Maine Breeding Bird Atlas

Atlasing Crepuscular and Nocturnal Birds in Your Block

March 2019, version 2.1

A Project of the Maine Department of Inland Fisheries and Wildlife

Every evening, as the sun sets and the moon rises, the cast of active birds shifts. As diurnal (daytime) birds such as woodpeckers, waterfowl, shorebirds, hawks, eagles, and most songbirds go silent and settle in for the night, crepuscular (twilight) and nocturnal (nighttime) birds such as nightjars, owls, and handful of others emerge. While you are likely to spend the majority of your time collecting breeding bird observations in your block during the day, we encourage you to go out and collect observations during these time periods as well. These special surveys will help fill an important information gap in our atlas efforts. It is just as important to document where birds are as it is to document where birds are not - so all surveys are very helpful, even if you don't find any crepuscular or nocturnal species

When to survey:

Crepuscular: Survey anytime during the twilight hours from 45 minutes before to 45 minutes after sunset. Birds to look and listen for during this window include Common Nighthawk, Common Loon (in blocks near lakes), Chimney Swifts, American Woodcock, Wilson's Snipe, and thrushes such as Veery, Swainson's Thrush, Hermit Thrush, Wood Thrush, and American Robin (see species accounts at the end of this document for more information).

Nocturnal: Survey anytime after dark from 45 minutes after sunset to approximately 45 minutes before sunrise. Birds to listen for during this window include owls such as the Great Horned Owl, Barred Owl, Northern Saw-whet Owl, night-herons such as the Black-crowned Night-heron and the Yellow-crowned Night-heron, Northern Mockingbirds in suburban areas, and under specific lunar conditions, the Eastern Whip-poor-will (see species accounts at the end of this document for more information). Timing your surveys to detect the Eastern Whip-poor-will requires a little extra planning since they sing only on moonlit nights and otherwise tend to remain quiet.

What to listen for:

While it is more challenging to see birds during dusk and at night, it is a great time to listen for them. Species such as the Barred Owl and Eastern Whip-poor-will give very distinct vocalizations: "Who-cooks-for-you? Who cooks for you all?" and a repeated "whip-poor-will" respectively. Other species can be identified by non-vocal sounds. These include the twitter aerial display of the American Woodcock, the "winnowing" of the Wilson's Snipe, and the "boom" of the Common Nighthawk. A list of crepuscular and nocturnal species with descriptions, safe dates, and likely breeding codes can be found following these instructions.

To detect these species, particularly the nocturnal species, you will need to become familiar with their sounds and calls. Luckily there are many online resources that can help you quickly learn the sounds that each species makes. The website of the Maine Nightjar and Crepuscular Bird Monitoring Project (https://www.mainenightjar.com/) has information on many species you are likely to encounter. Dendroica (https://www.natureinstruct.org/dendroica/) is another great resource where you can look up any species and hear a variety of the sounds that they make.

How to survey:

There are two levels of participation for volunteers to collect breeding observations of crepuscular and nocturnal bird observations based upon your level of interest.

Option 1: Conduct crepuscular and nocturnal observations on your own property. You can listen for owls, nightjars, thrushes, and more all from the comfort of your porch swing or lawn chair. Ideally you would spend at least 10 minutes listening for birds during twilight and 10 minutes listening at night. However, how long you spend looking and listening for these fascinating birds is up to you!

Option 2: Explore lots of different habitat types (forests, wetlands, grasslands, and cultivated land) within your block while conducting your crepuscular and nocturnal observations. Aim to visit at least 4 different locations within your block, spending at least 10 minutes listening for birds. Be mindful not to enter private property without prior permission and make sure that you are visible when near the road (have headlamp and/or a reflective vest). Be sure you stay near your vehicle and do not wander into any areas you are unfamiliar with.

Breeding Bird Behaviors:
Observing breeding behaviors can be a challenge when making observations during the evening and nighttime hours. You should make sure that you read the Maine Bird Atlas Volunteer Handbook befor venturing out. During the crepuscular and nocturnal surveys, in many cases the highest breeding evidence that will be observed will fall under the "Possible" breeding category. These behaviors include "Singing birds" (code **S**) or "In Appropriate Habitat" (code **H**). You can elevate the level of confidence that these birds are breeding in your block by revisiting the site 7+ days later. If you still hear the same species singing (code **S7**), this indicates that birds are "Probable" breeders in your block.

Other behaviors such as the non-vocal sounds described under "What to listen for" are courtship displays. These are considered indicators that these birds are "Probable" breeders in your block. In rare instances, you may be lucky enough to witness breeding behaviors higher on the list. We do not recommend seeking out these birds or their nests.

Please do not use playback to stimulate birds to vocalize. The use of playback can have a disruptive effect on nesting birds if used improperly. Playing recorded vocalizations can cause birds to expend energy, become stressed, and become distracted from their usual activities (foraging, nest building, care of young, etc.). It is for these reasons that we ask that volunteers strictly adhere to the project protocol outlined in this document. We ask that you please do not use playback to stimulate birds to vocalize and instead rely on detecting birds that are naturally visible and/or vocalizing.

