

**New York Breeding Bird Atlas III  
Volunteer Handbook  
2020-2024**



**NY BREEDING BIRD ATLAS III**

**[ebird.org/atlasny](http://ebird.org/atlasny)**

*Revised July 2021*

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## Background and History

Atlas data are proven to be among the most important tools for conservation and land management in New York. Changes in land use, the emerging effects of climate change, expansion of invasive species, and human development of urban and “exurban” habitats in the state continue to have sweeping and often unforeseen effects on our birdlife, other wildlife, and natural resources. The comprehensive data on distribution and abundance of breeding birds generated by this effort will provide critical information to inform a variety of conservation strategies and management actions and help ensure that the richness and diversity of our state’s birds are maintained into the future.

We hope this project will provide an opportunity for the many avid bird enthusiasts in New York to get out in the field, have some fun, make new friends, and learn more about the natural history of birds all the while contributing to ornithological research and conservation in the state. Atlasing is an opportunity to get to know the birds in your backyard intimately. Your skills as a birder will be greatly enhanced, and you will go far beyond just making a list of birds observed, to aspects of exploring and studying bird behavior. Many people across the country have become enthusiastic atlasers. Now it is our chance once again, and there is surely not a more beautiful and interesting state to work in than New York.

### The First Atlas

In the first atlas, over 4,300 volunteers submitted more than 361,595 observations of 242 species and three hybrids. This was the first time a detailed distribution map was available for some species, while it confirmed our understanding for others. Five new breeders were documented: Forster’s Tern, Yellow-throated Warbler, Palm Warbler, Blue Grosbeak, and Boat-tailed Grackle. Ten species known to have previously bred in the state were not confirmed in the first atlas: Lesser Scaup, Golden Eagle, Black Rail, King Rail, Monk Parakeet, Bewick’s Wren, Cape May Warbler, Wilson’s Warbler, Western Meadowlark, and Dickcissel.

*Andrle, R.F., and J.R. Carroll, eds. 1988. The Atlas of Breeding Birds in New York State. Cornell University Press.*

### The Second Atlas

A total of 1,207 individuals submitted data for the second Atlas, resulting in a database of 519,562 records of 248 species and three hybrids. A surprising amount of change took place between the survey periods for the two New York Breeding Bird Atlas projects. A few species were lost (Canvasback and Loggerhead Shrike), a few were gained (Trumpeter Swan, Common Eider, Black Vulture, Merlin, Sandhill Crane, and Wilson’s Phalarope), and the distributions of many changed. The five most frequently reported species were American Robin, Black-capped, Chickadee, Blue Jay, Common Yellowthroat, and Song Sparrow, the same most frequently reported species in the first atlas. Woodland birds experienced the most increases and grassland birds the largest decrease in occurrence. A comparison of the data between the first and second atlas showed that, for the 129 species analyzed, their geographic distribution moved northward on average 3.58 km, a sign that climate change may already be having an impact on New York’s birds.

*McGowan, K. J., and K. Corwin, eds. 2008. The Second Atlas of Breeding Birds in New York State. Cornell University Press.*

### The Third Atlas

The third atlas will take place from 2020 to 2024, 20 years after the last atlas began. The project will involve thousands of volunteers conducting fieldwork statewide. New York is divided into 5,710 blocks, each roughly 9 square miles in area. Within each block, observers will attempt to ascertain the presence,

breeding status, and relative abundance of as many species as possible. Observers will record breeding observations of birds at precise geographical locations and submit their data to eBird in real time. Summaries of incoming data such as effort totals, species lists, and maps will be available online as the project proceeds.

## Project Goals

The purpose of NYBBAIII is to assess the distribution and abundance of the breeding birds of New York State in the period 2020-2025 to allow valid comparisons with prior and future NY BBAs and inform the conservation of birds and their habitats. The steering committee has identified four goals for the third atlas project.

- Update statewide distribution data on NY breeding birds.
- Obtain a metric of abundance for breeding birds.
- Investigate habitat relationships of birds.
- Engage the public.

## Project Administration

### *Steering Committee*

The Atlas Steering Committee consists of representatives of seven organizations. Members and their affiliations are listed below. The committee provides guidance for the Atlas project, produces materials, and manages budget and policy matters. The atlas steering committee is co-chaired by Matt Schlesinger and Kathryn Schneider.

- [New York Natural Heritage Program](#) — Matt Schlesinger, Julie Hart
- [New York State Department of Environmental Conservation](#) — Dan Rosenblatt, Matt Palumbo, Bonnie Parton
- [New York State Ornithological Association](#) — Kathryn Schneider, Joan Collins, Greg Lawrence
- [New York Cooperative Fish and Wildlife Research Unit](#) — Angela Fuller, Kelly Perkins
- [Audubon New York](#) — Mike Burger
- [Cornell Lab of Ornithology](#) — Chris Wood, Ian Davies
- [State University of New York College of Environmental Science and Forestry](#) — Jacqui Frair, Matt Schlesinger, Julie Hart

In addition to the steering committee, there are four subcommittees that focus on important aspects of the project: Design and Analysis, Atlas Methodology, Outreach and Education, and Development.

### *Project Coordinator*

The Project Coordinator is responsible for coordinating the day-to-day activities of the Atlas, providing materials and assistance to the Regional Coordinators, gathering, editing, and analyzing the data, updating the Atlas website, producing reports from the database, and other aspects of Atlas coordination. The Project Coordinator is an employee of SUNY ESF with the New York Natural Heritage Program and is located at the NYS DEC Central Office in Albany, NY.

### *Regional Coordinators*

While the individual Atlas participant is the key to the success of the atlas, Regional Coordinators will play an important role by organizing the efforts of volunteers to achieve adequate coverage of targeted survey blocks. Regional Coordinators recruit and train field workers, monitor their region's coverage, ensure data quality, and answer questions.

## Introduction

### What is Atlasing?

Atlasing is different from normal birding. Instead of trying to find as many species as you can, atlasing requires slowing down to watch the behavior of individual birds. Atlasers search for evidence of breeding throughout the breeding season and note the behaviors they observe for each species. As you atlas, you will start to learn about what particular behaviors indicate, when each species is breeding in your area, and what specific habitat features they use. You'll gain an intimate glimpse into the daily struggles of raising nestlings and be able to regularly check in on how "your" birds are faring.

