

STATE DISTRIBUTION OF RETURNS FROM
BANDED DUCKS

SECOND PAPER—BRITISH COLUMBIA,
CALIFORNIA, CONNECTICUT, GEORGIA,
ILLINOIS, IOWA, AND KANSAS¹

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THE purpose of this series of short papers is to acquaint students of birds, sportsmen, conservation officials, and others with the information relative to our migratory waterfowl that is being accumulated by the Biological Survey, through application of the banding method. A complete discussion of the data would demand much more space than is now available, although it is planned eventually to prepare detailed migration reports for the various species.

On the maps now presented, the figures represent the total returns or recovery records for all species. The status of each species is indicated in the accompanying statement. The circumscribed areas represent the point or points of banding, and from these lines lead to the different States or Provinces where the banded ducks have been recovered. The terminals of these lines do not show the exact points of recovery, but merely indicate the number of return records that have been received from those States or Provinces. The number of local returns, that is, the number obtained from the State or Province in which the banding was done, is shown either within the circumscribed area or at the end of a short line therefrom.

The distribution of returns from Alberta was presented in a previous paper. In the present account similar treatment is accorded the data from British Columbia, California, Connecticut, Georgia, Illinois, Iowa, and Kansas.

BRITISH COLUMBIA

About 1850 ducks have been banded in British Columbia. The work was started in the autumn of 1923 when D. W. Gillingham banded a few Pintails and Green-winged Teals at Zone Island in the Fraser River delta. In the spring of 1924, and again in 1925, J. A. Munro and J. G. Cunningham banded a few more Pintails and others at several points in the southwestern part of the Province.

Extensive banding operations were not undertaken, however,

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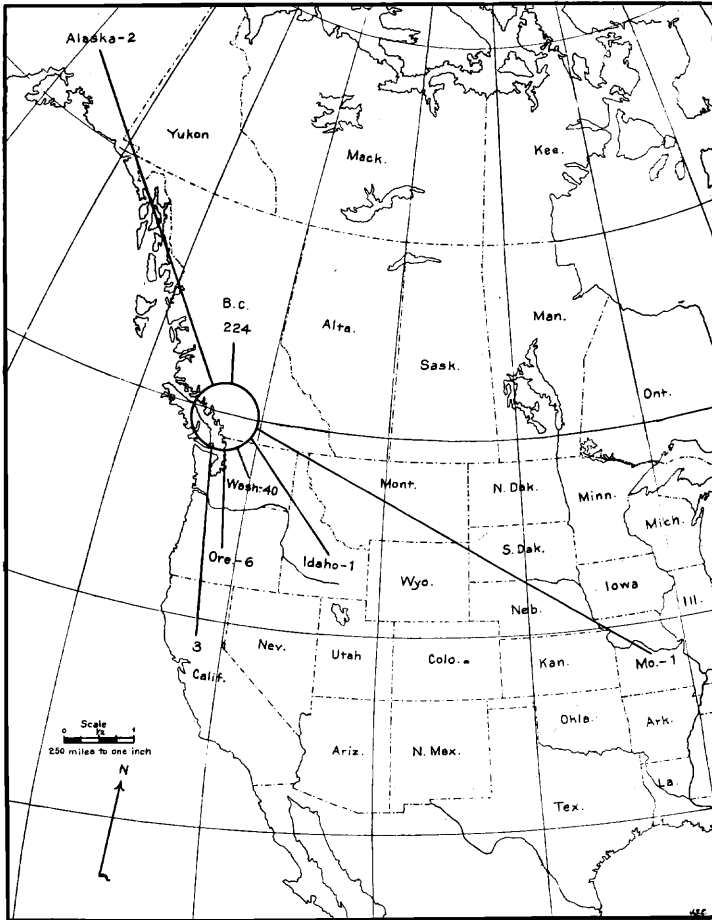


Figure 1. Distribution of Return Records from Ducks Banded in British Columbia.

until the fall and winter of 1928-29, when Constable R. M. Stewart, of the Provincial Police, conducted a station at Chilliwack,² in the southwestern part of the Province. During that season 657 birds were banded, mostly Mallards, with a few Pintails and Green-winged Teals. In 1930 this station was operated by Edward Lovell, who banded 474 birds (Mallards,

²Constable Stewart is now stationed at Atlin, in the northwestern part of the Province.

with one each of the Baldpate, Green-winged Teal, and Shoveller). A. J. Butler carried on work at this point in 1931, banding 528 ducks. Mallards again constituted the majority of the "catch", but it included also 9 Baldpates, 72 Green-winged Teals, 4 Pintails, 1 Shoveller, and 1 Wood Duck.

