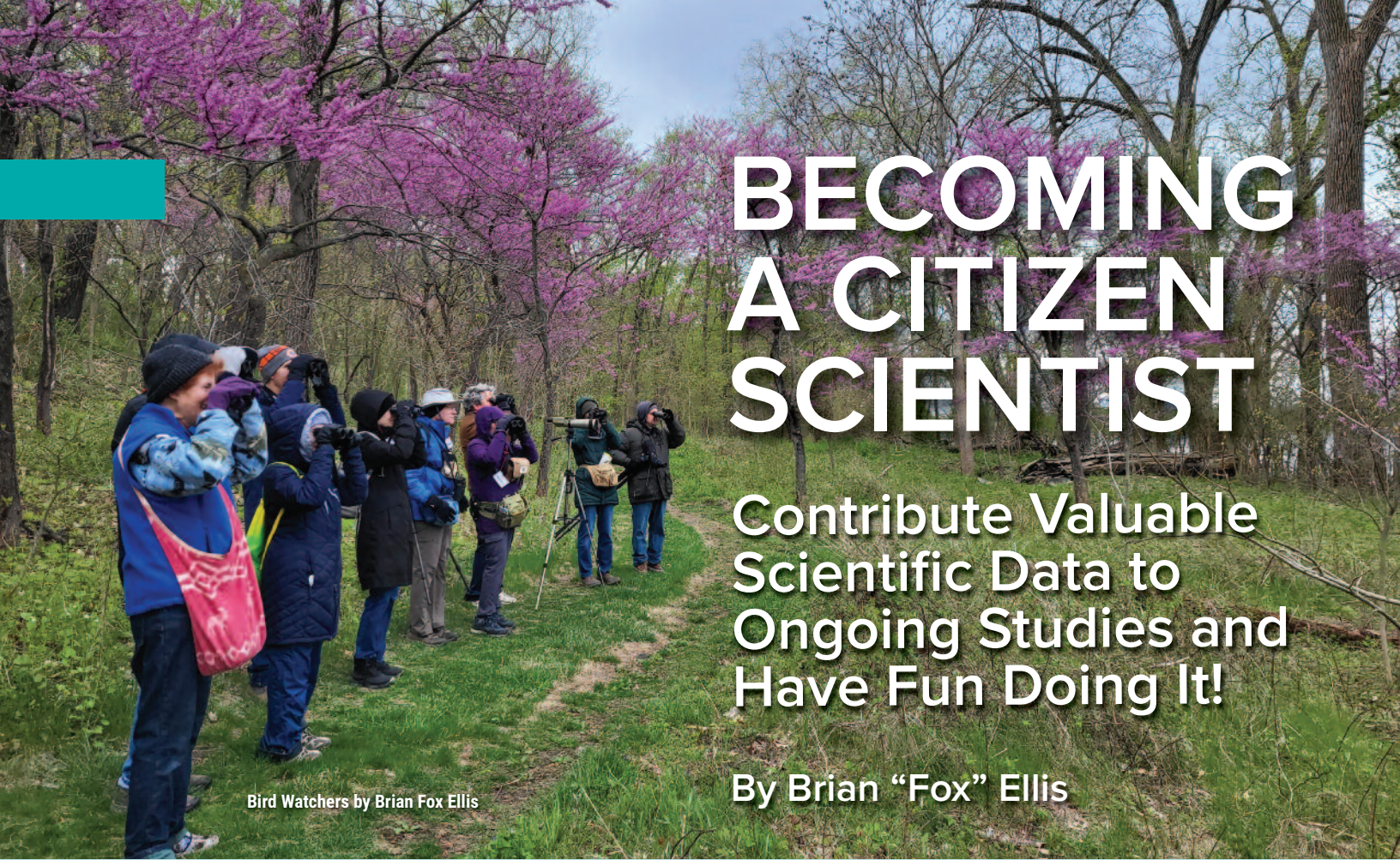


A group of bird watchers, including children and adults, are standing in a grassy field with many trees in full pink bloom. Some people are using binoculars, and one person has a camera on a tripod. The scene is outdoors on a bright day.

BECOMING A CITIZEN SCIENTIST

Contribute Valuable
Scientific Data to
Ongoing Studies and
Have Fun Doing It!

By Brian “Fox” Ellis

Bird Watchers by Brian Fox Ellis

The Illinois Audubon Society was founded in 1887 by a group of citizen scientists, also known as bird watchers. Bird watchers have long known that collecting data about bird populations, as well as their habits and habitats, provides a scientific basis for making better choices for our environment. We are motivated by a simple idea: everyday people can make a difference when we work together to create positive change based on scientific knowledge.

The Illinois Department of Natural Resources and the United States Fish and Wildlife Service would love to hire thousands of scientists to monitor every stream and forest, and every bird, bat, and butterfly. While this is unrealistic, you and I can be the eyes and ears concerning a wide array of research projects. We can count birds, tag monarch butterflies, and catch bugs in our local streams; by doing so, we can provide valuable data to help inform decision making.

