

NEW YORK STATE  
**Conservationist**

for  
**Kids!**



**BIRDS**  
are  
**COOL!**

# Welcome to

NEW YORK STATE

# Conservationist

for Kids!

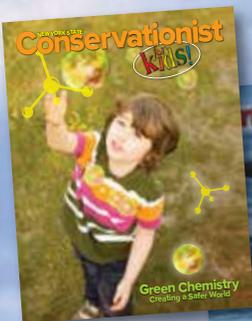
This issue explores the world of birds and introduces readers to ways of learning about and studying birds. It also discusses ways to help birds, no matter where we live.



## Why Birds?



Regardless of whether you live in the city or country, birds are everywhere, and people have studied them for hundreds of years. The study of birds is called ornithology. You will see this word repeated throughout this issue, so it would be good to learn it now! The word comes from ornitho—meaning “bird” (Greek) and –logy, meaning “study of” (Latin). Scientists study birds for many different reasons—to learn more about their diets and migration and to see how climate change affects them, among other things. Birds face many challenges, from habitat loss and pollution to extreme weather and predation. There are lots of opportunities for people to help scientists study birds, and some of those are discussed in this issue.



white-breasted nuthatch



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Featured on the cover is a great horned owl  
by Susan Shafer

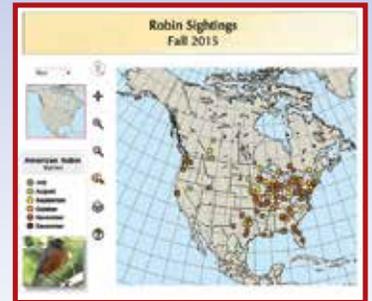
# What makes a bird a bird?

While there are roughly 10,000 species of birds worldwide, they all share some common traits. For example, birds are covered with feathers rather than scales or fur. All birds, even those that are flightless, have wings. The wings of some species are only for display, but most birds use their wings to fly, and some even use them to swim. All birds have only two legs, on which they stand, walk and perch. The bones of birds are mostly hollow and lightweight, making it easier to fly. All birds have beaks or bills (their mouths), and all birds lay hard-shelled eggs.



## Where Do Birds Migrate?

People have always been curious about where birds go when they migrate. Most birds that breed in New York and other northern locations migrate—that is, fly south—for the winter. One of the longest migrations is that of the red knot, a species of shorebird. They breed in the Arctic and fly to South America for the winter! Not all birds migrate, though. Some, such as the black-capped chickadee, northern cardinal, and great horned owl, are year-round residents of our state.



Hey kids, play the Mission Migration game online at [www.audubon.org/mission-migration-game](http://www.audubon.org/mission-migration-game)

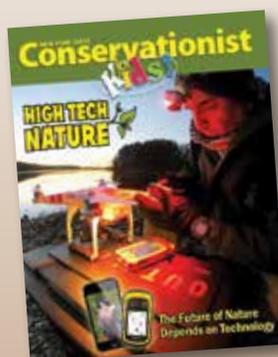
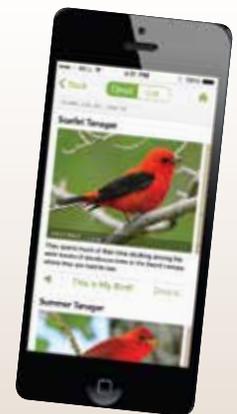
Many bird watchers and other interested people submit their observations of birds to a website called eBird. eBird is a project of the Cornell Lab of Ornithology and the National Audubon Society and is a valuable tool for scientists studying bird populations and migration. Anyone can submit data to eBird by going to <http://ebird.org/>.



U.S. Fish and Wildlife Service / Greg Breese

Another project that people can contribute observations to is Journey North. Through it, wildlife migrations are tracked, as are the changes in seasons. Many different kinds of birds are tracked on the Journey North website, [www.learner.org/jnorth/](http://www.learner.org/jnorth/).

The Cornell Lab also has a program called Merlin, an app that can be downloaded to your phone or used on their website. It's designed to help identify birds that you see, and it can be found at <http://merlin.allaboutbirds.org/>.