Late in the summer and early in the autumn of 1929, F.R. Butler, Secretary of the Game Conservation Board, banded about 50 Mallards at Victoria; and at Vaseaux Lake, in the autumn of 1931, S. J. Darcus banded 130 Mallards, Green-winged Teals, and Pintails, and one Barrow's Golden-eye.

The return records obtained from these operations consist of 254 for the Mallard, 18 for the Pintail, 4 for the Green-winged Teal, and 1 for the Baldpate.

The situation illustrated on the map (Fig. 1), namely that of extreme localization, is peculiar to the Mallard on the north-western coast, and is paralleled to a certain extent by the Black Duck on the northeastern coast. In some winters Mallards are abundant as far north as southern Alaska. It is particularly noteworthy that no Mallards banded in British Columbia have thus far been recovered in California; the three returns from that State are Pintails. Nevertheless, the long-range return from Missouri and one of those from Alaska, are for this species. The other Alaskan record is for a Pintail.

The evidence here presented seems to justify the conclusion that southern British Columbia and Washington constitute the winter grounds of this group of birds, which probably breed north through British Columbia to Alaska.

CALIFORNIA

Large-scale banding of migratory waterfowl in California was started in February, 1926, when E. W. Ehmann, of Piedmont, recognized the possibilities that existed at Lake Merritt in the city of Oakland, where for many years wild ducks have been protected and fed by the Board of Park Commissioners. These officials generously cooperated, and every year since a large number of the birds have been trapped and banded. The banding work has in no way affected the value of this area as a refuge. More than 4000 birds have been banded at Lake Merritt. Most of these were Pintails, although a fair number were Baldpates. A few Mallards and Shovellers, 1 European Widgeon, 2 Brant, 5 Snow Geese, and a large number of Coots make up the balance.

Through the interest of A. D. Trempe, of Sault St. Marie, Michigan, banding operations were begun in the vicinity of Gustine, in February, 1928, and extended to another station at Irvington in January, 1929. Associated with Mr. Trempe have

