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February 14, 1972 EASTERN REGION

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your file/votre dossier

Mr. H.J. Boyd

For your interest, is attached a summary of the distribution and survival of banded waterfowl associated with Newfoundland. This is not intended for present publication but rather as notes for a definitive account of the status of Newfoundland birds. Your comments are requested and an additional copy is provided for Doug Gillespie's information. A similar account is being prepared for gulls, terns, etc.

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DATA FILE

# Distribution and survival of banded waterfowl associated with Newfoundland

by

Leslie M. Tuck

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The first waterfowl banding station began operations in Newfoundland in 1947, but birds banded on the Mainland have been recovered in Newfoundland for the past 40 years. Recently, I received a print-off of all Newfoundland recoveries, and of those birds banded in Newfoundland and recovered elsewhere. This has enabled me to bring our banding files up-to-date and also provided an opportunity to examine those data for distribution and survival, in particular. Five species of waterfowl have been banded in Newfoundland and recovered elsewhere; 14 species have been banded elsewhere and recovered in Newfoundland. Only two species (Black Duck and Green-winged Teal) have been recovered in sufficient numbers to warrant a critical analysis.

## Black Duck

Of 1,392 Black Ducks banded in Newfoundland, 5.1% were subsequently recovered locally and 10.8% on the Mainland. In addition, 257 Black Ducks banded on the Mainland have been recovered in Newfoundland.

It is quite clear that the Black Ducks banded in southwestern Newfoundland, where most of the banding was done, are

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Newfoundland birds which are restricted in the fall to the southwest corner of the Island. They probably represent the populations of the watersheds of the numerous river systems in that region. For instance, only 5 birds were subsequently recovered elsewhere in Newfoundland and all the other local recoveries (30%) were within 50 miles radius of the banding site. The Tinker Harbour Banding Project was in operation at the same time as that of Codroy but only a single Labrador Black Duck was recovered at Codroy. Moreover, no Quebec or Maritime birds have been recovered in Newfoundland in the same fall banding period.

The earliest Mainland (foreign) recovery of a Newfoundland (local) banded Black Duck was in Prince Edward Island on October 8 of the same year. Table 1 shows that locally banded Black Ducks are distributed in late fall and winter all along the eastern seaboard, as far south as North Carolina. The greatest proportion of foreign recoveries of locally banded Blacks are from Nova Scotia (30.3%) and Massachusetts (14.0%). The Nova Scotia recoveries were mostly in November while those of Massachusetts were mostly in December and January. This is evidence that the Newfoundland population of Black Ducks (at least those from the southwestern part of Newfoundland) winter mainly in Massachusetts.

The recoveries in Newfoundland of Black Ducks banded on the Mainland show that most originated from fall concentrations in Prince Edward Island (8.6%) or from wintering concentrations in Massachusetts (49.0%) and New York (16.7%). A total of 51 foreign banded Blacks have been caught in muskrat traps in Newfoundland

Table 1. Percentages of Black Ducks recovered elsewhere after being banded in Newfoundland or recovered in Newfoundland after being banded elsewhere.

	<u>Banded in Newfoundland</u> N = 221	<u>Recovered in Newfoundland</u> <u>Banded elsewhere</u> N = 257
Newfoundland	32.1	-
Labrador	0.5	1.2
Quebec	0.9	2.7
Prince Edward Island	4.0	8.6
New Brunswick	1.8	0.4
Nova Scotia	30.3	4.7
Ontario	0.5	0.8
Maine	2.3	1.6
New Hampshire	0.5	0.4
Massachusetts	14.0	49.0
New York	2.3	16.7
Pennsylvania	-	0.4
New Jersey	4.0	6.2
Connecticut	1.4	0.8
Rhode Island	1.8	1.9
Delaware	1.4	1.2
Maryland	0.9	0.4
Virginia	0.9	1.2
North Carolina	0.5	1.6
South Carolina	-	0.4

in April. Of those territorial birds, 77% were banded in the winter months in Massachusetts. This is further evidence that the main wintering region for Newfoundland Black Ducks is Massachusetts.

An analysis of the survival of Black Ducks associated with Newfoundland (Table 2) shows several interesting phenomena. Local birds show an annual survival of 60% for the first 10 years. Only 1.5% survived longer than 10 years. In other words, once a Black Duck has survived for 10 years, the chances for it to survive another five are fifty-fifty.

