



# BIRDING— Fun and Science

by Phyllis McIntosh

For passionate birdwatcher Sandy Komito of Fair Lawn, New Jersey, 1998 was a big year. In a tight competition with two fellow birders to see as many species as possible in a single year, Komito traveled 270,000 miles, crisscrossing North America and voyaging far out to sea to locate rare and elusive birds. In the end, he set a North American record of 748 species, topping his own previous record of 726, which had stood for 11 years.

Komito and his fellow competitors are not alone in their love of birds. According to a U.S. Fish and Wildlife Service survey, about one in five Americans

over age 16 say they actively observe and try to identify birds, although few go to the extremes Komito did. About 88 percent are content to enjoy bird watching in their own backyards or neighborhoods.

More avid participants plan vacations around their hobby and sometimes travel long distances to view a rare species and add it to their lifelong list of birds spotted. Many birdwatchers, both casual and serious, also function as citizen scientists, providing valuable data to help scientists monitor bird populations and create management guidelines to protect species in decline.



## Birding Basics

The origins of bird watching in the United States date back to the late 1800s when conservationists became concerned about the hunting of birds to supply feathers for the fashion industry. It was better, they argued, to watch birds in the wild than to shoot them. The term *bird watching* is thought to have originated in 1901 with the publication of a book with that name. Today, *bird watching* and *birding* are used interchangeably; some people prefer *birding* because it encompasses listening to birds rather than just watching them.



Goldfinches flock around a feeder filled with nyger (thistle) seed.



**(above)** An eastern bluebird douses itself in a birdbath.

**(right)** This bird-friendly yard has several bird feeders as well as plants and trees that attract birds.

With improvements in binoculars following World War II and the publication of field guides with pictures and descriptions of bird species, interest in birding grew throughout the 20th century. In fact, those two tools—a decent pair of binoculars and a colored photo field guide—are all that one needs to enjoy watching birds.

Organizations such as the National Audubon Society, the American Birding Association, and the National Wildlife Federation offer information on how to attract birds to your backyard. Numerous stores, such as the Wild Birds Unlimited chain, stock a full range of supplies to aid the process.





Basically, birds feel welcome wherever they find:

- **Food.** Feeders offering one or two kinds of food, such as sunflower seeds and nyger (thistle) seed, will quickly attract a variety of birds. Adding specialty items like a suet cake or sugar solution will invite woodpeckers and hummingbirds as well.
- **Water.** Birds need a ready supply of water for drinking and bathing. A standing birdbath or a ground-level pool in an old frying pan or trash can lid can serve the purpose.
- **Natural habitat.** Birds prefer a less-than-tidy yard, where a variety of native plants, brush piles, and dead logs provide plenty of

food, cover, and places to nest. Leaving dead leaves, twigs, moss, and even yarn or string in the yard gives birds a choice of nesting materials.

- **Protection.** Bird lovers avoid using chemical pesticides and herbicides on their property, keep cats indoors, and minimize lighting that could lure migrating birds off course.

All year round, throughout the country, such measures—even just a backyard feeder—are almost guaranteed to attract common bird species, including the house sparrow, American robin, mourning dove, downy woodpecker, and the beautiful yellow American goldfinch.



A man uses binoculars to study a bird at a feeder in his backyard.

## The Appeal of Birding

Birding has broad appeal for a number of reasons. For one, bird watching is enjoyable for all ages and abilities. It is a way to introduce children to nature and a means for the elderly or homebound to connect to the outdoor world. Birding is ideal both as a family activity and as a solitary pursuit for individuals who want to escape from the pressures of daily life.

As backyard birdwatchers become more familiar with visitors to their feeders, they may expand their interest by taking classes to learn more about birds or by joining a local club to go for walks with other birders. According to the website [www.birdwatching.com](http://www.birdwatching.com), it's relatively easy to find at least 100 species of birds in any region of the United States.