You can learn about the technology that scientists use to track birds in "High Tech Nature", the winter 2015 issue of *Conservationist for Kids*. View it on our website at [www.dec.ny.gov/education/100415.html](http://www.dec.ny.gov/education/100415.html) or email us for copies.



dark-eyed junco



northern cardinal



white-throated sparrow



## Some Typical Winter Birds

Lots of different citizen science projects relate to birds, and many can make great classroom projects or can be done at home, with a scout group, et cetera. Some of these are described below.



## Project FeederWatch



courtesy of Celebrate Urban Birds

Project FeederWatch, run by the Cornell Lab of Ornithology, is a winter-long survey of birds that visit feeding stations or bird feeders. Over time, it can provide scientists with information about bird populations and where they can be found during the winter. Project FeederWatch is also used to track changes in locations and even bird diseases. The survey runs from mid-November through mid-April, and there is a small registration fee. Participants receive posters of common feeder birds and information about what to do and how to submit data. It only requires a minimum of two consecutive days of observation/recording per week, although even one day is fine; all data submitted is important! Learn more and register at <http://feederwatch.org>.

## NestWatch



Laurie Dirxx

Another valuable citizen science project also run by the Cornell Lab of Ornithology is called NestWatch. For more than a decade, people have been keeping track of which birds use nest boxes or just nests on their property, and how many chicks leave the nest box or nest. This information helps scientists who study bird populations and has even helped increase the population of certain birds like the eastern bluebird, the state bird of New York! The website for the project, <http://nestwatch.org>, contains information about birds and their nests and a variety of nest box plans that you can download and build for the birds in your area. With your school's permission, bird boxes could be put on school grounds so you and your class can observe them and provide information about the birds using them.

Even though it's winter, it's not too early to start thinking about the nesting season! If you're tracking a bird species on either eBird or Journey North, you'll see that some are beginning to head back north already. You can use that information to help determine when nesting might begin in your area. If you already have nest boxes at home or on your school grounds, now is a good time to clean them out, make any repairs needed and ensure they're ready to welcome the birds when they begin to arrive in the spring.



tree swallow

## Celebrate Urban Birds

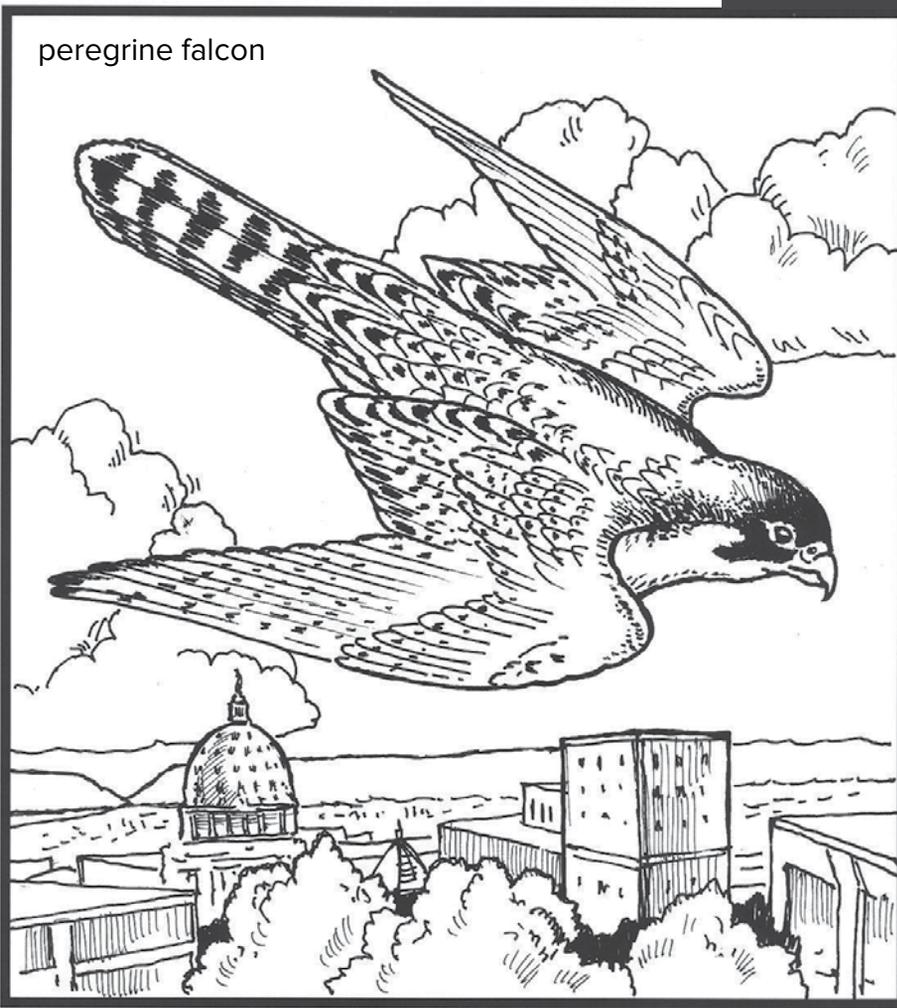
Even if you don't have a lot of bird habitat at your school or where you live, you can still help scientists study birds! The Cornell Lab also runs a program called Celebrate Urban Birds, which focuses on the birds found in cities. This year-round program concentrates on 16 different species, including the American crow, American robin, rock pigeon, European starling, and house sparrow. People observe these species and report what they see. There are also art contests, seasonal challenges, and information about activities like creating bird-friendly gardens. Learn more about this program at <http://celebrateurbanbirds.org>.