As you search for breeding birds, you are likely to explore new areas where you would not have considered going birding. Because this is such a large project, the state is broken up into smaller blocks within which you will focus your efforts. Within each block, you will try to survey each of the different habitat types to document as many breeding species as possible. You may find yourself regularly visiting powerline rights-of-way or a small patch of wetland just to find a Field Sparrow or Wood Duck, and in the process stumble upon a Brown Thrasher or Prothonotary Warbler. This is the excitement of atlasing—going to new places, finding unexpected birds, and observing behaviors you have only read about in books. What more can you ask for?

### Ways to Volunteer

Anyone with an interest in birds can contribute records to the atlas (having binoculars also helps). Whether you spend many hours surveying or report just a single nest you discovered in your backyard, your contribution will help to build the New York Breeding Bird Atlas. There are three ways you can contribute breeding bird sightings to the atlas. Whichever approach works best for you, remember to enter your data in the New York Atlas portal on eBird (see Data Entry). You may enjoy atlasing so much that you find yourself using all three approaches!

#### *Sign Up for a Priority Block*

The state is divided into thousands of smaller blocks to make this project more manageable. Of those blocks, we have systematically selected priority blocks in which we want to focus our efforts and get thorough coverage. If you are excited about atlasing a particular area and want to ensure it gets adequate coverage, you can sign up to be the Principal Atlaser for that block. By signing up for a block, you are agreeing to roughly 20 person-hours surveying the block for breeding birds during the year, attempting to confirm breeding for as many species as possible, regularly submitting your data through eBird, and providing additional documentation for rare or priority species. This does not prevent someone else from reporting birds in that block but serves to help us more evenly distribute effort.

We encourage enthusiastic, experienced birders to sign up for multiple blocks (particularly blocks difficult to access) in the same year. If you are a beginning birder and not yet comfortable with your ability to identify birds, consider joining with a more experienced group or partner in the first year to help you gain experience.

To sign up for a block, go to the block sign-up app (follow the links on the website or go directly to: <https://lab.nynhp.org/bba/>). Use the interactive map to see which blocks in your region are targeted for priority surveying, find out which blocks still need a Principal Atlaser, and fill out the block sign-up request form. We only allow one person to sign up as Principal Atlaser and only for priority blocks.

#### *General Atlasing*

You can atlas in any block whether you are the Principal Atlaser or not! You still need to be aware of the block boundaries and submit your data through eBird so that your effort will contribute to completing the

block(s) in which you survey. All the data you submit will show up on eBird and compiled for each block so you can see what other species have been observed in a block, what type of behaviors were observed, and even when and where those observations took place. The Principal Atlaser will monitor the observations submitted and fill in any gaps.

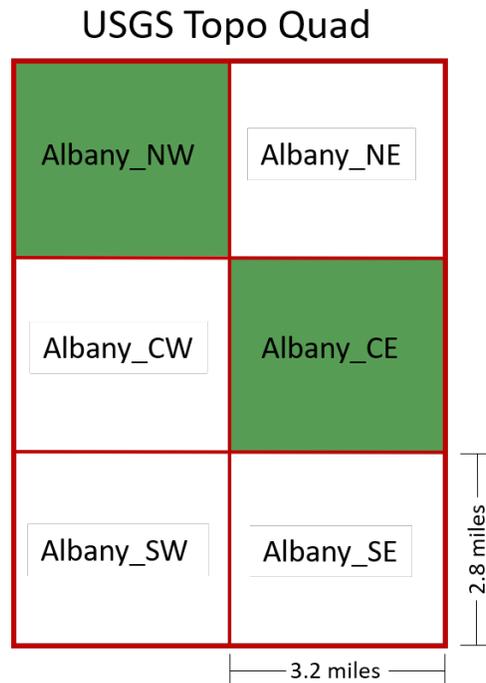
You may also atlas in non-priority blocks. This will most commonly happen if you spend a lot of time in a block, visit a birding hotspot that isn't in a priority block, or know about a rare bird breeding somewhere that you want to document for the atlas.

#### *Incidental Observations*

Incidental observations are those made while doing something other than birding, such as gardening, driving, or hiking. These observations are an especially important source of breeding bird data for habitats or species that may otherwise receive less survey coverage. However, it is very important that all observations be precisely plotted and identified at the block level.

#### Block System

In order to make surveying the entire state of New York more manageable, sampling units called blocks have been established using a grid system based on 7.5-minute (1:24,000) topographic quadrangle maps (quads) prepared by the U.S. Geological Survey. Each of the topo quads that covers the state is further divided into 6 atlas blocks, each roughly 3 x 3 miles and encompassing about 9 square miles (~23 square km). This creates a system of 5,710 blocks statewide. Each block is named based on the topo quad name followed by a 2-letter code denoting the ordinal direction: northwest (NW), northeast (NE), center-west (CW), center-east (CE), southwest (SW), or southeast (SE) (Fig. 1).



*Figure 1. Representation of a topo quad broken into 6 atlas blocks with the priority blocks highlighted in green.*

#### *Priority Blocks*

In past atlases, we surveyed all blocks in the state. However, some blocks received very little effort because they were remote or difficult to access. For the third atlas, we have chosen two blocks from each

topo quad that we want to target with in-depth coverage. This will provide a systematic sample of the entire state and ensure that all blocks receive a minimum amount of effort. Through a detailed modeling effort, we selected the CE and NW blocks from each topo quad as priority blocks. Some CE and NW blocks encompassing large amounts of open water or located largely in a neighboring state are not designated as a priority. The goal of the atlas is to adequately survey all priority blocks.

### *Non-Priority Blocks*

While the importance of completing priority blocks is emphasized, there is no restriction from atlasing in other blocks. In fact, surveys in regular blocks are welcomed, but not at the expense of priority blocks. For example, if your residence or cabin is not in a priority block, you could survey in the nearest priority block as well as in the block that contains your property. Incidental reports from regular blocks can provide important information on rare species and areas that might not otherwise receive coverage. Regular blocks can also be targeted if the priority blocks in your area are completed and your atlasing effort is limited geographically. Overall, we are striving to completely survey all priority blocks and then as many as regular blocks as effort allows.

## Block Maps

Each eBird checklist you submit should only refer to birds you observed in one block. In order to help you know which block you are in while doing field surveys, we provide block maps in several formats.

### *Paper Maps*

Traditional static PDF maps are the simplest to use. We provide two static maps for each block, one with satellite coverage and another with roads and topographic information as backgrounds. These maps provide guidance on land access, habitat diversity, water bodies, topography, and block boundaries. Static maps can be downloaded from the interactive mapping tool used to sign up for blocks (<https://lab.nynhp.org/bba/>). Once you download the maps of interest to you, you can print them or store them on your mobile device for reference in the field. Note that at the bottom of each map there is an active link that takes you to the data already submitted for each block.