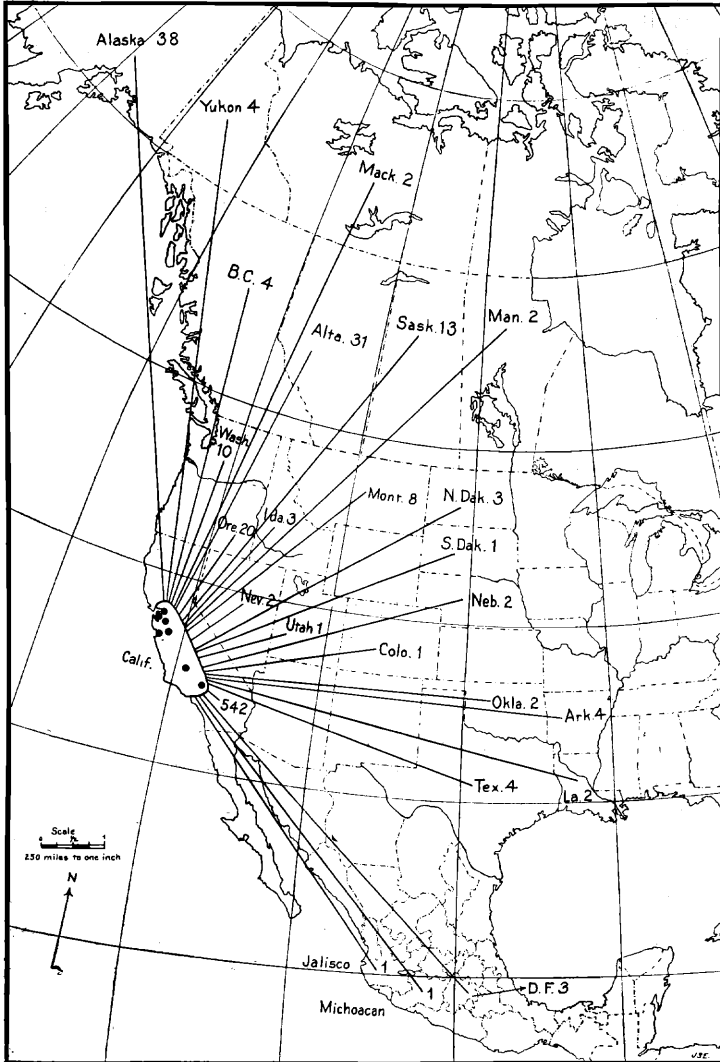


Figure 2. Distribution of Return Records from Ducks Banded in California.

been O. M. Thompson (Gustine), and Nion R. Tucker and J. O. Tobin (Irvington). These stations have banded about 2000 birds, and here also, the majority were Pintails, with many Coots and smaller numbers of Mallards, Baldpates, and Green-winged and Cinnamon Teals, and a few each of the Shoveller, Lesser Snow Goose, White-fronted Goose, and Black Brant.

L. Arnold and L. R. Ainsworth of the State Fish and Game Commission, banded 460 Pintails, 8 Green-winged Teals, 5 Baldpates, 2 Gadwalls, and 1 Shoveller at Buena Vista Lake in February, 1928. During the spring and autumn of 1929, A. A. Oliver banded 28 Pintails and Green-winged Teals at Eden. A large number of Coots also were marked at this time.

United States Game Protector George Tonkin, with headquarters at Berkeley, has taken continuous interest in the banding work and has carried bands as a part of his regular equipment. Although unable to operate a trapping station, he has been instrumental in banding 493 ducks, chiefly hand-reared Mallards released by the Fish and Game Commission at Watsonville and Pittsburg. In addition, he has banded many Cinnamon and Green-winged Teals, Pintails, Canvasbacks, Redheads, and Coots obtained on their breeding grounds, principally in Merced County.

The total number of ducks banded in this State up to July 1, 1932, is therefore practically 7000.

Return records from ducks banded in California to the number of 1508 are available for study. Of these, however, 751 are of birds retrapped at the banding stations. Almost all these birds (661 Pintails, 78 Baldpates, and 12 Shovellers) were retaken at the Lake Merritt station, many being recaptured during two or three successive seasons. These "retakes" were not used in the present investigation, so the data on the map and here discussed represent 757 records. (Fig. 2.)

The intensive shooting that takes place in California is well shown by the number of banded ducks that were locally killed. Of the 542 local returns, 463 are for Pintails. The records farthest east—the one from Arkansas, the two from Louisiana, and the two from Manitoba—also are for this species.

The numerical status of the recoveries in the different States and Provinces clearly indicates that the ducks (at least the Pintails and the Baldpates) that migrate to California come from two major breeding areas, Alaska and the Provinces of Alberta and Saskatchewan.

The 38 returns from Alaska are divided into 32 for the Pintail and 6 for the Baldpate. The Alberta records are for 22

Pintails and 9 Baldpates, and those from Saskatchewan are for 11 Pintails and 2 Baldpates.

The migration route is probably entirely through the interior as there are no records from the coast of British Columbia or southeastern Alaska. Three of the returns from Yukon Territory are for Pintails, the fourth being for a Baldpate, while from Mackenzie there is one each for these species. In their journey southward these ducks apparently traverse the prairie regions east of the mountains, cross western Montana, and enter California through Washington and Oregon. A few of those that in previous seasons wintered in California evidently became associated with the flocks traveling southward through the Plains States. This is indicated by the few records obtained from all the row of States (Kansas excepted) from North Dakota to Texas.

The southernmost records of ducks banded in California are five from Mexico. Three of these are of Pintails recovered in the general vicinity of Mexico City; the other two are of Cinnamon Teal, one of which was recovered in the State of Jalisco and the second in Michoacan.

