



BIRD MIGRATION AND THE GREAT LAKES

One of nature's most spectacularly choreographed rituals

bird facts

- More than 75 million Americans—about 20 percent of the nation's population—photograph, watch, study, hunt and enjoy birds. They spend more than \$25 billion a year in pursuit of this pastime. In fact, bird watching is the fastest growing wildlife-related outdoor activity in the United States.
- Scientists predict 10 percent of all bird species will become extinct by the end of this century.
- Populations of some migratory birds have declined drastically over the past 30 years, mostly due to habitat loss of the birds' breeding and wintering grounds, as well as the loss of the stopover sites birds rely on to rest and refuel along their migration routes.
- Because migrating species can spend more than half of the year on the move—heading north in the spring, south in the fall—the stopover sites they depend upon are critical for their survival.
- Some species of migratory birds travel more than 24,000 miles round trip each year, flying back and forth across the hemisphere.
- Migratory birds play an important role in seed dispersal and pollination, and they aid agriculture by eating insect pests.
- Before migration, some birds double in weight by storing fat to fuel their long journeys.

Scarlet tanager © Gerald D. Tang



Tundra swans © Don Metzner

Bird migrations enthrall people of all ages. Consider: Songbirds—no bigger than the palm of your hand—stay aloft 24 hours while flying over large bodies of water.

“Bird migration is the one truly unifying natural phenomenon in the world, stitching the continents together in a way that even the great weather systems, which roar out of the poles but fizzle at the equator, fail to do. It is an enormously complex subject, perhaps the most compelling drama in all of natural history,” writes Scott Weidensaul in *Living on the Wind - Across the Hemisphere with Migratory Birds*.

Alarmingly, recent songbird studies document that mortality during migration may be as high as 85 percent. Further, high rates of decline in their populations greatly concern scientists who understand that because birds are so responsive to changes in their environments, they are the proverbial “canary in the coal mine,” alerting us to losses of, and damage to, natural areas.

Throughout the world, scientists have identified a handful of places absolutely critical to migratory birds because they provide refuge and food. In America, those places include the Gulf of Mexico



Lake Ontario © Photos.com

and the Atlantic and Great Lakes coasts. In the Great Lakes, hundreds of millions of birds migrate through and depend on the region. It is a hub for North America's bird migration.

With scientists predicting that 10 percent of all bird species will become extinct by the end of this century, many conservation groups are working in concert to protect the wintering and summer breeding grounds of migratory birds. In the Great Lakes, scientists with The Nature Conservancy are responding to this international wake-up call with a variety of innovative tactics, designed to protect migratory birds while also increasing our understanding of them.

Creating a Model

On journeys that can span 10,000 miles, migratory birds need places where they can find food and shelter. Often called "stopover sites" by scientists, these places can range in size from a few hundred square feet to miles of shoreline. Knowing where these sites exist provides conservationists with a powerful roadmap for their protection.

The Conservancy is spearheading efforts to identify and protect remaining stopover sites for the vast numbers of

migratory birds that congregate in the marshes, forests, shorelines and islands in the Great Lakes region. Conservancy scientists have developed a successful model for locating critical stopover sites, which has been used to identify places in need of protection on the western shores of Lake Erie.

This groundbreaking site identification and protection process is producing a successful model that Conservancy scientists would like to first replicate throughout the Great Lakes, then elsewhere.

Kirtland's Warbler

Often called North America's rarest songbird, the Kirtland's warbler is federally-listed as endangered, as scientists believe about 2,800 adults remain in the world. This ground-nesting bird, weighing a mere one-half ounce, presents a unique conservation opportunity because of its narrow habitat requirements and limited range. It breeds only in the jack pine forests of Michigan's northern lower peninsula and winters almost exclusively in the Bahamas.

When the Kirtland's Warbler Research and Training Project launched in 2002, little was known about the warbler's time in the Bahamas. Much, however, has been

learned since then. Today, scientists from the U.S. Forest Service, the Conservancy and the Bahamas Trust—partners in the project—are identifying winter habitat needs of this species. Summer habitat in Michigan is being restored, and students are being trained in the Bahamas, which is increasing capacity for conservation work there. The impact of this work is being felt. In 2005 researchers documented 1,415 singing males, compared to 167 in 1987.

Although much work remains to understand how to fully recover this species, scientists are learning lessons that can be applied to conservation efforts of other migratory bird species in peril.



Kirtland's warbler © TNC

contact information

The Nature Conservancy
Great Lakes Program
8 South Michigan Avenue
Suite 2301
Chicago, Illinois 60603
tel (312) 759-8017
fax (312) 759-8409

nature.org/greatlakes