	0.9	0.6- 1.1	0.2	T - 0.4
Delaware	T	T - 0.1	0.8	0.7- 0.8	0.1	T - 0.1
Maryland	0.8	0.4- 1.0	0.4	0.2- 0.5	T	T - 0.1
Virginia	0.9	0.4- 1.6	0.5	0.2- 0.8	0.1	T - 0.1
North Carolina	1.3	0.6- 1.7	0.6	0.6- 0.7	0.1	0 - 0.1
South Carolina	0.5	0.4- 0.7	0.9	0.5- 1.2	0.2	0.1- 0.4
Georgia	0.1	0.1- 0.1	0.2	0.1- 0.3	T	T - T
Florida	1.0	0.8- 1.4	1.5	1.0- 1.7	4.0	3.1- 4.7
TOTAL	6.0		9.1		9.3	
U. S. TOTAL	99.5		99.8		100.1	

Table _.--Average distribution of the duck harvest by species in Canada and the United States, 1967-69, expressed as a percentage of the national total [T = trace] (continued)

	SHOVELER		PINTAIL		WOOD DUCK	
	Average	Range	Average	Range	Average	Range
CANADA:						
British Columbia	11.5	5.7-22.0	21.0	14.9-28.6	1.8	1.1- 2.9
Alberta	40.1	34.5-43.0	30.4	26.4-34.0	0.1	0 - 0.3
Saskatchewan	20.7	15.1-25.8	13.0	8.4-20.4	0	
Manitoba	20.3	18.7-23.0	13.3	12.6-14.2	0.5	0 - 0.9
Ontario	2.6	1.9- 3.9	9.8	7.3-11.5	82.5	79.8-85.0
Quebec	4.7	4.2- 5.3	10.8	9.0-12.4	13.3	9.6-16.6
Nova Scotia	T	0 - 0.1	0.3	0.2- 0.3	0.2	0 - 0.3
P. E. I.	0		0.4	0.2- 0.5	0	
New Brunswick	0		0.7	0.6- 0.8	1.6	1.2- 1.9
Newfoundland	0		0.4	0.1- 0.8	0	
TOTAL	99.8		100.1		100.0	
PACIFIC FLYWAY:						
Alaska	1.0	0.2- 2.1	1.2	0.5- 2.3	0	
Washington	3.9	2.1- 7.2	4.1	3.2- 5.7	0.5	0.3- 0.6
Oregon	3.7	2.2- 3.6	4.5	3.4- 5.7	2.0	1.5- 2.4
Idaho	0.5	0.4- 0.8	0.9	0.4- 1.2	0.4	0.1- 0.9
Montana	1.2	0.4- 2.3	0.5	0.3- 0.9	0.1	0 - 0.2
Wyoming	T	0 - T	0	0 - 0	T	0 - T
California	40.6	38.9-41.9	52.4	47.4-56.3	2.7	1.8- 4.2
Nevada	2.9	2.2- 3.3	1.6	1.2- 1.9	0.1	0 - 0.1
Utah	5.1	4.5- 5.8	5.4	3.9- 7.0	0.1	0.1- 0.1
Colorado	0		0		T	0 - T
Arizona	1.4	1.3- 1.5	0.7	0.6- 0.7	T	T - T
New Mexico	0		0		0	
TOTAL	59.3		71.3		5.9	
CENTRAL FLYWAY:						
Montana	0.2	0.1- 0.4	0.1	T - 0.2	T	0 - T
North Dakota	3.3	2.3- 4.0	1.7	1.5- 2.1	0.1	0.1- 0.1
South Dakota	1.5	1.5- 2.5	0.7	0.5- 0.9	0.1	0.1- 0.2
Wyoming	0.1	T - 0.2	T	T - 0.1	0	
Nebraska	1.4	1.0- 2.0	0.5	0.5- 0.6	0.3	0.3- 0.4
Colorado	0.4	0.2- 0.7	0.3	0.2- 0.4	0	