CONNECTICUT

Waterfowl-banding in Connecticut has been limited to the operations of Henry A. Bowden, of the Litchfield and Morris Game Sanctuary at Litchfield. Under the direction of the late John W. Titcomb, Superintendent of the State Board of Fisheries and Game, Mr. Bowden has banded systematically each year since the autumn of 1926. More than 1500 ducks have been marked, almost all of which were hand-reared birds. Because of this fact there is the possibility that their migratory flights may not follow the normal routes of wild individuals. It is believed, however, that upon release, the hand-reared birds associate themselves with wild flocks and travel from the area in their company. In other words, it would seem natural that when a small number of hand-reared birds are released, and are then associated with a larger number of wild individuals, they would be influenced in their movements by the latter.

The Litchfield station is one of the very few where large numbers of Wood Ducks have been banded, and despite the complete protected status accorded this bird by the Federal law, several return records have been received. Some of these Wood Ducks were found dead from unknown causes; two bands were recovered from the stomachs of owls (one in Connecticut and one in New York); while some of the ducks were accidentally shot by sportsmen. All together, 800 Wood

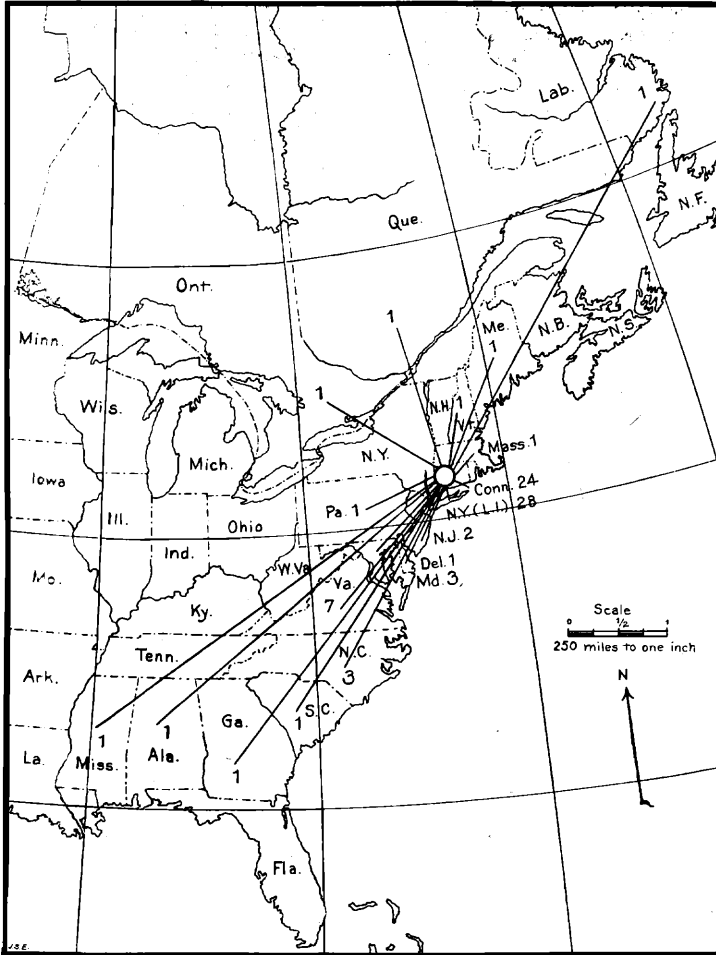


Figure 3. Distribution of Return Records from Ducks Banded in Connecticut.

Ducks have been banded at Litchfield, as well as 519 Mallards, 223 Black Ducks, and 1 Blue-winged Teal.

From these activities, 59 return records are available (Fig. 3) Of the 24 local recoveries, 18 are for Mallards. Only two other returns have been obtained for this species, one from Ontario and one from Vermont. This small percentage of returns from total bandings of more than 500 is truly remarkable, particu-

larly in view of the 28 returns received from only 223 banded Black Ducks. In its possible bearing upon the subject of restocking it might be discussed at some length.

Next to the local recoveries in point of numbers are those from Long Island, New York, consisting of seven for the Black Duck and one for the Wood Duck. Virginia is next in line with six and one respectively for these two species. No other State has reported more than three Connecticut ducks.