As satisfying as bird watching is itself, it also goes well with other hobbies. Photography buffs like to capture images of birds. Gardeners often decide to cultivate plants that will attract birds. Woodworking enthusiasts may take pleasure in building birdhouses, nest boxes, and feeders. Hikers may enjoy trekking to out-of-the-way locales in search of birds of prey and other species that do not frequent backyards.

Watching and studying birds often develops into an interest in broader conservation issues, such as air and water quality and protection of forests and wetlands that provide habitat for birds and other wildlife. Many birders become active in local and national organizations working to protect the environment.

## Serious Birding—Life Lists and Big Years

For some people, birding becomes a lifelong passion on which they are willing to lavish considerable time and money. Some birders plan vacations to take advantage of new bird watching opportunities or to attend some of the 200 birding festivals held each year in the United States and Canada. Convened at prime birding locations, festivals feature lectures, workshops, and visits to local birding hot spots. Some festivals focus on individual species, such as bald eagles, snow geese, and hummingbirds.

Thanks to birding websites, listservs, and organizations such as the North American Rare Bird Alert, a subscription reporting service sponsored by the Houston Audubon Society, news of rare bird sightings spreads quickly throughout the birding community. When a falcated duck normally seen only in Asia landed in California in January 2010, thousands of birders flocked to the Colusa National Wildlife Refuge near Fresno hoping to catch a glimpse.

Such sightings are opportunities for serious birders to add to their life lists—detailed compilations of all the bird species they have seen over the years. Some people take expensive trips to Antarctica or the Amazon in hopes of adding to their life lists. There is a 600 Club for birders who have sighted that many out of the more than 800 species found in North America. While some enthusiasts have spent their lives trying to see all 10,000 species of birds thought to inhabit the globe, only a handful have logged more than 8,000.

Serious birders also compete to determine who can identify the most species within a certain time or area. Competitions include “big day” events, in which teams have 24 hours to spot the most species, and “big sit” events, where birders identify birds within a prescribed circle, typically with a diameter of 17 feet.

The ultimate competition is the “big year,” in which individuals travel widely to locate the most species. The first American to complete a North American Big Year was Guy Emerson, a New York



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banker and National Audubon Society board member who in 1939 combined birding with business trips to log a total of 497 species.

Legendary among big year record holders is the late Ted Parker, who began his 1971 big year as an 18-year-old high school student in Pennsylvania and completed it as a freshman at the University of Arizona. His tally of 626 species remained unbroken for 15 years. Parker went on to become a renowned ornithologist and expert on tropical birds.

The reigning king of the big year is Sandy Komito, whose record-breaking competition against fellow birders Greg Miller and Al Levitan is chronicled in a book titled *The Big Year: A Tale of Man, Nature, and Fowl Obsession*. The story is featured in a 2011 movie, also called *The Big Year*, starring Jack Black, Steve Martin, and Owen Wilson.

In today's digital age, birders have more tools than ever to aid them in their quests. Digital cameras that can be used with binoculars or a spotting scope make it easier than ever to photograph birds in the wild. Advances in both audio and video technology make it possible to take large amounts of data, photos, and recordings of bird calls into the field in

pocket-sized devices. The *Audubon Birds* field guide, for example, is available as an app for the iPhone, iPad, and Android smart phones. Perhaps the ultimate in gee-whiz tools are binoculars with built-in cameras that take both video and still shots with powerful zoom lenses. And some can record in both 2D and 3D.

## Citizen Scientists

In addition to gaining enormous personal satisfaction from their hobby, birders at all levels make invaluable contributions to scientific knowledge about birds and their status in the wild. *BirdWatching* magazine lists more than 100 projects that rely on citizen observers, many of them focused on individual species and locales.

Organizations such as the National Audubon Society and the Cornell Lab of Ornithology actively recruit birders to help gather nationwide data on bird populations. The Cornell Lab notes that birdwatchers report tens of thousands of bird observations to the lab every day, and more than 200,000 people a year participate in its citizen science projects. Data contributed have been used in more than 60 scientific papers since 1997.