red-tailed hawks

Gerrick Johnson

color me!



peregrine falcon



rock pigeons



European starling



house sparrow



Cooper's hawk

# Helping Birds in Other Ways

In addition to the programs and projects already described, there are other things that you can do to help birds! A few of these are explored below.



## Bird-Friendly Buildings

Unfortunately, every year millions of birds die after flying into windows, especially at night, when many birds migrate. To help prevent this, make sure that lights inside buildings are turned off at night. Many birds use the moon and stars to help them navigate in the dark, and building lights can confuse them, causing them to fly into glass. As part of Audubon's Lights Out program, unnecessary lights in buildings are turned off at night, helping to prevent bird collisions. This also helps save energy at the same time. Lots of buildings in New York City participate in this effort, and in April 2015, Governor Cuomo announced that state buildings must turn off unnecessary nighttime lights during peak migration times in the spring and fall.



If you feed birds at home, you may have heard a thud as a bird flew against a window. While these birds are often just stunned and quickly recover, some die from the impact. Birds either don't see the glass and think it's an opening they can fly through, or they see their reflection in the window and try to fight with what they think is an intruder. One way to prevent this is by applying special stickers to your windows, which help birds to avoid them. Learn more by visiting the website of the American Bird Conservancy at <http://abcbirds.org>.



## Keep Cats Indoors

It is estimated that domestic cats kill as many as 1 billion birds each year. Cats are natural predators, no matter how well fed they may be. Some pet cats are allowed to go outside, and feral (wild) cats live outside all the time. Keeping your pet cat inside is an easy way to protect birds. Putting a small bell on your cat's collar can warn birds they're in danger, but the best way to keep birds safe is to confine your cat to the indoors.



## Help Birds on the Beach



piping plover

Be a Good Egg educates people about the importance of sharing the beach with nesting birds. Learn more at [www.goodeggnjny.org](http://www.goodeggnjny.org).

Although it's still winter and it will be many months before beach weather, you can still begin thinking about ways to help birds that nest on the beach. Many types of shorebirds, such as the endangered piping plover, nest on beaches and need help to successfully raise their young. Playing near nesting areas or letting your dog run loose on the beach can frighten birds into abandoning their nests. By avoiding nesting areas and keeping your dog leashed, you'll allow these birds to nest in peace. In New York and New Jersey, there is a program called Be a Good Egg; see the link above to learn more!

Visit the *Conservationist for Kids* webpage at [www.dec.ny.gov/education/40248.html](http://www.dec.ny.gov/education/40248.html) for links to more information about birds and citizen science opportunities.