Kansas	2.2	1.3- 2.8	0.9	0.8- 1.0	0.6	0.5- 0.9
New Mexico	0.4	0.2- 0.5	0.1	0.1- 0.1	T	0 - T
Oklahoma	1.0	0.2- 2.0	0.3	0.2- 0.6	0.9	0.2- 1.5
Texas	9.2	7.1-12.1	7.4	7.0- 8.0	4.3	2.6- 6.6
TOTAL	19.7		12.0		6.3	
MISSISSIPPI FLYWAY:						
Minnesota	2.9	2.2- 3.4	1.7	1.3- 2.2	13.9	13.1-14.4
Wisconsin	0.9	0.4- 1.2	0.9	0.9- 1.1	8.8	7.4-10.6
Michigan	0.2	0.2- 0.3	0.6	0.5- 0.7	3.7	3.4- 4.0
Iowa	0.8	0.4- 1.3	0.4	0.3- 0.6	2.7	2.5- 2.9
Illinois	0.7	0.4- 1.1	0.6	0.4- 0.7	3.4	3.1- 4.1
Indiana	0.1	0 - 0.2	0.1	0.1- 0.1	1.5	0.9- 2.2
Ohio	0.1	0.1- 0.2	0.2	0.1- 0.4	4.1	3.2- 5.4
Missouri	0.7	0.5- 0.9	0.5	0.3- 0.7	2.1	1.5- 2.8
Kentucky	0		T	0 - T	0.1	T - 0.1
Arkansas	0.6	0.4- 1.0	0.3	0.1- 0.6	2.0	1.2- 2.8
Tennessee	0.1	T - 0.3	0.2	0.1- 0.2	0.9	0.5- 1.5
Louisiana	10.4	9.2-11.4	8.3	6.2- 9.7	13.0	10.2-16.3
Mississippi	0.5	0.1- 0.9	0.1	0.1- 0.1	3.3	2.4- 4.0
Alabama	0.2	0.1- 0.3	0.2	0.2- 0.3	1.2	0.9- 1.4
TOTAL	18.2		14.1		50.7	
ATLANTIC FLYWAY:						
Maine	T	0 - T	T	T - 0.1	0.7	0.6- 1.0
Vermont	T	0 - T	T	T - T	0.6	0.4- 0.7
New Hampshire	0		T	0 - T	0.5	0.5- 0.6
Massachusetts	T	0 - T	T	0 - T	0.8	0.5- 1.2
Connecticut	0		T	T - T	0.4	0.3- 0.4
Rhode Island	T	0 - T	T	0 - T	T	T - T
New York	0.1	T - 0.2	0.3	0.2- 0.4	6.2	5.9- 6.5
Pennsylvania	0.1	T - 0.1	T	T - T	3.1	2.4- 3.7
West Virginia	T	0 - T	T	0 - T	0.3	0.2- 0.3
New Jersey	0.2	0.1- 0.3	0.2	0.1- 0.3	1.0	0.7- 1.5
Delaware	0.1	T - 0.3	0.1	0.1- 0.1	0.1	T - 0.2
Maryland	T	0 - 0.1	0.2	0.1- 0.3	0.3	0.2- 0.4
Virginia	0.3	0.1- 0.4	0.3	0.2- 0.4	1.1	0.6- 1.4
North Carolina	0.5	0.2- 0.8	0.5	0.3- 0.7	2.5	1.6- 2.9
South Carolina	0.4	0.3- 0.6	0.1	0.1- 0.2	4.9	4.1- 6.4
Georgia	0.1	T - 0.1	T	T - T	2.6	2.4- 2.8
Florida	0.8	0.3- 1.2	0.5	0.4- 0.8	3.0	2.2- 4.1
TOTAL	3.6		2.2		28.0	
U. S. TOTAL	99.8		99.6		99.9	

Table 2.--Average distribution of the duck harvest by species in Canada and the United States, 1967-69, expressed as a percentage of the national total [T = trace] (continued)

	REDHEAD		CANVASBACK		GREATER SCAUP	