Popular citizen science projects include:

- **Annual bird counts.** Believed to be the longest-running wildlife census in the world, the National Audubon Society's Christmas Bird Count enlists more than 60,000 volunteers to count birds in locally specified areas during a three-week period in December and January. More than a century old, the count has provided data for key reports such as Audubon's *Birds and Climate Change* and *Common Birds in Decline*. In 1980, Christmas counts documented the decline in wintering populations of the American black duck, which led to restrictions on hunting that species.

In 1997, Audubon and the Cornell Lab of Ornithology launched the Great Backyard Bird Count, which engages birdwatchers to count birds during four days in February and report their findings online. Anyone can visit the website [www.birdcount.org](http://www.birdcount.org) to view real-time maps and charts that show what birdwatchers across the country are finding. The counts can

provide the first sign that a species is increasing or declining or that its range is expanding or shrinking.

- **Project FeederWatch.** Throughout the winter, some 15,000 people periodically count birds that visit feeders in their backyards, nature centers, and communities and relay the information to the Cornell Lab. The more than 15 million checklists submitted since 1987 have helped scientists study the impact of non-native species on native birds and track unpredictable movements of winter bird populations.
- **eBird.** Another joint project of the National Audubon Society and the Cornell Lab, eBird is an online database where birders can keep track of their own sightings, share their observations with scientists, conservationists, and fellow birders, and access data about birds in their area and throughout the Western Hemisphere.
- **NestWatch.** Launched in 1997 by the Cornell Lab, NestWatch enlists volunteers to find and monitor bird nests and report on their locations, habitats, species, and numbers of eggs and young birds. More than 100,000 nesting records submitted so far have enabled scientists to track the breeding success of birds across North America.
- **Celebrate Urban Birds.** To encourage city kids and community groups to focus on birds in their environment, the Cornell Lab provides free kits with posters, flower seeds, and data forms. Participants are then asked to observe a small area for 10 minutes at a time and report on the presence or absence of 16 species of birds.



(above) Bird eggs in a nest  
(right) A blue jay and a cardinal look for food at a snow-covered feeder.

Many birdwatchers and bird experts alike would no doubt agree with Roger Tory Peterson, a noted American naturalist and ornithologist, who called birds “the most exciting and deserving of the vertebrates.” They are, he said, “perhaps the best entrée into the study of natural history and a very good wedge into conservation awareness.”

More than that, birds in their infinite variety touch a chord within us that makes us want to know them better. As Peterson went on to say, “The truth of the matter is, the birds could very well live without us, but many—perhaps all—of us would find life incomplete, indeed almost intolerable, without the birds.”

## Birder Words

**dimorphism**—difference between the sexes of the same species. For example, males may be smaller and brightly colored, while females may be larger and plainer.

**flyway** – route used by migratory birds to travel between wintering and breeding grounds

**irruption** – large influx of birds of the same species into an area outside their normal range, possibly

caused by drought or other environmental changes  
**lifer** – a bird that is first seen and identified by a birder and added to the birder’s life list

**little brown jobs (LBJs)** – small, dull-colored, unremarkable birds that some birders don’t want to bother with

**mobbing** – the banding together of a group of birds to chase away an intruder or predator

**molting** – process of a bird shedding worn feathers as new ones grow in to replace them

**raptor** – a carnivorous bird of prey, such as an eagle, vulture, falcon, or hawk

**twitcher** – a birder who travels great distances or goes to great effort to see a new bird species

**vagrant** – an individual bird present in an area where it is not normally found

## Websites of Interest

### American Birding Association

[www.aba.org](http://www.aba.org)

In addition to news about publications, events, and other resources for recreational birders, this site features a special page and blog for young birders and a Birders Exchange, through which birders in the United States can donate binoculars and other equipment to researchers and conservationists in Latin America and the Caribbean.

### Birdwatching Dot Com

[www.birdwatching.com](http://www.birdwatching.com)

Billing itself as “your lifetime ticket to the theater of nature,” this site combines useful information such as birding tips for all seasons and reviews of binoculars and spotting scopes with an online store full of birding equipment, DVDs, software, and gifts for birders.