### *Digital Maps*

We also provide the block boundaries in digital format for download to your personal device. You can load the kmz files into [Google Earth](#) (a free program) or your favorite GPS app. If you want to make your own map, you can load the shapefile into GIS software ([QuantumGIS](#) is a free, open-source option). The PDF maps are also georeferenced and can be loaded into some GPS applications such as [Avenza](#) so you can see your field location plotted directly on the block map.

## Survey Methods

### Getting Started

Your objective as an Atlas participant is to locate most bird species breeding in a block and confirm breeding for as many of those species as possible. Each species needs to be confirmed only once in a block. For example, one Red-winged Blackbird nest found in a block means Red-winged Blackbird is confirmed for that block for the entire 5-year period of the atlas. However, we strongly encourage you to submit checklists of all birds you observe and note all breeding behaviors every time you are afield; you just won't have to specifically seek out any additional Red-winged Blackbirds.

To get started, we suggest the following:

- Determine a priority block to survey in your area by visiting the [Block Sign-up Tool](#). You may wish to team up with others to survey a block, particularly if you are new to birding or atlasing.
- Obtain all necessary materials from the Atlas website. Familiarize yourself with the handbook, breeding codes, and data forms.
- Familiarize yourself with the birds. Review the expected breeding phenology (when each species breeds) on the [Breeding Guideline Bar Chart](#) and the [Atlas 2000 Breeding Season Table](#). Use the [Explore Regions](#) tool on eBird to review the species that occur in your area. Review bird identification materials including audio of bird songs and calls.
- Obtain a map of the block and study it carefully to familiarize yourself with block boundaries, roads, access points, and major landmarks. These will help you navigate around the block and determine the different types of habitats that need visiting. It is important to survey representatives of each major habitat type present in the block.
- Scout your block before the breeding season starts for most species, if possible. This allows you to assess the landscape and condition of the roads, begin seeking landowner permission, and determine the number and extent of habitat types in the block. It is best to obtain permission to enter private property sometime before the day you actually plan to survey for birds. Place the [Vehicle Sign](#) on your dash while driving slowly or parking in a location where it seems appropriate to identify your vehicle.
- Learn how to enter data in the NY Atlas portal on eBird. See the Data Entry section and our [Quick Start Guide](#) for data entry using the eBird mobile app.
- Finally, with binoculars ready, ears attuned, and field guide nearby, it's time to start observing the birds!

## When to Survey

Surveys for breeding birds can begin as soon as the Great Horned Owls begin courtship in January and continue until September or October when the last young fledge from late nesting species like American Goldfinch. Fortunately, only a very few species nest very early or late in the year. The peak of the breeding season for most species goes from late May to early August.

June is the primary month for building a species list for a block because most birds are on territory and very vocal. July and August are the optimal months for recording birds in the 'Probable' and 'Confirmed' categories (see Breeding Codes). Although most singing activity has decreased, it is a time when noisy fledglings accompany parents or beg for food in a nest, and adults are more likely to be seen carrying food for young. Also, species that produce multiple broods are busy with their second or even third brood.

The best time of the day to plan your visits during summer is from about dawn (5–5:30 am) to mid-morning (9–10 am). The majority of birds are most active and easier to confirm during this period. Crepuscular (active at twilight or just before dawn) and nocturnal (active at night) species will require visits in the early evening, after dark, or at dawn. Wilson's Snipe, American Woodcock, Common Nighthawk, Eastern Whip-poorwill, and owls are most easily recorded at these times.

Fieldwork for a block can be done in one year or spread out over two or more years. Once you have adequately covered your block, please [sign up for another block](#) or ask your Regional Coordinator which priority blocks need more coverage.

### *Nocturnal Surveys*

Enter separate checklists for daytime and nighttime observations. The eBird system marks a checklist as nocturnal if it occurs 40 minutes before sunrise or 20 minutes after sunset. Take extra precautions to ensure your personal safety.

New York is home to crepuscular (active at dawn and/or dusk) and nocturnal species that can be detected if volunteers devote some time to surveying before dawn or after sundown. Species such as Great Horned Owl, Eastern Screech Owl, and Barred Owl may be opportunistically detected during routine daytime atlasing. However, others like Chuck-Will's Widow, Common Nighthawk, Whip-poor-will, and Northern Saw-whet Owl are unlikely to be detected without nighttime effort. Rails and bitterns are easiest to detect right before dawn and after dusk.

Scope out your block for suitable nesting habitats based on the species that are likely to occur in your area and survey at the appropriate time. [Species Survey Strategies](#) will be posted on the atlas website. It is difficult to Confirm breeding for these species, so 'Probable' evidence is sufficient. Do not risk excessive disturbance to 'Confirm' them.

### Where to Survey

It is most useful to split the block into a number of separate areas by habitat type (e.g., a beaver pond, conifer swamp, marsh, or open field; see Fig. 2). Submit an eBird checklist for every visit, starting a new checklist if you enter a new habitat type. There is a balance between the amount of work it requires to keep separate checklists and the value of these checklists, but we suggest you give this a try and before long you will likely find it is second nature to start a new checklist for a new sublocation.

We recommend traveling checklists not exceed 5 miles in length, because the farther the birds were from the point you plotted on the map, the less useful it is. All data will be summarized at the block level but keeping separate lists gives information on habitat associations and provides more precise information for rare species, which is critical information for land managers.

If you visit a popular birding destination or hotspot, you may need to create a personal location to accurately locate your observations. For large hotspots that span several blocks, we suggest making a new location for the portion of the hotspot in each atlas block. This will ensure that the data you submit are assigned to the correct block.

There are few exceptions to plotting your observations as precisely as possible. You might use this option if you were driving by on the highway and saw an Osprey nest and you are confident about the block it was in but not exactly sure where it was within the block. Another situation is where you find a rare species and plotting its exact location would put the bird at risk of disturbance (see Sensitive Species).