	Average	Range	Average	Range	Average	Range
CANADA:						
British Columbia	1.2	0.9- 1.7	4.3	2.0- 7.1	2.8	1.3- 3.8
Alberta	15.2	11.4-17.8	25.1	19.4-30.9	0	
Saskatchewan	13.6	8.2-17.3	26.5	22.7-30.8	0	
Manitoba	32.7	29.3-36.0	23.4	19.2-29.4	1.8	0.3- 3.2
Ontario	29.5	24.1-33.0	20.0	18.1-23.4	56.8	50.4-67.0
Quebec	7.7	4.1-10.7	0.6	0 - 0.9	35.8	25.3-43.3
Nova Scotia	0		0		1.3	0.3- 2.6
P. E. I.	0		0		0.2	0.1- 0.2
New Brunswick	0		0		0.5	0.1- 0.9
Newfoundland	0		0		0.8	0 - 1.7
TOTAL	99.9		99.9		100.0	
PACIFIC FLYWAY:						
Alaska	T	0 - 0.1	0.1	0.1- 0.2	1.4	1.1- 1.6
Washington	1.4	0.8- 2.5	2.4	1.2- 3.9	3.0	1.4- 5.9
Oregon	1.0	0.5- 1.7	3.7	2.1- 4.9	2.4	1.5- 3.8
Idaho	1.5	0.3- 2.5	0.2	0 - 0.7	0	
Montana	0.4	0.3- 0.7	0.2	0.2- 0.3	0.1	0 - 0.2
Wyoming	T	0 - 0.1	0		0	
California	4.9	2.9- 7.9	13.9	9.6-17.2	18.5	10.9-29.1
Nevada	2.7	1.8- 3.8	2.2	1.3- 3.2	0.1	0.1- 0.2
Utah	6.5	4.8- 8.4	1.7	0.9- 2.8	0.1	0 - 0.2
Colorado	T	0 - 0.2	0		0	
Arizona	1.4	0.8- 1.8	1.0	0.6- 1.4	0.2	0.1- 0.3
New Mexico	T	0 - 0.1	0.1	0.1- 0.2	T	0 - 0.1
TOTAL	19.8		25.5		25.8	
CENTRAL FLYWAY:						
Montana	0.1	0 - 0.1	0.1	0 - 0.2	0.2	0 - 0.4
North Dakota	7.4	6.9- 8.4	4.5	3.9- 5.1	0.1	0 - 0.2
South Dakota	5.6	3.3- 9.8	3.4	2.4- 4.5	T	0 - 0.1
Wyoming	0.1	0 - 0.3	T	0 - 0.1	T	0 - 0.1
Nebraska	1.8	1.2- 2.2	0.7	0.1- 1.4	0.1	0.1- 0.1
Colorado	0.6	0.4- 0.8	0.2	0 - 0.5	0.1	0 - 0.1
Kansas	6.4	4.4- 7.6	1.3	0.8- 2.2	0.3	0.2- 0.4
New Mexico	0.2	0.1- 0.3	0.4	0.1- 0.8	0	
Oklahoma	2.3	0.6- 4.6	1.5	0.5- 2.6	T	0 - 0.1
Texas	11.0	6.9-18.4	8.4	4.7-11.9	0.3	0 - 0.6
TOTAL	35.5		20.5		1.1	
MISSISSIPPI FLYWAY:						
Minnesota	19.4	16.6-22.9	6.7	0.7-12.2	3.8	1.4- 5.2
Wisconsin	3.1	2.9- 3.3	6.7	4.3- 8.4	4.8	3.5- 6.0
Michigan	10.2	6.5-12.7	5.6	3.7- 7.8	14.5	11.0-18.8
Iowa	1.4	1.1- 1.5	0.9	0 - 1.8	0.4	0.2- 0.5
Illinois	1.2	0.8- 1.8	3.3	0.8- 6.3	0.9	0.5- 1.2
Indiana	0.4	0.3- 0.5	0.3	0 - 0.9	0.2	0.2- 0.3
Ohio	0.8	0.6- 0.9	0.9	0.6- 1.4	1.3	1.0- 1.5
Missouri	0.8	0.6- 0.9	1.0	0.9- 1.0	0.5	0.1- 0.8