The long-range records to the south (Mississippi, Alabama, and Georgia) all pertain to Wood Ducks, while the one obtained on the coast of Labrador was for a Black Duck.

GEORGIA

The banding of waterfowl in Georgia has been limited to a single operation. During December, 1927, and January and February, 1928, Charles O. Handley and James S. Mason conducted a station at Mitchell Pond near Beachton. This point is in the Thomasville-Tallahassee district, and is only a few miles from the Florida line. The ducks banded consisted of 430 Ringed-necked Ducks and one Lesser Scaup. Return records to the number of 120 have been received, all being for Ring-necks.

The region around Thomasville, Georgia, and Tallahassee, Florida, is a Mecca for many sportsmen, which fact explains the large number of recoveries reported from these two States. As the banding was done during the open season, it was inevitable that many banded birds would be killed locally before they had started migration.

An examination of the map (Fig. 4) reveals an interesting and important situation. No returns for Georgia-banded birds have been reported from the ducking-marshes of the Carolinas, Virginia, and Maryland. The evidence clearly points to the crossing of the ducks in a western or northwestern direction to the Mississippi Valley, and thence north and west to the breeding grounds in Wisconsin, Minnesota, Manitoba, and Saskatchewan. With one exception, the recoveries in the lower Mississippi Valley were all obtained in succeeding seasons. The exception (No. 326499) was banded December 29, 1927, and was recovered January 30, 1928, near Rammel, in northeastern Arkansas. This record probably indicates the general region where the flight connects with the Mississippi Valley flyway.

ILLINOIS

The ducks banded in Illinois have been almost entirely Mallards, with a fair percentage of Pintails, a few Black Ducks,

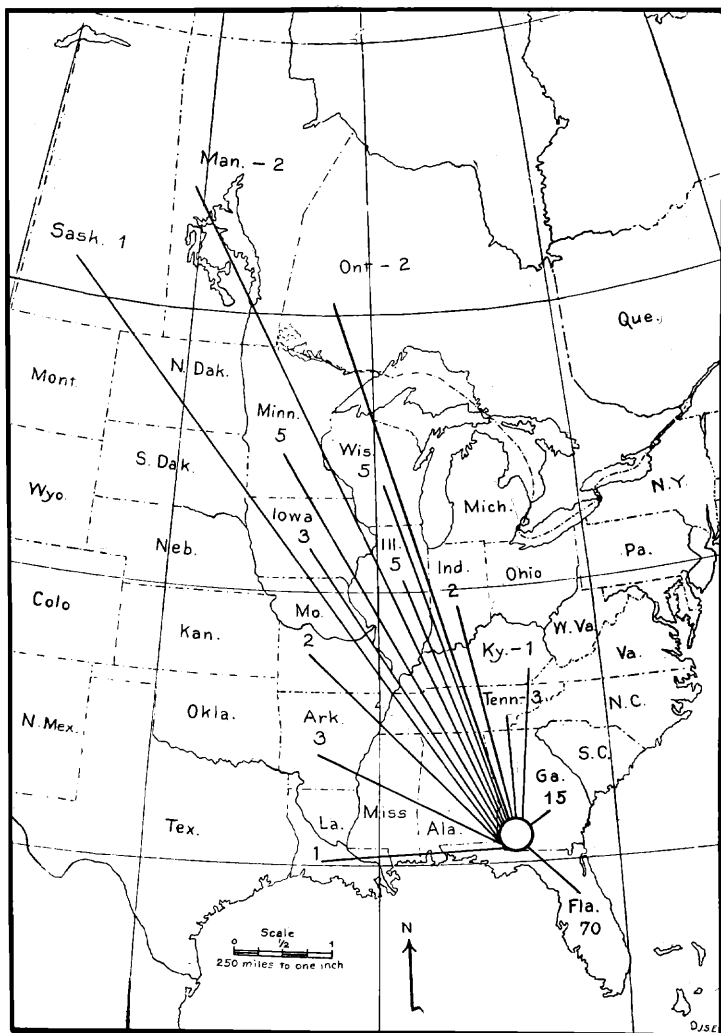


Figure 4. Distribution of Return Records from Ducks Banded in Georgia.