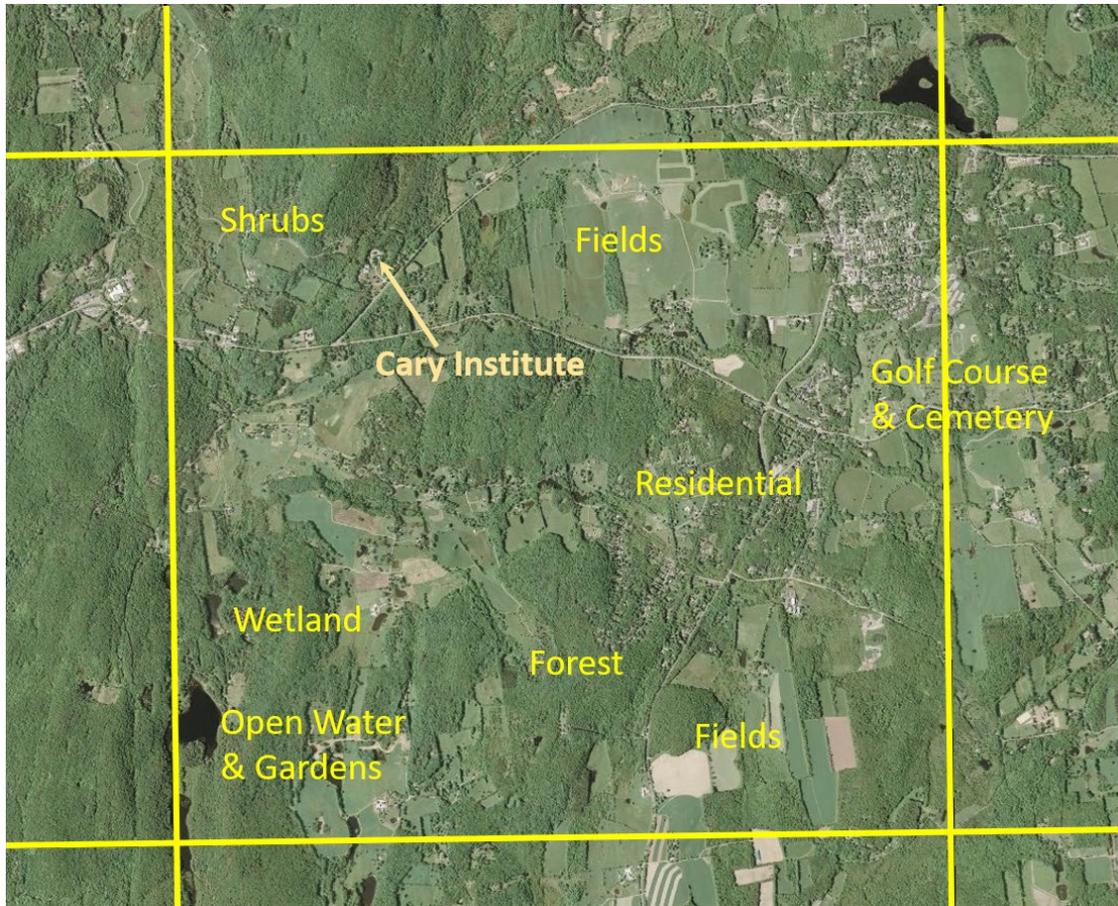


Figure 2. Map of a block in the Hudson Valley that shows some of the major habitat types as well as the Cary Institute preserve. Checklists would ideally be submitted for each different major habitat type every time you visit.

### Land Access

The first place to focus your atlasing efforts should be on public and unrestricted land. However, unique and interesting habitats within a block may exist on private or restricted land. Unless land is clearly public property, ALL land in New York is presumed to be private, whether posted or not, and you *must* have permission to be on it. *It is your responsibility to obtain permission before entering private or restricted property.*

A good time to identify private landowners and secure permission to enter private lands is when you are scouting your Atlas block in the spring and/or fall. Download and print the [landowner introduction letter](#) provided on the website. When you contact landowners and land managers, ensure them that you will not damage habitat or property, will not disturb livestock or wildlife, and will leave the area as you found it. When you are done surveying, we suggest reporting your findings to the landowner using the thank you letter provided.

Use the resources provided on the website to understand property boundaries and landowners. While there is no single statewide map that indicates public access, there are a few tools that will help you determine what lands are public and for which lands you need to request permission.

Don't be shy about asking permission to use a landowner's property. Many folks will be welcoming once they understand the project, and many will be able to offer insight on the features and birds that occur on their property. It is a good opportunity to share your expertise and enthusiasm about birds!

## Breeding Behaviors

Determining which birds are breeding in a region is what separates atlasing from general birding efforts. As mentioned before, your goal in atlasing is to observe and report specific behaviors that provide differing levels of evidence that a species is breeding in a block. Breeding behavior is classified into one of four categories, sorted by the strength of the evidence:

- Confirmed breeding (strongest evidence)
- Probable breeding
- Possible breeding
- Observed (no evidence of breeding)

There are multiple behaviors that fall under each of the four categories. They are described in the Appendix. While atlasing, assign behavioral observations to the appropriate code. Your goal during field work is to confirm breeding for as many species as possible while minimizing disturbance to the birds. It is not necessary to find actual nests; other ‘Confirmed’ codes are easier to document, such as carrying nesting material (CN), carrying food (CF), and recently fledged young (FL).

**Enter breeding behaviors every time you go atlasing. Enter breeding codes whenever you observe breeding behavior.** By reporting the highest code each time you observe breeding behavior, you’re collecting valuable information about not just *where* birds breed, but also *when* birds breed.

The [Breeding Guideline Bar Chart](#) provides information on New York’s breeding species that can be used as a general guide for when species are nesting. Refer to the [Acceptable Codes Chart](#) to help determine if a given breeding code is suitable for the species in question. Not every breeding code can be used for each species. For example, you would not encounter a Canada Goose singing and many species never give a distraction display.

During the first Atlas, several regional coordinators and other knowledgeable birders compiled a list of tips and tricks to help birders find breeding birds in New York. Much of the information in the “Hints on Haunts” still holds true today. You can [read the tips on our blog](#) or [download them](#) from the website.

### *Upgrading Codes*

When atlasing, look not only for new species in your block, but also try to upgrade the breeding evidence for species you have already recorded. Upgrading occurs when a code for a species is entered at a higher level than previously recorded. Upgrading may occur either within a category, such as from P (pair observed) to A (agitated behavior) in the ‘Probable’ category, or from one category to a higher one, such as C (courtship) in the ‘Probable’ category to NB (nest building) in the ‘Confirmed’ category. ***On every checklist you submit, record and enter the highest possible breeding code for each species you observed.***

Overall, try to build a good species list rather than trying to confirm everything. Meaningful distribution maps can still be drawn with high species counts in the ‘Probable’ and even the ‘Possible’ categories. Don’t waste time confirming abundant species when you could be examining additional habitats; you will probably confirm most of the common species without even trying. One exception is for uncommon to rare species—upgrading to ‘Probable’ or ‘Confirmed’ is important and efforts to do so are not only warranted but encouraged. If you don’t think you’ll have time to follow up promptly on a potentially rare breeding record, please contact your Regional Coordinator immediately so they can find someone who can.