Kentucky	0.1	0 - 0.2	0.2	0 - 0.6	0.1	0 - 0.2
Arkansas	0		0.1	0 - 0.2	0	
Tennessee	0.1	0 - 0.2	1.3	0.5- 1.7	0.6	0.2- 1.3
Louisiana	1.3	0 - 3.0	3.0	1.0- 4.7	1.3	0.4- 2.4
Mississippi	0.4	0 - 0.6	0.8	0.7- 1.0	0.3	0 - 0.8
Alabama	0.6	0.5- 0.7	1.2	0.4- 2.0	0.6	0 - 1.3
TOTAL	39.8		32.0		29.3	
ATLANTIC FLYWAY:						
Maine	0		0		0.2	0.1- 0.2
Vermont	T	0 - T	T	0 - T	0.6	0.3- 1.1
New Hampshire	0		0		T	0 - T
Massachusetts	T	0 - T	0.1	0.1- 0.2	0.3	0.1- 0.7
Connecticut	0		0.2	T - 0.4	3.2	1.4- 4.3
Rhode Island	T	0 - T	0.1	T - 0.2	0.6	0.3- 1.1
New York	0.7	0.3- 1.2	1.4	1.0- 1.6	23.0	19.3-27.7
Pennsylvania	0.3	0.2- 0.3	0.4	0.2- 0.8	1.4	0.9- 1.8
West Virginia	T	0 - T	0		T	0 - T
New Jersey	0.1	T - 0.2	0.9	0.7- 1.1	2.9	2.1- 3.5
Delaware	T	0 - 0.1	0.1	T - 0.2	0.2	0 - 0.5
Maryland	1.4	0.9- 1.8	10.4	6.8-16.1	5.9	1.1-15.5
Virginia	0.5	0.2- 0.8	4.9	2.9- 6.3	2.1	1.4- 3.2
North Carolina	0.5	0.4- 0.6	2.1	1.3- 2.5	0.9	0.6- 1.3
South Carolina	0.2	0.1- 0.4	0.5	0.2- 0.8	0.4	0.1- 0.7
Georgia	T	0 - T	T	0 - 0.1	0.1	0 - 0.2
Florida	1.1	0.9- 1.4	0.8	0.4- 1.4	1.9	0.8- 3.4
TOTAL	4.8		21.9		43.7	
U. S. TOTAL	99.9		99.9		99.9	

Table 2.--Average distribution of the duck harvest by species in Canada and the United States, 1967-69, expressed as a percentage of the national total [T = trace] (continued)

	LESSER SCAUP		RING-NECKED DUCK		COMMON GOLDENEYE	
	Average	Range	Average	Range	Average	Range
CANADA:						
British Columbia	3.6	1.2- 5.1	2.2	1.6- 3.3	4.4	2.6- 7.8
Alberta	11.3	7.8-13.6	0.8	0.5- 1.2	1.4	0.3- 2.2
Saskatchewan	4.1	2.3- 5.8	0.9	0.2- 1.6	0.8	0.5- 1.4
Manitoba	29.0	24.1-33.7	12.2	11.3-13.1	2.7	2.6- 2.9
Ontario	38.1	28.6-44.9	63.3	58.0-68.2	46.3	42.4-49.2
Quebec	12.7	10.8-14.1	12.3	8.7-14.4	27.4	21.2-35.7
Nova Scotia	0.3	0 - 1.0	1.4	0.4- 2.0	4.3	2.4- 5.8
P. E. I.	0		0.3	0.2- 0.4	0.2	0.1- 0.3
New Brunswick	0.4	0.1- 0.8	4.0	3.4- 4.6	4.1	3.2- 4.7
Newfoundland	0.4	0 - 0.7	2.6	1.7- 3.0	8.2	7.6- 8.7
TOTAL	99.9		100.0		99.8	
PACIFIC FLYWAY:						