Blue-winged Teals, Green-winged Teals, Widgeons, Lesser Scaups, and one Greater Scaup. The total number banded is 3060.

The work was begun by the author in March, 1922, on the

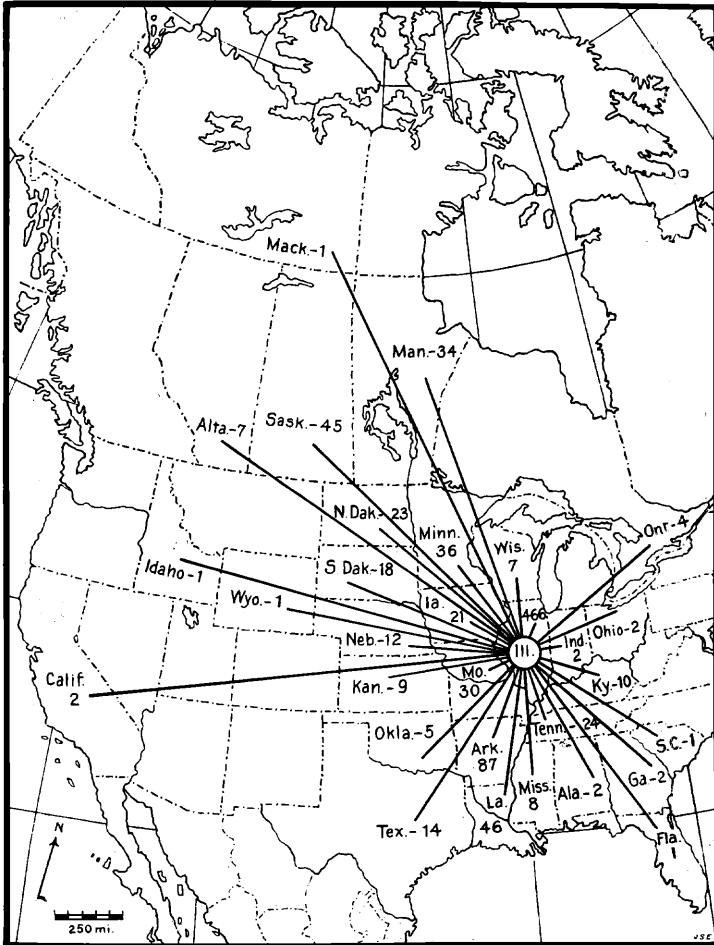


Figure 5. Distribution of Returns from Ducks Banded in Illinois.

grounds of the Sanganois Club near Browning, at which time 466 Mallards, Black Ducks, and Pintails were marked. In the autumn of the same year he banded 1338 additional birds. Again, during a few days early in January, 1926, about a thousand more were banded on a private shooting preserve at Crane Lake, near Bath.

T. E. Musselman started waterfowl-banding in February,

1926, marking 5 Mallards at Warsaw. At Lima Lake, near Meyer, during March, 1927, he banded 161 Mallards, Black Ducks, Pintails, and Blue-winged Teals, and 1 Greater Scaup Duck. During the same period in 1928, at some ponds and marshes near Quincy, he banded 100 Mallards, Pintails, and Widgeons; while in this same area in February, 1931, he added to his total 16 Mallards, Pintails, Green-winged Teals, and Blue-winged Teals. Four Lesser Scaups were banded in this area in March, 1932.

From these operations 921 return records have been received, of which 875 pertain to the Mallard, 15 to the Black Duck, 28 to the Pintail, 2 to the Lesser Scaup, and 1 to the Blue-winged Teal.

As much of the banding was done during the shooting season, the large number of local recoveries was to be expected, particularly since the banding stations have been located in regions where duck-hunting is intensive. The great importance of the Mississippi Valley flyway is well shown by the map (Fig. 5). The Provinces of Manitoba and Saskatchewan, and every State along the Mississippi River and west to the Dakotas, Nebraska, Kansas, Oklahoma, and Texas, have reported a goodly number of Illinois-banded ducks. The chief breeding ground is indicated as being in Saskatchewan and Manitoba.

