

Bird Migration

How and why do birds migrate? How can we help migrating birds?

Every spring and fall, millions of birds **migrate** through Georgia on journeys between their breeding and wintering grounds. These birds include songbirds, shorebirds, hawks, herons, hummingbirds, woodpeckers, and more. Though they come in many shapes and sizes, they share some remarkable abilities. For some, the trip may be just a few hundred miles, while others may fly thousands of miles, sometimes flying for days without stopping. Regardless of the journey, migrating birds face many challenges and dangers, and we can all take actions to help them have a safer passage.



Arctic Terns fly an astonishing 25,000 miles between the Arctic and Antarctic each year.



Bar-headed Geese regularly fly over the tallest mountains in the world, as high as 5-1/2 miles above sea level.

What Is Migration?

Migration is the regular movement of animals from one location to another in search of food and places to raise young, usually on a seasonal basis.

Who Migrates?

Many types of animals migrate, including birds—but not all birds. About forty percent of bird species migrate.

Why Do Birds Migrate?

Survival! Birds migrate in order to find enough food and space to raise their young. While weather and day length may trigger migration, the movement is tied to food and nesting resources.

When Does Migration Occur?

Birds generally migrate to their **breeding grounds** in the spring to begin the nesting cycle and return to their **wintering grounds** in the fall. The exact date and time depends on the species.

Where Do Birds Go?

Some birds travel only a few hundred miles, while others may journey from pole to pole. In some cases, birds migrate directly east and west, while other species migrate up and down mountain slopes. In North America, birds generally migrate north in the spring and south in the fall, but routes and timing are different for every species.

How Do Birds Know When to Leave and Where to Go?

Birds sense changes in day length, weather, and food availability, but they also have an “internal clock” that helps them know when to leave. During the journey they may use landforms and bodies of water to find their way, or use the sun, moon, and stars as a guide. Some birds are even able to sense the earth's magnetic field, like a compass. They have an internal global positioning system (GPS)!

How Do Birds Survive Such Long Journeys?

To prepare for long trips, birds must fatten up. Some will even double their body weight. They'll burn this fat as a source of energy during flight. During migration, some survival strategies include:

- Timing flights with tail winds.
- Flying at night, when air is cooler, winds are calmer, and fewer predators are out.
- Flying non-stop over bodies of water or hazardous habitats. (Or flying around them.)
- Stopping along the way to eat, drink, and rest.



Bar-tailed Godwits fly more than 6,000 miles across the ocean without stopping—from Alaska to New Zealand!

The Migration Equation

Day Length + Weather + Less Food + Just Knowing

Stopover Sites: Rest Stops for Birds

Finding good habitat during migration can make all the difference to a bird's survival. Even a backyard or schoolyard may be an important **stopover site**, providing a safe place for birds to eat, drink, and rest before continuing their journeys.



Georgia's coastline provides valuable stopover sites for migrating birds. In spring, thousands of shorebirds traveling from Central and South America flock together to fatten up on horseshoe crab eggs before continuing to their breeding grounds in the Arctic. Without this food and place to rest, these shorebirds would not be able to complete their journeys. Protecting them is important to protecting bird populations.

Major stopover sites like the Georgia coast provide unique opportunities for scientists to study bird populations. **But how do you count thousands of birds on a beach?!** Scientists estimate the number of birds in a huge flock by blocking off a group of 10, 100, or 1,000 birds and counting how many groups are present. How many shorebirds do you estimate are in the picture above?

Migration Hurdles

Migration is difficult and dangerous. Sadly, many birds do not survive. Can you think of any obstacles birds may face during their journeys? Write a few of them in the spaces provided below.

Solving the Mystery...

Scientists still don't completely understand the mysteries of bird migration, but several methods help us learn about bird movements:

- Bird counts record the species and number of birds observed in an area, noting the date, time, and location.
- Bird banding tracks individual birds with a numbered metal tag.
- High-tech tracking systems monitor birds, using transmitters, solar-powered tags, and radar.



Did you know? Banding is one of the oldest techniques used to study bird movements. Small metal tags with unique codes of letters and numbers are placed on a bird's leg. If that bird is seen or captured again, the tag is like an identification card. The Song Sparrow was tagged at the Panola Mountain Banding Station.