

New York Breeding Bird Atlas III

Breeding Codes with Examples

Revised January 2020



Every time you're out birding, you're observing bird behavior. It could be a song, some territorial squabble, or even a bird building a nest. Matching bird behaviors to specific codes is all you have to do to atlas!

Breeding behaviors are divided into four categories of breeding evidence: Observed, Possible, Probable, and Confirmed. The behavior codes below are listed from low to high. Every time you are out atlasing, enter the highest breeding code observed for each species and be sure to submit your checklist in the atlas portal.

Additional materials are provided on the atlas website (ebird.org/atlasny) to help you determine when a species is likely to be breeding and which codes are appropriate to use for each species. If you are in doubt about which code to use, please describe the behavior(s) you observed in the comments field for that species in your eBird checklist. You may also wish to contact your regional coordinator or pose the question on the [Atlas Facebook Discussion Group](#).

— 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 present in suitable nesting habitat. This code is also used for non-songbirds giving their primary vocalization, such as woodpecker drumming, owl calls, rail vocalizations, and woodcock peenting. 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 Male Present 7+ Days: Singing male 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. This code should only be used if the initial observation was made after migration ceased. 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 Males: 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. While this is generally used for individuals of the same species, an interaction between members of different species may fall under this code 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 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. 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. This code should not be used for corvids, raptors, terns, and other species that regularly carry food for courtship, caching, or other purposes. 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. This code should not be used for species that may move many miles from the nest site, such as raptors and terns. Use the NY code for nestlings being fed by an adult.

- 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.