There are a wide array of citizen science projects. Find one that excites you! Most require just a few minutes or few hours of your time; all of them benefit when you make a long-term commitment. It is good for your physical and mental health, and good for the planet.

Where would you like to start?

Christmas Bird Count (CBC)

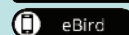
CBC is the great-grandmother of all citizen science projects. Started in 1900 by Illinois native Frank Chapman, it began as an alternative to the holiday tradition of shooting birds for sport. Retaining the good-natured competition, counting birds was less destructive than shooting them. Because data has been collected for 125 years, it has become a vital source of information for long-term studies. In the past 25 years, hundreds of researchers have used this information to look at shifting bird populations, climate resiliency, and endangered species. The protocol is simple and fun! On the chosen day, between December 14th and January 5th, teams scour a pre-determined area within a circle 15 miles in diameter. The goal is to count both the number of species and the number of individual birds. Most teams meet for dinner afterwards to share their tallies, making it a social event as well. There are now count circles in more than 20 nations. If you are new to birding, this

is a great way to learn. An experienced birder can join new circles and explore new territories with a local guide. Scan the QR code to learn more about the history and current procedures, and to find a count circle near you.

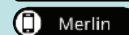


eBird & Merlin

The apps eBird and Merlin, produced by Cornell Lab in Ithaca, New York, are powerful tools that help you learn about what birds you might see, where to go bird watching, and how to identify birds by sight and sound. They will help tally your life list. More importantly, every birder who uses these tools automatically becomes a citizen scientist. eBird data is used for monitoring population fluctuations, migration, and countless other studies. eBird and Merlin are also the primary tools used to collect data for the Christmas Bird Count, FeederWatch, the Great Backyard Bird Count, and other citizen science projects. To get the most out of these tools, it is highly recommended that you take the short, free, online course so you are following their best practices, making your data more useful. These tools are free.



Download eBird



Download Merlin



Blue Jay by Paul Mayer

The Great Backyard Bird Count (GBBC)

Also managed by Cornell Lab, GBBC occurs in Mid-February. You can count for 15 minutes on one day or for all four days. You can stay in your pajamas with a cup of coffee and count the birds at your feeders. It is also a fun count for a classroom, senior center, or nature center, making it a social citizen science project. Because hundreds of thousands of people are observing birds on the same dates all over the world, it is a valuable snapshot of bird populations. Last year, 642,003 people in 210 countries identified 7,920 species of birds, making this one of the largest citizen science projects on the planet! The protocol is also quite simple: count every bird you see at your feeders. Again, Cornell Labs provides a useful guide that covers GBBC best practices.



FeederWatch

If GBBC is an introduction to citizen science; FeederWatch is an immersion in protocols. Though one-day counts are helpful, participants are encouraged to select a site and manage feeders over the winter months for several years to provide better data for long-term analysis. For this reason, many nature centers, including Illinois Audubon Society's Adams Wildlife Sanctuary, host a team of dedicated FeederWatch participants who take turns making sure the counts are done consistently—again, a fun social event. If you are a dedicated bird feeder, this is the study for you. With more than three decades of data, there have been a wide range of studies based on the collected statistics.



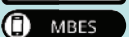
Rose-breasted Grosbeak by Paul Mayer



Immature Bald Eagle by Bob Schifo

Midwinter Bald Eagle Survey (MBES)

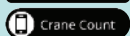
The recovery of the Bald Eagle throughout the U.S. is a conservation success story. Bald Eagles currently breed in 49 out of 50 states. In 1979, when Bald Eagle populations were just beginning to recover from the effects of DDT and other toxins, the National Wildlife Federation started an informal survey. The survey was standardized to count within a specific window during the winter in 1984; this became the Mid-Winter Bald Eagle Survey. From 2007 until 2024, Illinois Audubon Society managed the MBES in Illinois, coordinating the 45 predetermined routes along the Mississippi, Illinois, Ohio, and Wabash rivers. Surveyors completed their routes in one day, often through snow, fog, rain, floods and sometimes bitter cold temperatures. Beginning in 2025, the entire effort will be managed by the U.S. Army Corps of Engineers. Periodically, surveyors retire from their volunteer commitment and replacements are needed. Interested? Scan the QR code.



Annual Midwest Crane Count

Each year in mid-April, thousands of observers spread out across Wisconsin, Illinois, Iowa, Indiana, Michigan, and Ohio to count Sandhill Cranes. The count started informally in 1976 in Columbia County in south-central Wisconsin. In 1973, Sandhill Cranes had been removed from the rare and endangered list, but there were only an estimated 250 pairs in Wisconsin. In 1981, the International Crane Foundation began managing the count, expanding into 34 counties in Wisconsin. When Illinois joined in 1995, five cranes were

counted; however, in 2023, 326 cranes were counted in Illinois at 150 sites in 20 counties. And the count grows every year! To get involved, contact a county coordinator in your area. Don't see one where you live? Start a count yourself and become a county coordinator!