The block data on eBird shows the highest breeding code for each species so you aren't expected to keep track of this. However, for blocks you visit regularly, we recommend manually filling out a [Block Summary Card](#) between survey visits to help you keep track of which species you could upgrade on your next trip in the field.

## Estimating Abundance

The primary objective of the Atlas is to collect breeding evidence for each species within a block. However, an estimate of the number of individuals seen will greatly increase the value of the Atlas for conservation planning and future comparisons of population change. Imagine if John James Audubon had noted only "the Passenger Pigeon is present" rather than estimating that in one flock, over 300 million birds flew by him each hour!

Record the total number of birds you saw or heard for each species on all eBird checklists. If you did not record the actual number in the field, it is acceptable to make an educated guess provided it is reasonably close to accurate. Although it's allowable to include an X on your checklist to indicate a species was present, it is highly preferred that you estimate the number of birds seen for each species. The difference between "X Great Blue Herons" and "30 Great Blue Herons" nesting or "X Prothonotary Warblers" and "5 Prothonotary Warblers" singing provides important information about bird distribution, relative abundance, and quality of habitat near your checklist location. The number of birds entered on the checklist should represent the total number of birds seen or heard, NOT a projected estimate of how many may have been present and gone undetected.

## Rare Species

The Atlas provides a great opportunity to learn more about some of the rare, secretive, or high conservation priority bird species in the state. We are preparing [Species Survey Strategies](#) to assist you in looking for some of these species. These documents will provide instructions on what special species you should be searching for based on habitat and region, and the optimal time of year and methods to seek them. You can also consult with your Regional Coordinator or post a question to the [Discussion Forum](#) for guidance on what you should be looking for in your area.

To maintain high data quality and provide useful information for management, there are some species for which we request additional information (see Table 1).

- *Rare breeders* are not necessarily rare in the state, but they don't often breed here. These are mostly species of conservation concern and are tracked by state agencies for conservation planning and management purposes. If you document a rare breeder with a 'Probable' or 'Confirmed' breeding code, we ask that you fill out the New York Natural Heritage Program's [Rare Species Reporting Form](#). You will be asked to report the precise location and to describe the breeding behaviors and habitat. Location coordinates can be obtained in the field (preferable) using a GPS unit or app on your mobile device or at home through an online mapping tool such as Google Maps.
- *Rare species* will be flagged in eBird and you will be prompted to add detailed information on your observation. For these species, we recommend taking a photo and or sound recording, taking notes on the habitat and behavior of the bird, and listing the identification marks you used to identify to species. For some rare species, you should also fill out a [Rare Bird Reporting Form](#) for the New York State Avian Records Committee.

All checklists and rare reporting forms should be submitted in a timely fashion to avoid duplication of effort and so we can schedule follow-up visits to rare breeders if warranted.

SPECIES	REPORT TO		SPECIES	REPORT TO	
	NYNHP	NYSARC		NYNHP	NYSARC
Trumpeter Swan	N	D	Glossy Ibis	N	
Common Eider	N	U	Golden Eagle	N	
Ruddy Duck	N		Mississippi Kite		N
Northern Bobwhite	N		Barn Owl	N	
Gray Partridge		N	Short-eared Owl	N	
Spruce Grouse	N	A	Red-headed Woodpecker	N	
Eurasian Collared-Dove		N	Am. Three-toed Woodpecker	N	N
Common Nighthawk	N		Black-backed Woodpecker		A
Chuck-will's-widow	N	U	Peregrine Falcon	N	
Eastern Whip-poor-will	N		Olive-sided Flycatcher	N	
King Rail	N	N	Loggerhead Shrike	N	N
Clapper Rail	N	U	Canada Jay		A
Black Rail	N	N	Sedge Wren	N	
Sandhill Crane	N		Bicknell's Thrush	N	N
American Oystercatcher		U	Seaside Sparrow	N	U
Piping Plover	U	U	Saltmarsh Sparrow	N	U
Upland Sandpiper	N		Henslow's Sparrow	N	
Wilson's Phalarope	N		Yellow-breasted Chat	N	
Least Tern		U	Rusty Blackbird	N	
Gull-billed Tern		U	Boat-tailed Grackle		U
Caspian Tern	N		Golden-winged Warbler	N	
Black Tern	N		Prothonotary Warbler	N	
Roseate Tern		U	Tennessee Warbler	N	
Common Tern	U		Kentucky Warbler	N	
Black Skimmer		U	Cape May Warbler	N	
Least Bittern	N		Cerulean Warbler	N	
Snowy Egret	U		Bay-breasted Warbler	N	
Tricolored Heron		U	Summer Tanager		U
Cattle Egret	N		Blue Grosbeak		U
Yellow-cr. Night-Heron	U				

Table 1. List of rare breeding species that should be documented with a rare species reporting form. Report observations in the noted regions: N-Anywhere in the state; U-Upstate only; D-Downstate; A-Outside the Adirondacks.

### Sensitive Species

Some species are particularly sensitive to disturbance at the nest site and attract disproportionate attention from birders, photographers, and the public. We have made sure that records of the most sensitive species will be hidden from public output on eBird. These species and the time of year they are hidden are as follows:

- Spruce Grouse (year-round)
- Black Rail (year-round)
- King Rail (May 15–Aug 15)

- Northern Goshawk (Mar 15–Aug 15)
- Barn Owl (year-round)
- Long-eared Owl (Mar 1–Aug 15)
- Short-eared Owl (Apr 15–Jul 15)
- Golden Eagle (Apr 15–Sep 15)
- Loggerhead Shrike (Apr 15–Aug 1)

If you are concerned about a specific bird or nest and the species is not listed above, there are additional actions you can take. You can choose to [hide your checklist](#) from the public. This hides your checklist from the public *and* from the atlas, so we request that you unhide the checklist after the birds have left the area. Other options are to provide a vague geographic location (that you should later update) and delaying the reporting of your observation. Advanced users can also make their checklists harder to find by changing their data privacy settings to hide their checklists from recent visits, eBird alerts, and top 100 lists.