The single records from South Carolina, Florida, and Idaho, both of those from Georgia, and one from California, are of Mallards. The other California record is that of a Pintail (No. 204144) banded at Bath, January 6, 1926, and killed at Newark, California, November 3, 1926. One Pintail also was recovered near Fort Resolution, Mackenzie, this being the most northern record for a duck banded in Illinois.

IOWA

Although only 199 ducks have been banded in Iowa, the number of return records has been relatively large. The work has been done entirely by Allen Green, of Oakville, who started his station in the winter of 1923, and who each year since has banded Mallards and Pintails, with an occasional Black Duck.

Forty of these birds have been reported as returns. While eight are from Iowa (Fig. 6), this number is exceeded by those reported from Illinois, which may be considered, however, as in the immediate banding district. With one exception, all the other records are from the States of the Mississippi Valley flyway, the adjoining Plains States and the Prairie Provinces of Saskatchewan and Manitoba being included in this category.

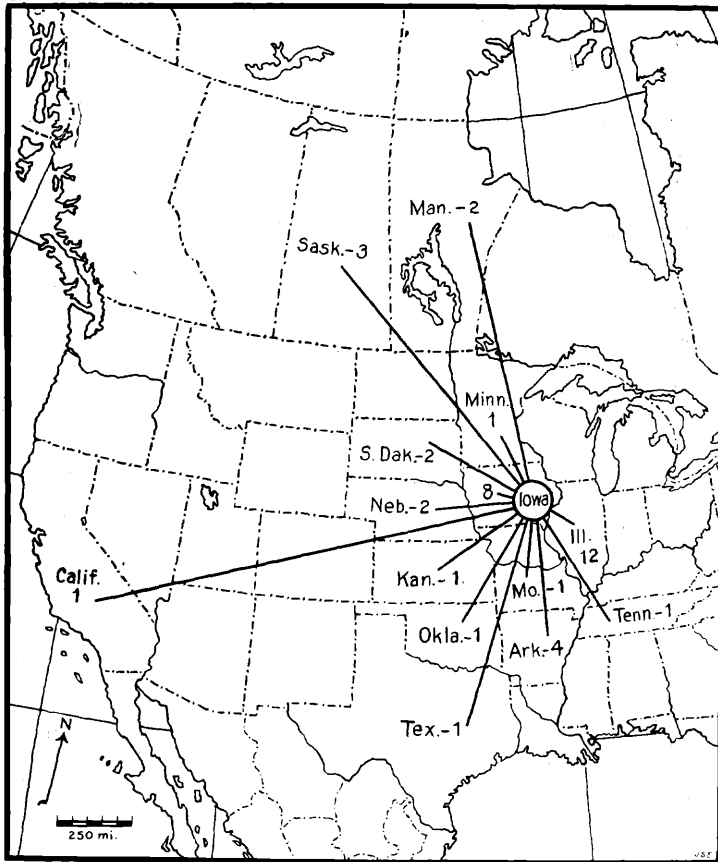


Figure 6. Distribution of Returns from Ducks Banded in Iowa.

The exception is a Mallard (No. 102145) banded March 10, 1923, and killed October 21, 1923, at Los Banos, California.

It is of interest to note that, except those for twelve birds recovered in Illinois and one in western Tennessee, all the return records are from points west of the Mississippi River.

KANSAS

The waterfowl-banding station at Ellinwood, Kansas, operated by Frank W. Robl, is easily one of the most important in the country. This fact is due not only to its prox-

imity to the famed Cheyenne Bottoms, but also to its general geographical location, the large number of ducks banded there, and the diversity of the species that figure in the records.

Mr. Robl started this station during the fall of 1924, and it has been in more or less constant operation each succeeding season from November to March or April, and sometimes to May. The total number of ducks and geese banded up to July 1, 1932, is 6798. These are distributed as follows: Canada Goose, 44; White-fronted Goose, 2; Mallard, 1046; Gadwall, 6; Baldpate (Widgeon), 177; Pintail, 3726; Green-winged Teal, 515; Blue-winged Teal, 1100; Shoveller, 32; Redhead, 62; Ring-necked Duck, 1; Greater Scaup, 1; Lesser Scaup, 83; Buffle-head, 2; Ruddy Duck, 1.

