

The changing picture of bird populations throughout the year intrigues those who are observant and who wish to know the source and destination of these birds. While many species of fish, mammals, and even insects undertake amazing migratory journeys, birds as a group are the most mobile creatures on Earth. Even humans with their many vehicles of locomotion do not equal some birds in mobility. No human population moves each year as far as from the Arctic to the Antarctic with subsequent return, yet the Arctic Terns do.

Birds are adapted in their body structure and physiology to life in the air. Their feathered wings and tails, bones, lungs and air sacs, and their metabolic abilities all contribute to this amazing faculty. These adaptations make it possible for birds to seek out environments most favorable to their needs at different times of the year. This results in the marvelous phenomenon we know as migration—the regular, recurrent, seasonal movement of populations from one geographic location to another and back again.

Throughout human experience, migratory birds have been important as a source of food after a lean winter and as the harbinger of a change in seasons. The arrival of certain species has been heralded with appropriate ceremonies in many lands. Among the eskimos and other tribes this phenomenon is the accepted sign of the imminence of spring, of warmer weather, and a reprieve from winter food shortages. The European fur traders in Alaska and Canada offered rewards to the Native American who saw the first flight of geese in the spring, and all joined in jubilant welcome to the newcomers.

As North America became more thickly settled, the large flocks of ducks and geese, as well as migratory rails, doves, and woodcock that had been hunted for food became objects of the enthusiastic attention of an increasing army of sportsmen. Most of the nongame species were also found to be valuable as allies of the farmer in his never-ending confrontation against insect pests and weed seeds. And in more recent years, all species have been of ever-increasing recreational and esthetic value for untold numbers of people who enjoy watching birds. We soon realized that our migratory bird resource was an international legacy that could not be managed alone by one state or country and that all nations were responsible for its well being. The need for laws protecting game and nongame birds, as well as the necessity to regulate the hunting of diminishing game species, followed as a natural consequence. In the management of this wildlife resource, it has become obvious that studies must be made of the species' habits, environmental needs, and travels.

In the United States, the Department of the Interior recognized the value of this resource and is devoted to programs that will ensure sustainability for these populations as they are faced with the impacts of alteration in land use, loss of habitat, and contaminants from our technological society. Hence bird investigations are made by the U.S. Fish and Wildlife Service, the arm of the Department of Interior charged by Congress under the Migratory Bird Treaty Act with the duty of protecting those avian species that in their yearly journeys pass back and forth between United States and other countries. In addition, the federal government through the activities of the Biological Resources Division of the U.S. Geological Survey also promotes basic research on migration. Federal agencies cooperate with their counterparts in other countries as well as with state agencies, academic institutions, and non-governmental groups to gain understanding and for the protection of migratory species through such endeavors as Partners in Flight, a broadly based international cooperative effort in the Western Hemisphere.

For almost a century the Fish and Wildlife Service and its predecessor, the Biological Survey, have been collecting data on the important details of bird migration. Scientists have gathered information concerning the distribution and seasonal movements of many species throughout the Western Hemisphere, from the Arctic Archipelago south to Tierra del Fuego. Supplementing these investigations is the work of hundreds of United States, Latin American, and Canadian university personnel and volunteer birdwatchers, who report on the migrations and status of birds as observed in their respective localities. This data, stored in field notes, computer files, and scientific journals, constitutes an enormous reservoir of information pertaining to the distribution and movements of North American birds.

The purpose of this publication is to summarize this data and additional information from other parts of the world to present the more important facts about our current understanding of the fascinating subject of bird migration. The U.S. Fish and Wildlife Service is grateful to the many people who have contributed their knowledge so that others, whether in biology or ornithology classes, members of conservation organizations, or just individuals interested in the welfare of the birds, may understand and enjoy this precious resource as well as preserve it for generations to come.