### Determining Adequate Block Coverage

At some point, you will stop finding new species in your block and it will become challenging to find additional breeding evidence. It is at this point that you should stop surveying in that block and switch to another one. Although the variability of atlas blocks makes it difficult to come up with rules that work in every situation, the following guidelines suggest when a block is complete. When you feel you've achieved the below Block Guidelines in a block for the 5-year atlas period, please let us know and we'll evaluate the block for completion. Blocks will be flagged as complete in eBird when they reach these guidelines.

#### *Block Guidelines*

- Visited at 3+ times of year (e.g., April, June, July)
- All accessible habitat types in a block are visited
- 20+ hours of daytime birding
- 2+ hours of nocturnal birding
- 55-95+ species reported (highly variable throughout the state)
- 50% of reported species marked as 'Confirmed'

Note that these metrics apply to the cumulative effort of yourself and others in a block. A running total of species and effort within your block can be found on the eBird portal.

#### *Details on Block Guidelines*

*Visited at 3+ times of year* – Aim to survey each block at different times of the breeding season (e.g., April, June, July) to capture species that breed at different times of the year. While most birds in New York breed in June and July, some groups of birds breed earlier (e.g., owls, nightjars, resident birds) and others later (e.g., waxwings and goldfinches).

*All accessible habitat types in a block are visited* – All of the major habitat types in a block should be visited to ensure that we record the full diversity of species breeding per block. Major habitat types include deciduous, coniferous, and mixed forests; shrubland and early successional habitat; grassland; wetlands; coastal beaches; and montane areas. If a significant habitat type does not lie on public land, please use the [landowner letters](#) to request access. Access will be denied in some areas, but we do ask for a concerted effort to gain permission. You can also ask your regional coordinator for assistance in gaining access.

*20 hours of daytime birding*— Studies based on other atlas projects indicate that 20 hours is the average time it takes to adequately survey a block. Some of the factors that influence how long it will take to finish a block are observer skill, access, and habitat diversity. Experienced birders are able to identify species by ear and are familiar with the local habitat requirements of species so it may take them less time on average to atlas a block. If the land is difficult to access, either with little public land or few roads and trails, it will take longer to atlas the block. Some blocks contain fairly uniform habitat and it will take longer to increase the species count.

*2 hours of nocturnal birding* – Nocturnal surveys are important to capture crepuscular and nocturnal species like nightjars, owls, and rails. eBird defines a nocturnal checklist as starting more than 20 minutes after sunset and ending 40 minutes before sunrise. We recommend making at least two nocturnal visits per block, once in March or April to capture owls and again in May or June for nightjars and rails.

*55-95+ species reported* – The number of species breeding in a block is highly variable depending on geographic location and local habitat diversity. Areas like Long Island and the Adirondacks support fewer species than central New York. To gauge how many species you should target in your block, use the [atlas effort map](#) on eBird to see how many species have been documented in neighboring blocks. You can also refer to the [second atlas results](#) to see how many species were reported in the same general area.

*50% of reported species marked as ‘Confirmed’* – At least half of the species reported in a block should be documented with a ‘Confirmed’ breeding code. Refer to the breeding code section of this handbook for a list of ‘Confirmed’ codes. To determine how many species have been reported as ‘Confirmed,’ go to the atlas effort map, click on your block, and follow the “View all block data” link. Alternatively, from the PDF of the block map, click on the link just above the map. The top of the detailed block data page shows the total number of species reported according to three breeding categories: ‘Possible,’ ‘Probable,’ or ‘Confirmed.’ Divide the ‘Total’ by 2 to determine how many species should be ‘Confirmed’ and compare the result to the ‘Confirmed’ count.

## Data Entry – Using the Atlas Portal

All atlas data should be submitted through eBird using the “NY Breeding Bird Atlas” portal. As a general rule, **use the atlas portal at all times during the next 5 years when you are following block boundaries on your checklists, and when you are keeping an eye out for breeding behaviors and reporting them.**

All the data you enter will be in your single eBird account, but when you enter data on the atlas portal you are indicating that you are familiar with the atlas protocols and know where the block boundaries are. This is important for ensuring the quality of the data we collect. See the [tutorials](#) on the website for how to get starting using eBird.

### *Mobile App*

If you use the mobile app and enter your data while you are in the field (recommended), you will need to change the portal in the app settings. To find the settings on Android, go to the Menu icon (three stacked, horizontal lines) on the app home page and then go to “Settings.” On iOS, use the More icon (three dots) and then go to “Settings and Account.” Find the portal section and use the drop down list to select “New York Bird Atlas.” We recommend defaulting to the atlas portal for the entire project period. If you submit a checklist to the wrong portal, you can change the portal on the website by going to your checklist and then under the “Checklist tools” use the “Change portal” option.

## *Website*

If you prefer to use the website to enter data, there is a [field checklist](#) you can print and fill out in the field. When you get home, enter data at [ebird.org/atlasny](http://ebird.org/atlasny).

## Additional Information

### Atlas Ethics

Birdwatching is a growing hobby and with the increase in birders comes an increase in the potential for disturbing birds, habitats, and people. In addition to the following guidelines, the American Birding Association's [Code of Birding Ethics](#) and [Audubon's Guide to Ethical Bird Photography](#) also provide guidance for birders.

#### *Respect for Birds*

Birds are living creatures that deserve our respect. Be considerate of the needs of nesting birds. The survival of nestlings is paramount.

- Be quiet and unobtrusive. Try to observe the birds so they are unaware of your presence and behave normally. Avoid quick movements, unnecessary noise, running, continuous chasing of the same individual, throwing things, tree-whacking for cavity nesters, excessive “pishing,” etc. Ideally, the birds should behave normally and not be aware of your presence during the observation periods. The quiet observer sees more!
- Approaching a nest too closely or repeatedly flushing adults during certain stages of the nesting cycle may cause nest abandonment. Visiting a nest site may attract predators (avoid leaving a single, dead-end scent trail to a nest). Do not handle the young or eggs. Remember, a single criterion from the ‘Confirmed’ category is sufficient evidence to note a ‘Confirmed’ record. In most cases, breeding can be confirmed without approaching a nest by observing from a distance. If the adult birds are agitated or do not return within 10 minutes, you may be too close and should move farther away from the nest.
- Audio playback can be useful for detecting birds but may also have negative effects on birds by causing them to expend energy defending their territory against a phantom intruder. Because we are seeking breeding birds during the time of year when they are defending their territory and tending to their mate or young, playback has the potential to be more disruptive than for migrant or wintering birds. Audio playback can be detrimental to the health and breeding productivity of birds. Therefore, we do not condone playback for most general atlasing purposes and playback is strongly discouraged for any non-scientific use.
- Use discretion in divulging information on threatened and endangered species. Use the Hide function in eBird for any species that may be highly sought-after and sensitive to disturbance. The Atlas will not publish exact locations for these species.