Foreign banded Black Ducks seem to have a higher survival during the first few years (Table 2). This is merely relative since by taking January 1 (instead of September 1) as the beginning of the year for these winter banded ducks, the birds had already survived the previous fall hunting season. There is one anomaly in this table and that is concerned with the survival of the 10th year class. Rechecking those data, I found an abnormally high (25%) spring muskrat trap kill. No consideration was given to the age or sex of the banded birds. Short exercises indicated that age and sex are not important after the 2nd or 3rd year. The oldest recovery of a foreign banded Black Duck was an adult female banded in Maine and recovered in Newfoundland nearly 21 years later.

It will be recalled that locally banded Blacks have a restricted fall concentration area. Figure 1 shows the percentage distribution of foreign banded Black Ducks recovered in Newfoundland.

Table 2. Percentage survival of Black Ducks banded in Newfoundland or recovered in Newfoundland and banded elsewhere.

	Newfoundland fall banded (Year commences Sept. 1) N = 221	Foreign winter banded (Year commences Jan. 1) N = 257
Alive 2nd Year	58.9	73.9
" 3rd Year	34.0	44.8
" 4th Year	17.2	26.9
" 5th Year	10.0	17.5
" 6th Year	5.4	12.0
" 7th Year	3.6	9.7
" 8th Year	3.1	7.0
" 9th Year	1.8	5.8
" 10th Year	1.4	2.7*
" 11th Year	1.4	2.0
" 12th Year	1.4	1.6
" 13th Year	1.4	1.2
" 14th Year	1.4	1.2
" 15th Year	0.9	0.8
" 16th Year	0.5	0.8
" 17th Year	0.0	0.4
" 18th Year	0.0	0.4
" 19th Year	0.0	0.4
" 20th Year	0.0	0.4
" 21th Year	0.0	0.0