From these operations 590 return records are available for study. As will be seen from the map (Fig. 7) ducks banded in Kansas have been recovered at points throughout nearly the entire continent, except the northeastern portion. In addition, one, a Blue-winged Teal, was killed in Cuba.

These records demonstrate clearly the important flight down the Great Plains from breeding grounds indicated to be chiefly in the Prairie Provinces of Canada and probably also in the Dakotas, Nebraska, and Minnesota, and to a lesser degree in the Northwest Territories and Alaska. The normal western boundary of this flight is evidently the Rocky Mountains, while the eastern overlaps the Mississippi Valley flyway. Most of the birds using this flight-lane winter in Texas and Louisiana, but it is evident that a relatively large percentage of them push on south to Mexico, where they disperse widely. Returns have been reported by our southern neighbor from no fewer than ten States and the Federal District. These Mexican recoveries are all of Pintails and Blue-winged Teals. The two records from Honduras are also of Blue-winged Teals, both being male birds that were banded in April, 1930. One (No. A510183) was killed in November, 1931, and the other (No. A500237) was taken in February, 1931.

The records from banded ducks indicate the Pintail to be the most widely ranging of our native wildfowl. All ten of the Alaskan returns, three of those from Yukon Territory, all four from Mackenzie, the single record from Washington, the three from Oregon, the one from Idaho, the one from Nevada, and 39 of the 41 from California relate to this species. Also, the single record from the Atlantic coast is of a Pintail (No. 600869) banded May 4, 1928, and killed in Jasper County, South Carolina, November 21, 1928.

The fourth record from Yukon Territory is of a Mallard

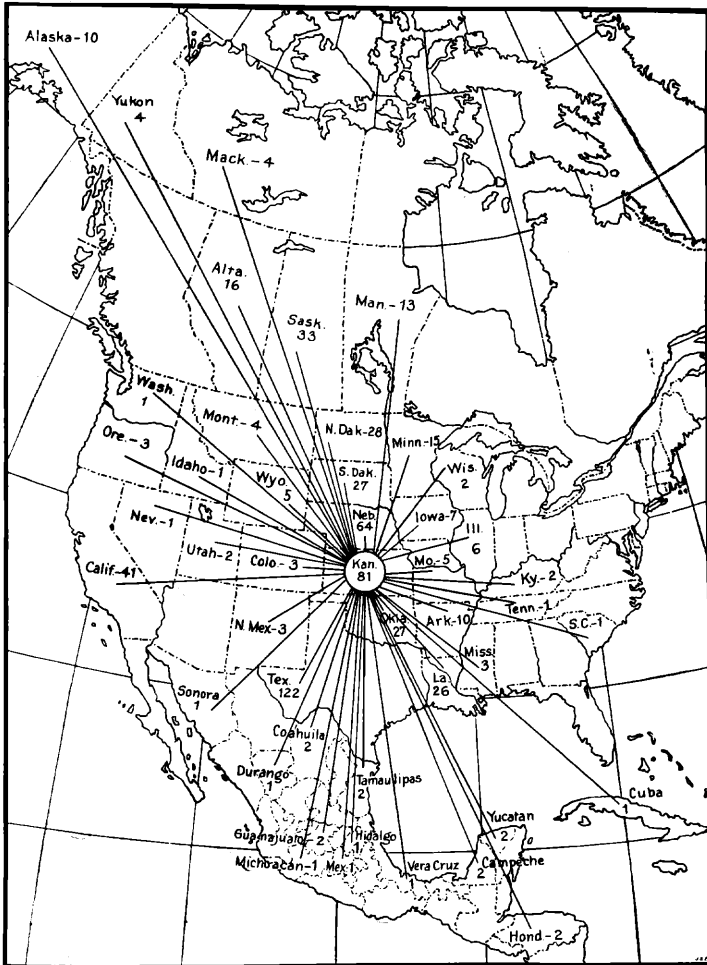


Figure 7. Distribution of Returns from Ducks Banded in Kansas.

(No. 423241) banded February 11, 1930, and killed at Mayo during the autumn of 1931. The remaining two California records are both of Green-winged Teal.

Biological Survey, Washington, D. C.
December 5, 1932.