Alaska	0.3	0.1- 0.8	T	0 - T	2.7	1.7- 3.2
Washington	1.4	0.4- 3.0	0.9	0.4- 1.4	8.6	6.3-12.4
Oregon	1.2	0.8- 1.5	1.0	0.6- 1.4	3.8	2.1- 5.5
Idaho	0.1	0.1- 0.1	0.3	0.1- 0.5	6.0	3.6- 8.1
Montana	0.3	0.2- 0.4	0.1	0 - 0.2	3.1	1.2- 6.6
Wyoming	0		T		0.2	0.1- 0.3
California	7.6	5.0- 9.9	3.8	3.0- 4.8	5.9	3.2- 8.8
Nevada	0.1	0.1- 0.1	0.1	T - 0.1	0.2	0.1- 0.3
Utah	0.3	0.1- 0.6	0.2	0.1- 0.2	2.4	1.9- 2.7
Colorado	T		T	0 - 0.1	0.4	0 - 1.1
Arizona	0.3	0.2- 0.5	0.6	0.3- 0.7	0.4	0.1- 0.7
New Mexico	T		T		0.2	0 - 0.5
TOTAL	11.6		7.0		33.9	
CENTRAL FLYWAY:						
Montana	0.1	T - 0.1	T	0 - T	0.2	0 - 0.4
North Dakota	2.0	1.3- 2.4	0.8	0.6- 1.0	0.5	0.3- 0.9
South Dakota	1.2	0.6- 1.6	0.6	0.3- 0.8	0.3	0.2- 0.4
Wyoming	T	0 - 0.1	T	0 - 0.1	0.5	0.2- 1.0
Nebraska	0.9	0.4- 1.5	0.5	0.4- 0.6	0.8	0.6- 1.0
Colorado	0.2	0.2- 0.2	0.1	T - 0.1	0.7	0.2- 1.1
Kansas	2.7	1.1- 5.8	1.6	1.0- 2.0	0.6	0.1- 1.1
New Mexico	T	T - 0.1	0.1	0.1- 0.1	0.2	T - 0.4
Oklahoma	1.4	0.6- 2.2	1.8	1.0- 2.6	0.5	0.3- 0.7
Texas	5.3	4.7- 5.8	5.0	2.4- 7.1	0.6	0 - 0.7
TOTAL	13.8		10.5		4.8	
MISSISSIPPI FLYWAY:						
Minnesota	23.8	14.8-35.9	33.0	24.9-40.2	13.9	8.6-20.9
Wisconsin	9.1	6.0-11.5	9.9	8.9-11.3	8.7	6.1-10.1
Michigan	9.9	9.6-10.4	4.1	2.3- 6.0	8.1	3.9-10.7
Iowa	1.3	1.1- 1.5	0.9	0.6- 1.2	0.3	0 - 0.6
Illinois	2.7	1.5- 3.5	1.7	1.0- 3.0	1.7	0.7- 3.4
Indiana	0.6	0.4- 1.0	0.5	0.5- 0.5	0.4	0 - 0.7
Ohio	1.6	1.0- 2.2	0.5	0.3- 0.8	1.3	0.6- 2.0
Missouri	2.9	0.8- 5.2	1.2	0.7- 1.9	0.4	0.1- 0.6
Kentucky	T	0 - 0.1	0.1	T - 0.3	0.3	0.1- 0.4
Arkansas	0.1	0 - 0.2	0.7	0.5- 0.9	0	
Tennessee	0.2	T - 0.5	0.9	0.3- 1.3	0.9	0.7- 1.4
Louisiana	5.6	3.2- 9.4	6.1	5.2- 7.4	0.2	0 - 0.5
Mississippi	1.6	0.6- 3.4	1.4	1.2- 1.5	0.2	0 - 0.5
Alabama	0.4	0.1- 0.7	0.3	0.1- 0.6	0.5	0.3- 0.7
TOTAL	59.9		61.3		36.8	
ATLANTIC FLYWAY:						
Maine	T	T - 0.1	0.3	0.3- 0.4	2.3	1.0- 2.5
Vermont	0.1	T - 0.2	0.1	0.1- 0.2	3.4	3.2- 3.5
New Hampshire	T	0 - T	T	T - 0.1	0.1	T - 0.2
Massachusetts	T	T - 0.1	T	0 - T	0.8	0.6- 0.9