\* See Text

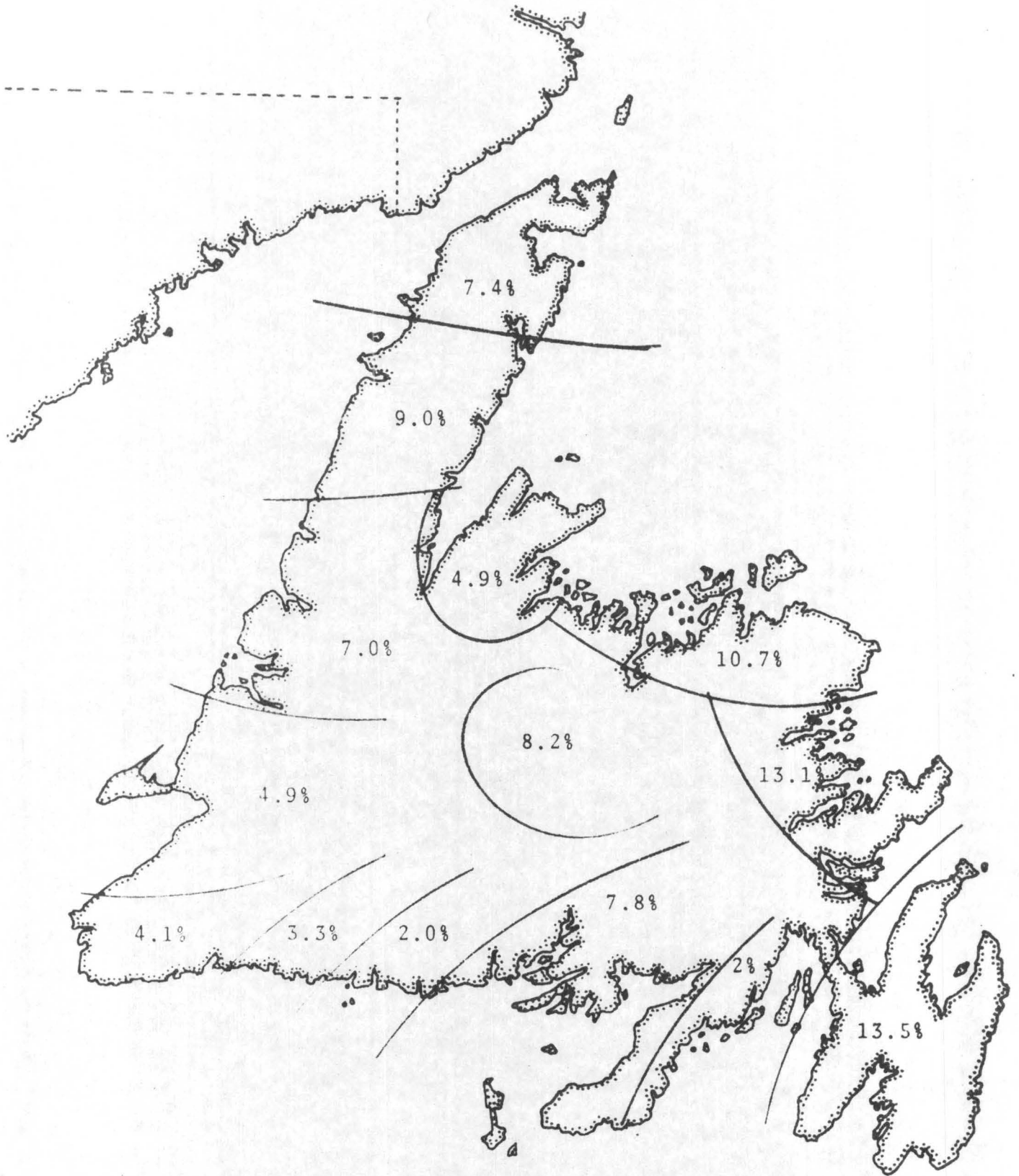


Figure 1. Percentage distribution of mainland banded Black Ducks recovered in Newfoundland.

It was an exercise to determine where most of the Blacks are shot. Except for showing that most were shot on the Avalon Peninsula and the east coast where most of the hunters reside, there is a relatively even distribution coastwise of the kill. The best Black Duck hunting region seems to be on the northern peninsula; something to consider if another waterfowl banding station is set-up in Newfoundland.

Finally, there is no evidence that Black Ducks raised outside of Newfoundland visit Newfoundland to any extent at any time of the year. Since twice as many Newfoundland Black Ducks are shot on the Mainland as are in Newfoundland, an interesting moral question arises. For an equitable harvest, should not the bag or season limit of Newfoundland hunters be doubled?

#### Green-winged Teal

Some 1,704 Green-winged Teal have been banded in Newfoundland. Of those, 10% have been recovered; 2.8% locally and 7.2% on the Mainland. Also, 23 foreign-banded Green-winged Teal have been rescored in Newfoundland.

Of the locally-banded Green-wings, only a single bird was recovered in Newfoundland outside a 25-mile radius from the banding site. Two Labrador birds and two Quebec birds were recovered in Newfoundland in the same fall banding season so there is some movement to Newfoundland of Mainland Green-wings. By-and-large, like Black Ducks, the Green-wings occurring in Newfoundland are locally-raised birds.



Unlike Blacks, Green-winged Teal are shallow-water species and therefore are not coastal birds in winter in Newfoundland to any extent. In mild winters a few overwinter in Newfoundland, and in cold winters perhaps none at all. The Newfoundland Green-winged Teal go far down the Atlantic Seaboard in winter - so far south as Louisiana. It appears, however, that the principal wintering region is a large one extending from New Jersey to North Carolina (Table 3).

A rather surprising small proportion of Green-wings are shot, according to the band recoveries. This may be a reflection of hunter preference for the larger Blacks. It may also be related to the relatively short life-span of the smaller bird. According to our band recoveries, the annual mortality is around 50%. None of the locally produced Green-winged Teal survived beyond the sixth year. Another factor affecting the survival of these smaller birds is the rather extensive migration.

Table 3. Percentages of Green-winged Teal recovered elsewhere after being banded in Newfoundland or recovered in Newfoundland after being banded elsewhere.

	Banded in Newfoundland N = 171	Recovered in Newfoundland Banded elsewhere N = 23
Newfoundland	28.0	-
Labrador	-	8.7
Quebec	0.6	17.4
Prince Edward Island	7.0	-
New Brunswick	6.4	-
Nova Scotia	15.2	21.7
Ontario	-	4.4
Maine	4.1	-
Massachusetts	2.9	-
New York	4.7	-
Pennsylvania	0.6	-
New Jersey	10.5	8.7
Connecticut	1.2	-
Rhode Island	0.6	-
Delaware	4.1	-
Maryland	1.2	-
Virginia	4.7	17.4
North Carolina	2.4	17.4
South Carolina	2.4	4.4
Alabama	0.6	-
Tennessee	0.6	-
Florida	1.2	-
Illinois	0.6	-
Louisiana	0.6	-

Other Waterfowl

Canada Goose

(16 to 17 to BCS)