#### *Respect for Habitat*

Damage to a habitat affects all species in the ecosystem. Keep disturbance to a minimum.

- Do not disturb vegetation near a nest and avoid trampling sensitive habitats.
- Carry out your litter. If possible, also carry out litter left by others.
- Keep motor vehicles on established roads and parking areas. One set of tracks invites others.

#### *Respect for People*

Remember that much Atlas fieldwork will be conducted on private property, so it is necessary to exhibit certain courtesies.

- Always obtain permission to enter private lands.
- Do not block rights-of-way and always leave gates as you found them.
- When birding near a private residence, be considerate of your host's time, property, and privacy.
- Behave in a manner that reflects favorably on the organizations that you represent.
- Respond to questions about your activities with courtesy and respect.

### Field Safety

Please be safe when in the field; your safety is more important than a bird survey. Atlasing is not a particularly dangerous activity, but any time you are out in the field it pays to be alert, be prepared, and use common sense. See the NYS DEC [Hike Smart NY](#) guidelines for tips.

### Volunteer Hours

Your in-kind contributions to the atlas allow us to receive matching grant money. We will be asking volunteers to submit a record of the amount of time and mileage they spend while atlasing. Please stay tuned for more details.

In addition, your time and effort on the Atlas may be tax-deductible depending on your tax situation.

### Support the Atlas

You can support New York Breeding Bird Atlas III in other important ways.

- Make a direct contribution through our [online donation button](#) (managed by NYSOA).
- Purchase merchandise from our [online store](#). We receive a 5% royalty on all purchases. Then advertise your support by showing off your new gear!

## Appendix 1. Breeding Codes

Record breeding behaviors in the block where you see them every time you see them even when you have already recorded breeding for that species. Record behaviors year-round when they are observed, such as singing, even if you know the bird doesn't breed there. This will help us understand breeding phenology and how birds use the landscape throughout their life cycle. **If you are in doubt about what breeding code to use, use the most conservative code applicable and add comments.** Don't forget to add possible codes for birds in the right habitat and singing birds, and be sure to include observations of starlings and House Sparrows! Don't overthink it, just do your best and use common sense.

### Observed

**No code, checklist in atlas portal:** Species present but without evidence of breeding and outside of suitable nesting habitat. No code is required. Any bird you enter on your checklists in the atlas portal without a breeding code are automatically 'Observed.'

- Shorebirds that normally breed in the arctic.
- Herons or egrets (colonially nesting species) observed away from a nesting colony (does not include Green Heron and bitterns).
- Gulls frequenting dumps, plowed fields, lawns, etc., throughout the summer.
- A Marsh Wren singing from a dry grassy field.

**F – Flyover:** Birds flying high overhead or in direct flight. This is a behavior code that doesn't indicate breeding, therefore it is in the 'Observed' category. Tree Swallows foraging for insects are not considered a flyover because they are not in direct flight. Please see [the eBird help pages](#) for more detail.

- Turkey Vulture soaring high overhead.
- Great Blue Heron flying above treeline.

### Possible

**H – In Appropriate Habitat:** Adult in suitable nesting habitat during its breeding season. Note that this code has both a habitat and breeding season component, which can be very different for residents vs migrants.

- Virginia Rail observed stalking in a marsh.
- Scarlet Tanager feeding in a deciduous forest.
- Bobolink observed once in an abandoned field.
- Loons, cormorants, or ducks in adult plumage summering on a lake with suitable breeding habitat, but no courtship display or young observed.
- Green Heron or bitterns (non-colonial nesting species) observed in appropriate nesting habitat.
- A Mourning Dove at a backyard feeder with suitable nesting trees nearby.
- A Black-capped Chickadee giving the *chick-a-dee-dee* call.

**S – Singing Bird:** Singing bird giving vocalizations that are used in a mating context, including counter-singing. This code is also used for non-songbirds giving their primary vocalization, such as woodpecker drumming, owl calls, rail vocalizations, and woodcock peenting. Birds that do not have a specific vocalization for breeding, such as jays and crows, should not be coded with S. If in doubt, refer to the Acceptable Codes Chart. In some species, both males and females sing (e.g., Northern Cardinal, Bicknell's Thrush). If a bird is heard singing at the same place on a second trip during the breeding season, it may qualify as S7.

- Rails heard in a marsh early in the breeding season but not relocated on subsequent visits.
- Second-year male American Redstart singing an abnormal song in a hedgerow in early June.

- Woodpeckers drumming. Woodpecker drumming is analogous to singing. Note: It takes a considerable amount of experience to reliably identify woodpeckers by their drumming.
- An Eastern Screech-owl calling from your backyard.

## Probable

**S7 – Singing Bird Present 7+ Days:** Singing bird present at same location on at least two occasions 7 or more days apart. Do not use if you observed the species singing a week earlier elsewhere in your block. This behavior presumes a permanent territory. Observations must be made within the same breeding season; observations from different years do not apply.

- A Pine Warbler singing from the same group of pines two Saturdays in a row.
- A Barred Owl calling for over a week from the same patch of forest.

**M – Multiple (7+) Singing Birds:** Multiple (7 or more) singing or territorial birds of a species detected within a block within a single breeding season. If you are submitting separate checklists for different locations and habitats in your block (recommended) and you don't have all 7 birds on a single checklist, use this code on the checklist where you reach a total of 7 birds and make a note in the comment field that you are including birds from other checklists in the block.

- Rose-breasted Grosbeaks heard in 7 different forest patches in a block throughout June and July.
- 8 Song Sparrows observed in a block in one day.

**P – Pair in Suitable Habitat:** Pair observed in suitable nesting habitat. Only use this code when you are fairly certain that a mated pair of birds has been observed. Look for behavioral cues to determine if you have a male-female pair, particularly in species where males and females look the same.

- Male and female Scarlet Tanagers observed together several times in the same area but no nest is found.
- Two Mourning Doves sitting next to each other on a branch, cooing, and preening each other.

**T – Territorial Defense:** Permanent territory presumed through defense of breeding territory by fighting or chasing. This code is generally used for individuals of the same species, but it can also be used for an interaction between members of different species when it appears to be territorial defense. Also see “A – Agitated Behavior.” Because territoriality involves the defense of a fixed area, it may be useful to map locations of individuals to determine if they are defending the same general area when surveying the block on future visits.