Connecticut	0.1	0.1- 0.2	0		0.7	0.5- 0.8
Rhode Island	0.1	T - 0.2	T	0 - T	0.6	0.2- 0.9
New York	2.5	1.9- 3.0	1.0	0.9- 1.1	9.8	5.8-14.0
Pennsylvania	0.5	0.5- 0.6	0.2	0.2- 0.3	0.7	0.4- 1.1
West Virginia	T	0 - T	0		0.1	T - 0.3
New Jersey	0.4	0.2- 0.7	T	T - 0.1	0.8	0.3- 1.4
Delaware	0.1	0 - 0.4	T	0 - 0.1	0.3	0 - 0.7
Maryland	2.4	0.4- 5.9	0.3	0.2- 0.4	3.1	2.4- 3.7
Virginia	1.9	1.5- 2.1	0.5	0.3- 0.8	0.9	0.8- 1.2
North Carolina	1.9	0.9- 3.2	1.3	0.6- 1.7	0.5	0.3- 0.7
South Carolina	0.6	0.2- 0.9	1.0	0.8- 1.2	0.2	0 - 0.5
Georgia	0.3	0 - 0.6	0.9	0.7- 1.2	0.2	0.1- 0.3
Florida	3.6	1.8- 4.8	15.3	12.7-17.4	0.1	0.1- 0.1
TOTAL	14.6		21.0		24.6	
U. S. TOTAL	99.9		99.8		100.1	

Table 2.--Average distribution of the duck harvest by species in Canada and the United States, 1967-69, expressed as a percentage of the national total [T = trace] (continued)

	BUFFLEHEAD		RUDDY DUCK			
	Average	Range	Average	Range	Average	Range
CANADA:						
British Columbia	12.5	7.0-15.7	7.3	2.6-11.4		
Alberta	4.3	3.2- 5.2	15.5	0 -40.1		
Saskatchewan	1.8	1.6- 2.2	6.1	0 -14.5		
Manitoba	5.4	3.3- 9.6	21.7	14.9-26.9		
Ontario	61.5	55.4-65.5	47.4	29.7-62.8		
Quebec	11.7	7.6-17.2	2.0	0 - 5.9		
Nova Scotia	1.9	1.0- 2.5	0			
P. E. I.	0		0			
New Brunswick	0.8	0.6- 1.0	0			
Newfoundland	0		0			
TOTAL	99.9		100.0			
PACIFIC FLYWAY:						
Alaska	1.0	0.3- 1.7	0			
Washington	4.5	3.4- 5.0	2.7	0.6- 4.6		
Oregon	3.4	2.2- 4.1	3.8	2.6- 5.0		
Idaho	0.2	0 - 0.4	0.1	0 - 0.4		
Montana	0.5	0.3- 0.7	0.4	0 - 1.3		
Wyoming	0		0			
California	11.4	6.6-15.3	30.6	17.5-41.5		
Nevada	0.4	0.1- 0.6	2.6	1.8- 3.6		
Utah	0.8	0.1- 1.4	3.3	1.8- 4.9		
Colorado	T	0 - T	0			
Arizona	1.3	1.2- 1.4	3.3	1.6- 4.2		
New Mexico	0.3	0 - 0.7	0.1	0 - 0.4		
TOTAL	23.8		46.9			
CENTRAL FLYWAY:						
Montana	0.1	0 - 0.3	0			
North Dakota	1.6	0.7- 2.4	2.3	1.3- 2.8		
South Dakota	1.3	0.7- 1.9	3.0	0.9- 5.0		
Wyoming	0.4	0.2- 0.9	0.5	0 - 0.9		
Nebraska	0.6	0.1- 0.9	0.3	0 - 0.8		
Colorado	0.8	0.4- 1.1	0.4	0.3- 0.6		
Kansas	1.9	0.8- 3.1	1.5	1.0- 1.9		