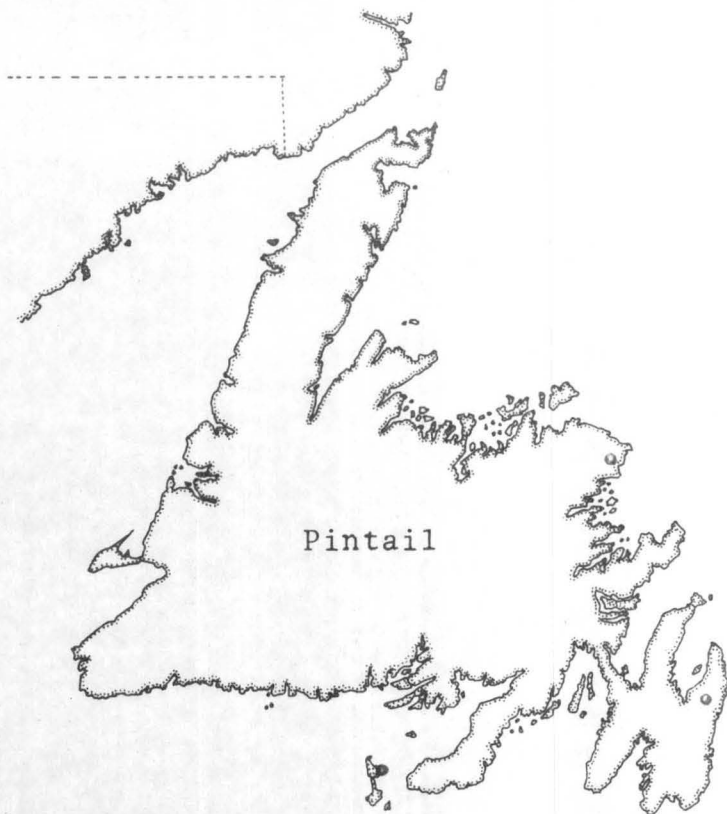
No geese have been banded in Newfoundland but 15 have been recovered, most of which (12) had been banded in Massachusetts. Single birds banded in Nova Scotia, Maryland and Virginia have also been recovered in Newfoundland. Some of those recoveries go back 40 years when spring shooting was legal in Newfoundland. It was therefore interesting to learn that all early spring recoveries (April) were from Fortune and Hermitage Bays (Fig. 2A) indicating a build-up on the south coast while waiting for the interior lakes to get free from ice. The spring migration of Canada Geese in Newfoundland is documented in some detail elsewhere (Canada Goose Survey, April, 1956). Flocks of Canada Geese migrated across the interior of the island (Buchans) in late April and early May and up the northeast coast, presumably to Labrador. In checking through the Labrador recoveries (36), only 2 birds had been banded in Massachusetts, the majority had been banded at North Carolina - farther south than the Newfoundland recoveries. It appears that geese en route to Labrador in spring may occasionally fly over Newfoundland but most likely do not stop-over later in this Province to any extent.

Mallard

The Mallard is rare in Newfoundland. One banded in Codroy



A



B



C



D

was shot in Prince Edward Island. Four others banded on the Mainland (Maine, Massachusetts and New York) have been recovered in Newfoundland.

### Pintail

The Pintail is also a rare species in Newfoundland but breeds (rarely) and in recent years seem to be extending its range. Three were banded in Newfoundland; one shot locally, the other two in Virginia and North Carolina. Three banded on the Mainland (Nova Scotia, Saskatchewan and Montana) were recovered in Newfoundland (Fig. 2B). The Montana bird was 14 years old when shot.

### Blue-winged Teal

Also a rare breeding species but one which is extending its range in Newfoundland, now breeding even in St. John's. An immature female banded at Codroy in 1948 was shot in Puerto Rico in 1968 (20 years later). Eleven Blue-wings banded on the Mainland have been recovered in Newfoundland. Those were banded mostly in Ontario, Manitoba, Minnesota, Michigan and Wisconsin (Fig. 2C). The Blue-wing, and the Pintail, are the only two waterfowl species occurring in Newfoundland which sometimes come from the mid-west, rather than from the Atlantic Seaboard.

Wood Duck

Five birds, banded in Maine, Vermont, New York and Wisconsin have been recovered in Newfoundland.

American Widgeon

Two recovered in Newfoundland, one banded in Nova Scotia, the other in New Brunswick.

Ring-necked Duck

This species, first recorded breeding in 1948, is now widely spread in Newfoundland. The 18 band recoveries, mostly from North Carolina and South Carolina, also show a similar wide distribution (Fig. 2D).

Others

Single recoveries of Lesser Scaup (Maryland), Greater Scaup (New York); Ruddy Duck (New York) and American Merganser (Nova Scotia) have been recorded for Newfoundland. In addition two Common Eiders banded on Baffin Island have been recovered.