# The OUTSIDE Page

## EXPLORING YOUR OWN ENVIRONMENT

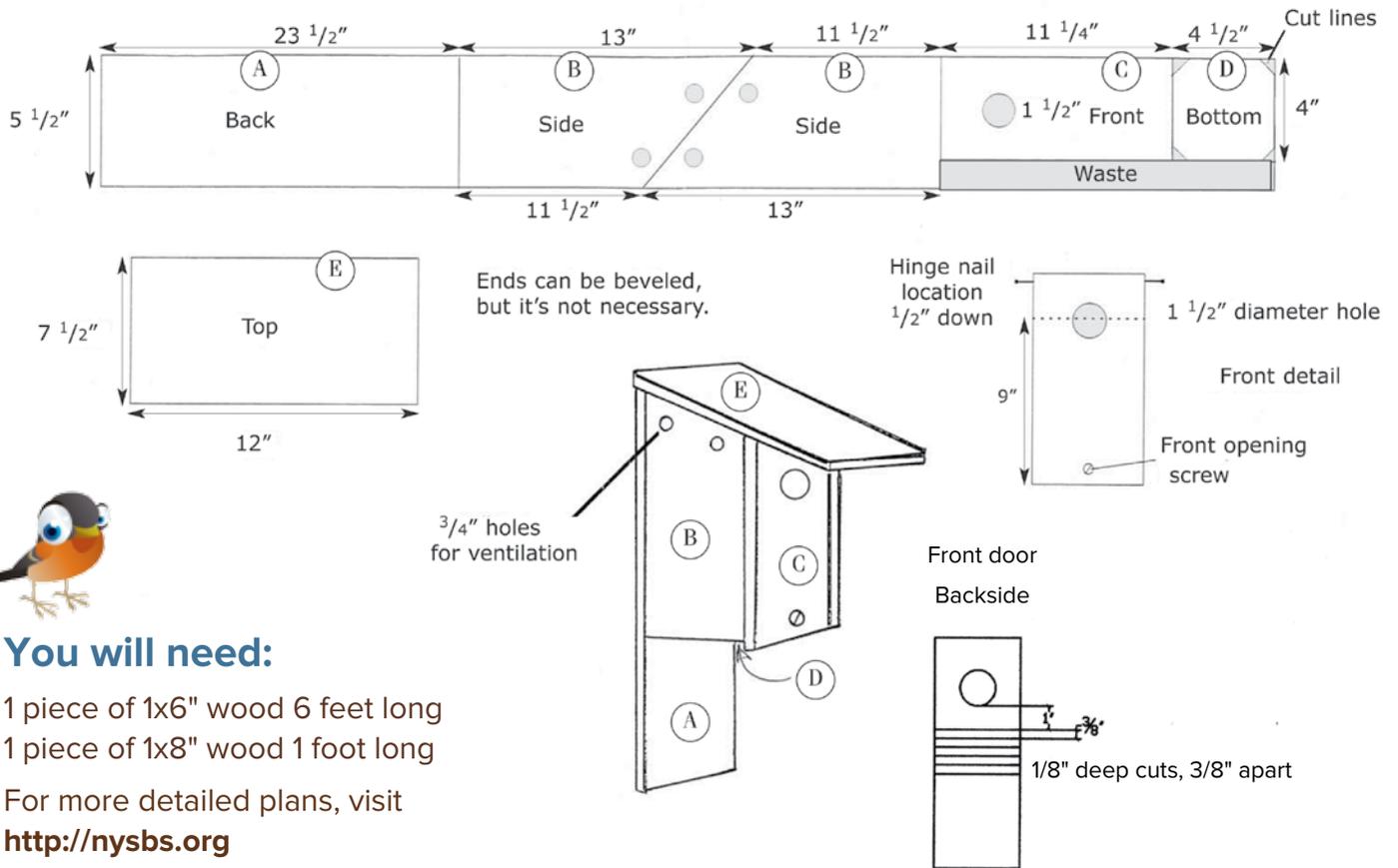


You can do simple things to help birds no matter where you live. If you have a flower garden, make sure you plant native species that offer food and shelter to the birds found in your neighborhood. Adding a small bird bath will make your yard even more bird-friendly.