### National Audubon Society

[www.audubon.org](http://www.audubon.org)

Official website of the premier U.S. organization associated with birds, this site provides a wealth of information about birds and about the Audubon Society’s extensive conservation work. The education section features such topics as “Tips for Bringing Nature to the Classroom.”

### The Cornell Lab of Ornithology

[www.birds.cornell.edu](http://www.birds.cornell.edu)

This site describes the lab’s research, educational, and conservation efforts on behalf of birds. It includes a detailed list of citizen science projects and an “All About Birds” section that explains the basics of birding, has an informative bird guide, and provides tips on attracting birds to your yard.



This male (left) and female cardinal illustrate *dimorphism*.

# The Legacy of John James Audubon



Carolina chickadee, a bird named by John James Audubon

The one person most associated with birds in the United States is John James Audubon, even though he died more than 160 years ago. Born in Haiti in 1785, he grew up in France, where he developed a passion for collecting and drawing items from nature, especially birds' nests and eggs.

After coming to the United States as a young man, Audubon discovered that he much preferred drawing to managing his business interests. In 1820, he began to travel extensively, collecting specimens and creating life-size drawings of birds he found. The result, 18 years later, was *The Birds of America*, a book containing color

sketches of 435 kinds of birds, virtually all the bird species then known in the United States. Audubon broke new ground with his use of dramatic poses and settings, picturing the birds as he thought they looked in the wild. Audubon later published a five-volume *Ornithological Biography* documenting what he had learned about birds during his travels.

The Audubon legacy officially began in 1886, when magazine editor George Bird Grinnell, appalled by the slaughter of birds for sport and to supply adornments for ladies' apparel, founded an organization devoted to protecting wild birds. Not surprisingly, he decided to call it the Audubon Society. Various state Audubon Societies sprang up over the next few years, and in 1905 the organization now known as the National Audubon Society was established.

Associated throughout its history with appreciation and conservation of birds, the organization now focuses on protecting and restoring natural ecosystems that provide valuable habitat for birds and other wildlife throughout the Western Hemisphere. Its 500 chapters organize birding activities and engage members in grassroots conservation action. Some 80 Audubon Society centers and sanctuaries across the United States educate and inspire more than a million visitors every year.

The Audubon Society counts among its successes protection of the Arctic National Wildlife Refuge in Alaska, the ongoing recovery of the imperiled California condor and brown pelican, and continuing restoration of the Everglades in Florida. The organization also assisted in bird rescue and wetlands recovery following the 2010 oil spill in the Gulf of Mexico and has designated 2,500 Important Bird Areas to help protect vital habitat, especially along migratory flyways.

An engraving of mourning doves  
by John James Audubon





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## Celebrating a National Symbol

Of conservation successes in the United States, probably none is more celebrated than the recovery of the majestic bald eagle, the symbol of the United States since 1782. As such, the bald eagle graces the Great Seal of the United States, the Seal of the President of the United States, and the seals of many government agencies.

Called “bald” because of its distinctive white head, the bird once thrived in every part of the country except Hawaii. When it was declared a national symbol, eagle populations may have topped 100,000 in what is now the continental United States, excluding Alaska.

By the mid-20th century, however, the eagle was in serious decline, the victim of legal and illegal hunting, habitat loss, and the pesticide DDT. Used widely after the mid-1940s, DDT caused eggshells to become so thin and brittle that they broke easily under the weight of a nesting adult eagle. By 1963, only about 400 nesting pairs remained in the lower 48 states.

Declared an endangered species in 1967 and protected by several other laws, the bald eagle began to rebound, especially after the United States banned DDT in 1972. In 1995, the bald eagle was removed from the endangered list, and in 2007, when populations had increased to 10,000 nesting pairs, it was declared no longer threatened. The national symbol soars once again.



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**(top)** A bald eagle soars over the Grand Canyon.

**(above)** The bald eagle was named for its distinctive white head.