New Mexico	0.4	0 - 0.7	0.1	0 - 0.3		
Oklahoma	0.4	0.4- 0.4	0.4	0 - 0.7		
Texas	1.9	1.4- 2.4	4.3	0 -12.8		
TOTAL	9.4		12.8			
MISSISSIPPI FLYWAY:						
Minnesota	13.6	10.1-18.1	6.1	5.9- 6.2		
Wisconsin	8.3	5.5-10.1	7.8	6.1-10.8		
Michigan	11.9	8.1-14.9	5.1	2.4-10.2		
Iowa	0.7	0.4- 1.1	0.9	0 - 1.6		
Illinois	1.2	1.1- 1.2	0.4	0.3- 0.5		
Indiana	0.3	0 - 0.9	0.6	0 - 1.3		
Ohio	1.5	1.0- 2.0	0.9	0.3- 1.9		
Missouri	0.5	0.1- 0.7	1.3	0.7- 1.7		
Kentucky	0.1	0 - 0.1	0			
Arkansas	0.1	0 - 0.3	0			
Tennessee	0		0.9	0 - 2.1		
Louisiana	0.2	0 - 0.5	2.5	0 - 5.6		
Mississippi	0.9	0.3- 1.7	0.2	0 - 0.6		
Alabama	0.6	0.4- 0.8	0			
TOTAL	39.9		26.7			
ATLANTIC FLYWAY:						
Maine	1.4	1.0- 2.0	0.1	0 - 0.3		
Vermont	0.4	0.4- 0.5	T	0 - T		
New Hampshire	0.3	0.2- 0.4	T	0 - T		
Massachusetts	1.5	1.0- 2.2	0.2	0 - 0.4		
Connecticut	0.6	0.4- 0.8	0.1	0 - 0.1		
Rhode Island	0.3	0.2- 0.4	0			
New York	6.9	3.7- 9.4	1.4	0.4- 2.9		
Pennsylvania	1.5	0.9- 2.5	1.3	0.7- 2.4		
West Virginia	T	0 - 0.1	0			
New Jersey	3.1	2.7- 3.4	0.5	0 - 0.8		
Delaware	0.3	0.1- 0.6	T	0 - 0.1		
Maryland	4.4	3.8- 5.1	1.6	0.8- 3.0		
Virginia	2.2	1.1- 3.7	1.8	1.4- 2.0		
North Carolina	2.7	2.6- 2.8	3.7	1.5- 5.2		
South Carolina	0.5	0.3- 0.7	0.6	0.3- 1.1		
Georgia	T	0 - 0.1	T	0 - 0.1		
Florida	0.7	0.4- 1.2	2.5	0.6- 4.0		
TOTAL	26.8		13.8			
U. S. TOTAL	99.9		100.2			

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As the Nation's principal conservation agency, the Department of the Interior has basic responsibilities for water, fish, wildlife, mineral, land, park, and recreational resources. Indian and Territorial affairs are other major concerns of this department of natural resources.

The Department works to assure the wisest choice in managing all our resources so that each shall make its full contribution to a better United States now and in the future.

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
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