Providing a home for cavity-nesting birds is another simple thing that can help. Ask your parents or a scout leader to help you build a bluebird nest box by using the plans below. Bluebirds will often nest in boxes near mowed meadows, orchards, cemeteries, and other areas with short grass and sparse tree cover. Nest boxes should be placed on a pole, 4-6 feet off the ground in open areas, away from trees and shrubs.



### Build Your Own Bluebird Nest Box



### You will need:

- 1 piece of 1x6" wood 6 feet long
- 1 piece of 1x8" wood 1 foot long

For more detailed plans, visit <http://nysbs.org>

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### *Conservationist for Kids*

#### Supplement for Classroom Teachers – Birds are Cool!

##### Understanding Birds

For centuries, scientists and everyday people have been very interested in birds and have wanted to learn more about them. From most birds' ability to fly to their laying of eggs, birds have long held our fascination. They can be an important tool in the study of biology, ecology, and climate change, and are also great examples of the vast biodiversity that exists. Approximately 10,000 species of birds exist worldwide, ranging from the ruby-throated hummingbird, which weighs 0.1-0.2 ounces and is only about 3 inches long, to large birds of prey such as the California condor, which weighs 15-25 pounds and has a wingspan of 9 feet. Birds come in many sizes, shapes, and colors, and can be used to discuss evolution and adaptation.

All birds face a variety of challenges, although migratory birds face even more. They rely on suitable habitat and food supplies at both ends of their journey, as well as at resting points along the way. For some species, the migration may be only a few hundred or thousand miles, but, for others, it can be halfway around the globe. Along the way, birds face danger from pollution, collision with buildings, extreme weather, predators, and a host of other threats. Learning more about them and the dangers they face can help both scientists and students get a better understanding of ways to help birds.

As birds are found on every continent and in every habitat type, from the Arctic to Antarctica, they are an excellent indicator of ecosystem health. Changes in reproductive success, population fluctuations, and health can signal problems in the greater environment. Many citizen science projects allow for classroom participation and are also activities that students and their families can do at home. By learning more about their local birds, they help scientists increase their knowledge, which can lead to better management of environmental issues.

##### This Issue's "Outside Page"

The "Outside Page" in this issue of *Conservationist for Kids* encourages students to take action at home to make their local environment better for birds and other wildlife. From planting native species in flower gardens to including a source of water and supplemental food, even the smallest yard can be made more bird friendly. Putting up a bird house is a good way to enhance a yard or park and to study and learn about birds. Plans for building a bluebird nest box are included for students interested in this activity.

##### Teacher Workshops

For teachers who have participated in a **Project WILD** or **Project Learning Tree (PLT)** workshop, the activities listed below complement this issue of *Conservationist for Kids*. Project WILD also offers an entire curriculum about birds called **Flying WILD**. Visit [www.dec.ny.gov/education/1913.html](http://www.dec.ny.gov/education/1913.html) for information about workshops and how to obtain curriculum and activity guides.

**Project WILD:** Everybody Needs a Home  
Birds of Prey  
Owl Pellets  
Adaptation Artistry

**PLT:** Birds and Worms  
Are Vacant Lots Vacant?  
Tropical Treehouse

**Conservationist for Kids and an accompanying teacher supplement are distributed free of charge to public school 4<sup>th</sup>-grade classes in New York State three times per school year (fall, winter and spring).** If you would like to be added to or removed from the distribution list, need to update information, or if you have questions or comments, please e-mail the editor at [KidsConservationist@dec.ny.gov](mailto:KidsConservationist@dec.ny.gov) or call 518-402-8047. Limited quantities of some back issues are also available on request. The full archives can be found online at [www.dec.ny.gov/education/100637.html](http://www.dec.ny.gov/education/100637.html)



Department of  
Environmental  
Conservation

## Supplemental Activities for the Classroom

### Audubon Adventures

*Audubon Adventures* is a program of the National Audubon Society. Geared toward students in grades 3-8, it is designed to introduce them, their classrooms, and their families to the natural world. The lessons are science based and use non-fiction reading and outdoor activities for encouraging students to care for the planet by learning how to help birds and other wildlife. There are currently almost 40 different topics available, covering a wide range of different animals and habitats. To learn more or to purchase classroom activity sets, visit the Audubon Adventures website at [www.audubonadventures.org](http://www.audubonadventures.org).

