

been banded with aluminium, stamped with consecutive numbers attached to the leg; a filing card with necessary data is sent in to a central office. For Canada and the United States, to avoid confusion, the bands are stamped "Notify Biological Survey" and handled by the Department of Agriculture, Washington, D.C. All records of birds that have been banded in Canada, or taken in Canada or other countries bearing bands of Canadian origin as shown by their numbers on file, are ultimately sent to Ottawa and filed at headquarters of the National Parks Bureau, Department of Mines and Resources. Birds banded in Canada may be taken in the United States, or *vice versa*, and many birds have been taken during several successive years as "repeaters" The assembled records have given a very clear and accurate idea of where certain species spend their summers and winters and the routes which they follow during migrations.

The matter of migration records is of considerable importance to Canada, as most of the bird species which nest in Canada spend the winter outside of our borders. We know that a large proportion of the geese and ducks reared in Canada find their winter feeding grounds in the United States and are killed there. Recent investigations¹² have shown that some of our smaller species, which are protected in North America, as the upland plover (*Bartramia longicauda*), a favourite bird on the western prairies, is being killed to a dangerous extent in Argentina, and the buff-breasted sandpiper (*Tryngites subruficollis*), formerly common in Arctic Canada and well-known on migrations, has nearly approached extinction on its wintering grounds in Argentina, where settlement and wheat growing has developed during the past generation as on the prairies of Western Canada.

The prolonged period of drought during the past few years in large sections of Western Canada, covering the area which is normally the greatest duck-producing ground in North America, has focussed the attention of sportsmen and conservationists on the study of our waterfowl fauna. Data have been gathered which show that some species have reached such a low ebb, due to lack of reproduction on the breeding grounds and to over shooting in autumn and winter, that a few years more might easily place them in the class of the Labrador duck and the passenger pigeon—irrevocably missing from the list of our living fauna.

The recent intensive studies on the waterfowl migration have been well summarized by Lincoln,¹³ who has described the four important flyways.

The Atlantic Flyway extends from the Atlantic coast west to the Allegheny mountains and curves northwestward to the western end of lake Erie. It has at least three primary migration routes and as many more that are important as tributaries. The extreme eastern route which leads directly down the coast, has its origin in the Eastern Arctic islands and Greenland, bringing down the greater snow goose (*Chen hyperborea atlantica*) and the Atlantic brant (*Branta bernicla hrota*), which winter on the coast of Virginia and North Carolina. This route is also used by black ducks (*Anas rubripes*) and Canada goose (*Branta canadensis*), the latter species on this route seldom going very far south of Long Island sound. The black ducks of western Quebec and Ontario first travel southward through the peninsula of southern Ontario, and together with ducks and geese from both sides of Hudson bay, and several species of diving ducks, canvasback (*Nyroca valisneria*), redhead (*N. americana*), and scaup (*N. marila* and *N. affinis*), which breed in the Prairie Provinces and some of the northwestern States, make a cross-country flight over Pennsylvania and northern West Virginia to the Atlantic coast, and winter largely in the vicinity of Chesapeake bay and Delaware bay.