- A Field Sparrow chasing another Field Sparrow in a grassy field.
- Two American Robins fighting in your backyard.
- A Swamp Sparrow chasing a Marsh Wren.

**C – Courtship, Display, or Copulation:** Courtship behavior or copulation between a male and female. Courtship behavior includes transfer of food, displays, and grooming between a pair of birds.

- American Woodcock or Wilson's Snipe display flights.
- Ruffed Grouse drumming or Spruce Grouse performing flutter-jumps.
- Common Nighthawk booming.

**N – Visiting Probable Nest Site:** Repeated visits to a probable nest site. This is especially useful for cavity nesters or for a shrub-nesting species that flies into the same thicket and disappears on several occasions.

- A male Northern Cardinal flies into a dense shrub and doesn't come out for several minutes.
- A Boreal Chickadee entering a tree cavity and not coming out for some time.

**A – Agitated Behavior:** Agitated behavior or anxiety calls from adults indicating a nest site or young in the vicinity. This code refers to a stronger reaction to intruders than those exhibited by “T – Territorial Defense,” usually against other species, brood parasites, nest predators, and humans. Do not use this code for agitation induced by “pishing” or playing recordings. This code also excludes mobbing behavior that species engage in year-round (e.g., mobbing an owl).

- A House Wren begins chattering loudly from a bush as you walk by.
- Common Yellowthroat scolding a Brown-headed Cowbird.
- A mixed flock of birds mobbing a Blue Jay during the breeding season.
- Red-winged Blackbird or Eastern Kingbird attacking a Great Blue Heron.
- A Northern Goshawk or Common Tern dive bombing you.

**B – Woodpecker/Wren Nest Building:** Nest-building by wrens or excavation of cavities by woodpeckers. This includes carrying nesting material by wrens and woodpeckers. Wrens may build “dummy” nests before the female selects a nest. Woodpeckers often drill holes for roosting.

- Male House Wren stuffing a nest box with sticks.
- Hairy Woodpeckers building a cavity in April.

### Confirmed

**PE – Physiological Evidence:** Physiological evidence of breeding based on a bird in the hand. This code is used primarily by bird banders and includes evidence such as a highly vascularized swollen incubation (brood) patch, cloacal protuberance, or an egg in the oviduct.

**CN – Carrying Nesting Material:** Adult carrying nesting material to an unseen nest, such as sticks, grass, mud, and cobwebs. For raptors, be sure the material is not simply incidental to prey capture/transport. For wrens, use B.

- Vesper Sparrow flying with a bill full of grass.
- Northern Parula collecting lichen and then flying away with it.
- Barn Swallow collecting mud and then flying off toward a barn.

**NB – Nest Building** (not wrens or woodpeckers): Nest-building observed at the actual nest site, excluding wrens and woodpeckers.

- Canada Goose moving reeds around and adding mud to build up its nest.
- Warbling Vireo weaving cobwebs into its nest.

**DD – Distraction Display:** Distraction displays and injury feigning in attempt to draw intruder away from nest or young.

- Killdeer doing broken-wing distraction display but no young seen.
- Ovenbird running about with wings fluttering.
- Ruffed Grouse using a broken-wing display to protect her brood.

**UN – Used Nest:** Used nest found, but no adult birds seen nearby. Use *only if the nest was used during the Atlas period* and you are *certain* of the species. Add comments detailing how you identified the nest. Do not collect the nest, but do take a photograph if possible. Enter ‘0’ if no individuals of that species are observed during your visit.

- A large ground nest in the woods with several large Wild Turkey eggs in it.
- Baltimore Oriole nest with no activity but the nest is still in good shape.

**ON – Occupied Nest:** Occupied nest indicated by adult sitting in nest in incubating position, adult entering nest site and remaining, or exchange of incubation duties by the pair. This code is useful for nests

high in trees, on cliffs, and in chimneys where the contents of the nest and incubating or brooding adult cannot be seen.

- Wood Thrush seen on nest for an extended period of time but nest too high to see contents.
- Chimney Swift seen flying into a chimney and doesn't leave for a long time.

**FL – Recently Fledged & Precocial Young:** Recently fledged or downy young still dependent upon adults and presumed incapable of extended flights from nest site. Look for retained downy feathers, a yellow gape, a short tail (shorter than the wings), clumsy flight and landings, and a bird incapable of feeding itself. Beware of family groups late in the breeding season which may still be interacting but are far from the breeding location. Young cowbirds begging for food confirm both the cowbird and the host species. If you find a dead fledgling and don't see an adult of the same species, use a count of '0' and enter the FL code.

- A stubby-tailed juvenile cardinal incapable of sustained flight.
- Common Loon chicks riding on the back of an adult.
- Young Common Tern chicks at the nesting site and incapable of flight.

**CF – Carrying Food:** Adult carrying food for young or incubating partner. One of the best signs to look for is the repeated carrying of food in the same direction.

- A Hermit Thrush with a bill stuffed full of insects.
- Yellow Warbler carrying a fat green caterpillar.

**FY – Feeding Young:** Adult bird feeding young that have left the nest. Use the NY code for nestlings being fed by an adult. If a bird is feeding a young cowbird, record FY for both species.

- Eastern Bluebird feeding a begging juvenile in a tree near probable nest site.
- A Black-capped Chickadee feeding chicks in a hemlock tree.

**FS – Carrying Fecal Sac:** Adult carrying fecal sac or egg shell fragments. Many passerine adults keep their nests clean by carrying membranous, white fecal sacs and broken eggshells away from the nest. Note that only songbirds and woodpeckers produce fecal sacs and this code should only be applied to these groups of species.

- Common Grackle flying out of a shrub with a white fecal sac.
- Carolina Wren carrying an eggshell out of its nest.

**NE – Nest with Eggs:** Nest with eggs. Be careful not to disturb the vicinity of the nest. Confirm the species by waiting at a distance until adult returns. If no birds are seen, use the UN code. If a cowbird egg is found in the nest, use code NE for both the cowbird and the host species; if no individual cowbirds were seen that day, then enter a "0" in the Brown-headed Cowbird number field during data entry.

- American Robin nest with blue eggs in the low branches of an apple tree.
- Northern Cardinal nest with blotchy eggs in the bushes outside your home.

**NY – Nest with Young:** Nest with young seen or heard. Keep your distance so nestlings are not prematurely flushed from the nest. Include the nestlings in your species count. Presence of cowbird young confirms both the cowbird and the host species.

- Eastern Phoebe or House Finch nestlings under the eaves of a house.
- Young Osprey calling from a nest platform.