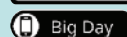
Sandhill Cranes by Chuck Hunnicutt



Blackburnian Warbler by Sue Wagoner

Spring Bird Count/Global Big Day

These are two different counts that often overlap. Both counts include teams of folks who go out and count as many birds as they can on the same day during spring migration. The Spring Bird Count was created in 1959 by Chandler Robbins and began in Illinois in 1972. It was organized and managed by Vern Kleen for 30 years; most recently it has been managed by the Illinois Natural History Survey. County territories are surveyed by members of the Illinois Audubon Society and Illinois Ornithological Society who focus on counting every bird, similar to CBC. Because we have more than 50 years of data, this is second only to the CBC in age and importance for monitoring long-term population trends. Contact your county coordinator to join. It is held every years on the Saturday between May 4th and 10th. The Global Big Day is managed by Cornell Labs using eBird. The Global Big Day is part of World Migratory Bird Day and is always the second Saturday in May. Last year saw 66,675 eBirders count 7,845 species, breaking all previous records for the most birders counting the most species on one day! It is exciting to be part of



such a large effort. Since Spring migration is a great time to go out and count birds, why not participate in both events at the same time!

Bird Conservation Network Monitoring

BCN is a consortium of more than 20 conservation organizations who are making a major impact on bird populations within the Chicagoland Region. With a concerted effort, clear protocols, and a dedication to translating data into best management practices, this monitoring program is the gold standard for pioneering regional bird monitoring. Illinois Audubon Society is excited to be a part of this program, and you can be too. They do ask for a commitment to walk the assigned route at sunrise at least twice in June, with the option to visit at other times. Participants make several five minute point counts, using a unique eBird login so the data is compiled for each point count. Working with public preserve staff and private landowners, the data is then used to make land management decisions. The proof is in the pudding: several species of special concern are showing signs of rebounding within the region. But more monitors are needed! Sign up for training; if you are new to birding, you will be partnered with an experienced birder to learn the skills you need to make an impact.



Ruby-throated Hummingbird by Donna Caplinger

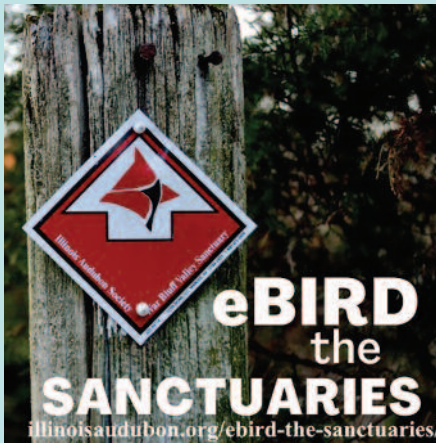
City Birds

The Chicago Bird Migration Monitoring Network is a collaborative effort dedicated to tracking and understanding bird migration across the Chicago Wilderness Region. Using a network of autonomous monitoring devices strategically placed throughout the area, the #citybirds collaborative captures near real-time audio data to monitor the seasonal movements and behaviors of various bird species that vocalize at night. These devices operate only between sunset and sunrise during migration seasons, from March 1st to June 15th and August 1st to



City Birds

November 15th. Community members can become involved by volunteering their property or building rooftops as a site for monitoring units. Volunteers and the public may access this data on chicagobirdmigration.net, where they can unveil what is flying overhead each night and experience the wonder of bird migration along one of our country's busiest migratory routes.



eBird the Sanctuaries

The Illinois Audubon Society owns a dozen sanctuaries; nine of them are currently open to the public. Former IAS Board Member Maury Brucker has raised the challenge to engage the public to eBird all of the sanctuaries once a week so we get a year-round impression of what birds are using these wild places at what times of the year. He has done weekly eBird counts at Chillicothe Bottoms for several years. Our Assistant Director, Matt Hayes, eBirded our Adams Wildlife Sanctuary for 50 weeks last year.



IAS Sanctuaries

All we are asking is that more members make the effort to visit at least five sanctuaries any time during the year to win a medallion and to help IAS collect bird population trends. This data will help us discern if our conservation and restoration efforts are moving in the right direction. How many IAS sanctuaries have you visited?

Cornell Labs Citizen Science: Be Part of Something Bigger

This website lists dozens of bird related citizen science projects that utilize eBird data. Most are coordinated by the staff of Cornell Labs. There are links to the individual pages which then provide the protocols and types of data they are seeking. From once-a-year counts like the Great Backyard Bird Count and FeederWatch, listed above, to more involved nesting surveys, urban bird watching pro-

grams, and opportunities to share photos and recordings to Macaulay Library, there are a myriad of opportunities for you to be a part of something bigger, turning your hobby into scientific research. From beginning birders to the most experienced ornithologists, your contributions can make a difference.



Cornell Labs

This is just an introduction to the world of possibilities! Whether your passion is birdwatching, counting butterflies, or finding the largest trees in each state, there are many more ways to participate in citizen science projects.

Here is a website that lists hundreds of other projects and provides a tool kit for creating your own citizen science program.

Field Scope offers a list with both national and regional citizen science projects.



Citizen Science



Field Scope

Remove this brochure from the center of the magazine and keep it handy as you explore different projects. You could also share it with friends who are interested in ecological field study or a high school science teacher looking to engage their students.