### For the Birds

Audubon New York's *For the Birds!* is an education program that uses birds to teach students an appreciation of nature and environmental awareness. Although first started in New York City in 1997, the program is now available in other cities around New York State. Programs include 4, 8, or 16-week sessions and are targeted toward students in grades 2-4. Classes are taught by Audubon staff and volunteers and emphasize local birds and habitats. The program includes classroom lessons, outdoor activities, and a class project to benefit their local environment. To learn more or request a program for your classroom, visit <http://ny.audubon.org/education/birds>.

### BirdSleuth

*BirdSleuth*, a program of the Cornell Lab of Ornithology, is an inquiry-based curriculum that engages students in real scientific study and data collection. A series of curriculum plans is available for students in grades K-12. By using citizen-science projects as a basis for many of the lessons, students learn science and also contribute valuable data to scientists who study birds and the environment. Some materials are available as free downloads, and additional curriculum sets can be purchased. To learn more, visit [www.birdsleuth.org](http://www.birdsleuth.org).

### Do you have an interactive white board in your classroom?

If you use a SMART Board or similar interactive white board or projection system in your classroom, consider downloading a PDF of *Conservationist for Kids* and using it along with the printed copies enclosed in this mailing. This issue and *all of our back issues* are available at [www.dec.ny.gov/education/40248.html](http://www.dec.ny.gov/education/40248.html).

### Online Resources

DEC Birds [www.dec.ny.gov/animals/271.html](http://www.dec.ny.gov/animals/271.html)

DEC Biodiversity and Species Conservation [www.dec.ny.gov/animals/279.html](http://www.dec.ny.gov/animals/279.html)

DEC Education [www.dec.ny.gov/26.html](http://www.dec.ny.gov/26.html)

DEC Watchable Wildlife [www.dec.ny.gov/outdoor/55423.html](http://www.dec.ny.gov/outdoor/55423.html)

All About Birds - Cornell Lab's Online Guide to Birds and Birdwatching [www.allaboutbirds.org](http://www.allaboutbirds.org)

American Bird Conservancy [www.abcbirds.org](http://www.abcbirds.org)

American Birding Association <http://aba.org/>

Audubon New York <http://ny.audubon.org/>

Bird Education Network [www.birdeducation.org](http://www.birdeducation.org)

BIRDNET – Ornithological Council [www.nmnh.si.edu/BIRDNET/index.html](http://www.nmnh.si.edu/BIRDNET/index.html)

BirdWatching [www.birdwatchingdaily.com](http://www.birdwatchingdaily.com)

Bird Watcher's Digest [www.birdwatchersdigest.com](http://www.birdwatchersdigest.com)

Cornell Lab of Ornithology [www.birds.cornell.edu](http://www.birds.cornell.edu)

International Migratory Bird Day [www.birdday.org](http://www.birdday.org)

National Audubon Society [www.audubon.org](http://www.audubon.org)

New York State Bluebird Society <http://nysbs.org/>

New York State Ornithological Association <http://nybirds.org/index.html>

New York State Young Birders Club [www.nysyoungbirders.org/](http://www.nysyoungbirders.org/)

North American Bluebird Society [www.nabluebirdsociety.org/](http://www.nabluebirdsociety.org/)

Partners in Flight [www.partnersinflight.org/](http://www.partnersinflight.org/)

Smithsonian Migratory Bird Center <https://nationalzoo.si.edu/scbi/migratorybirds>

U.S. Fish & Wildlife Service Migratory Birds Program [www.fws.gov/birds](http://www.fws.gov/birds)

Wild Birds Unlimited - Educational Resources [www.wbu.com/education/](http://www.wbu.com/education/)

Young Birders Network <http://ebird.org/content/ybn/>