Submitting Bird Records:
Refer to the Maine Breeding Bird Atlas Volunteer Handbook for a detailed description of the options for submitting your bird records to the Maine Bird Atlas through eBird or on paper forms. On some of your nocturnal surveys, you will likely not detect any species. It is very important that you still send us this information since knowing where species are not found is just as important as knowing where they are found. If you are submitting your bird records directly into the Maine Bird Atlas eBird portal, you can simply submit a checklist without any species noted in your list. If you have any questions about any of this, please contact the Maine Bird Atlas Coordinator (mainebirdatlas@gmail.com).

Resources:
For more information on crepuscular and nocturnal birds, as well as examples of their vocalizations, visit: https://www.mainenightjar.com

For more information about the Maine Bird Atlas (project of the Maine Department of Inland Fisheries and Wildlife, visit: http://www.maine.gov/birdatlas

If you have questions or comments, contact: Glen Mittelhauser, Maine Bird Atlas Project Coordinator, Maine Natural History Observatory, 317 Guzzle Road, Gouldsboro, ME 04607 (207)963-2012 - mainebirdatlas@gmail.com

Maine's Crepuscular and Nocturnal Bird Species

Nightjars:


Photo John Winze

Eastern Whip-poor-will: The Eastern Whip-poor-will is a cryptically plumbed nightjar that is active during the twilight hours and on moonlit nights. By day, these birds remain stationary and blend into day roosts on the forest floor or perched on a tree limb. Males sing an onomatopoeic song to defend territories and attract mates. They typically lay two eggs directly on the leaf litter. Once the first eggs hatch and young start to mature, females depart to start a second nest while the male continues the care of the first brood. Adult males will employ a hovering, tail-flashing display when another male enters his territory or when an intruder approaches the nest site. Both males and females will perform wing-dragging distraction displays to lead off predators. Visit portions of your block with good potential habitat. Foraging habitat consists of low-elevation open areas (forest openings, agricultural areas, blueberry barrens, dirt roads, etc.) on the margins of dry and open forests, particularly those in riparian areas with sandy soils. Pine-oak forest, pine barrens, pine-hemlock-hardwood forest all serve as suitable nesting and roosting habitat for this species in Maine. Visits should be conducted after the moon has risen and is unobscured by clouds. There are three windows to seek out and listen for these birds during 2019 (based on the lunar cycle): May 15st to May 26th, June 10th to June 25th, and July 9th to 10th.

Safe Dates: May 25th to July 25th (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: Hearing vocalizations of birds is the most likely encounter with this species during the breeding season. All potential Eastern Whip-poor-will breeding records should be carefully documented. If you hear one singing within the safe dates, use code **S**. The simplest way to upgrade this to a "Probable Breeder" is to listen again at the same location 7 or more days later to upgrade the code to **S7**.


Photo Mary Alice Tartler

Chuck-will's-widow: Chuck-will's-widow are not known to breed in New England, though they have been very rarely reported in Maine during the breeding season. These large, cryptic nightjars have similar habits to the Eastern Whip-poor-will (it also has an onomatopoeic song sung on moonlit nights) and thus can be found under similar conditions. These birds are also known to call at dusk and generally inhabit more open habitat than the Eastern Whip-poor-will. They are more tolerant of development and are associated with agricultural and even suburban areas so long as subtle roosting and nesting habitat (oak, pine, and mixed forest) is sufficient. Eggs are laid on the ground typically under dense cover. Chuck-will's-widows are aggressive during the nesting phase and will pursue nest site predators or gape its large mouth while hissing.

Safe Dates: June 5th to July 25th (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: Hearing vocalizations of this bird is the most likely encounter with this species during the breeding season. All potential Chuck-will's-widow breeding records should be carefully documented. If you hear one singing within the safe dates, use code **S**. The simplest way to upgrade this to a "Probable Breeder" is to listen again at the same location 7 or more days later to upgrade the code to **S7**.


Photo David S. Hall

Common Nighthawk: Although somewhat similar in appearance to the Eastern Whip-poor-will, the Common Nighthawk has very different habits. This bird is much more likely to be found just before or after sunset. Breeding males perform an aerial display which produces a non-vocal sound referred to as a "boom" as part of courtship and territory establishment. These birds can be easily identified by their white wing patches as they pursue insects on the wing, often giving a "peent" call throughout. They are associated with a range of habitats including sand dunes, logged forests, grasslands, and even urban areas. Eggs are laid on the ground in open areas and can be found on gravel, leaf litter, bare rock, and cinder substrates. The mostly white eggs depend on the cryptic plumage of the incubating female to avoid predation. When the eggs or young are threatened, females will feign injury to draw potential predators away. Males sometimes defend the nest site with hissing and wing beating.

Safe Dates: June 5th to July 25th (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: If you hear the vocal "peent" or "beret" call while the birds are in flight within the safe dates, use code **S** and upgrade to **S7** if heard at the same location 7 or more days later. For wing-boom sounds by the male, use code **C** as this is associated with an aerial display.

Owls:


Photo Raul F.

Eastern Screech Owl: This owl is rather easy to identify by call and can be found in a variety of habitats and suburban habitats. In Maine, the species has been documented breeding only along the southwestern coast. They get more vocal as spring approaches and typically vocalize throughout the night. Males perform a monotonic trill to court females and maintain their pair bond. Both males and females may screech or bark when defending their nest site against potential predators. Screech-owls nest in tree cavities in deciduous or mixed woods and occasionally nests in bird boxes. The species can tolerate and may actually prefer breeding in or on the edge of lightly developed areas with less than 10% forest cover. They usually avoid areas with Barred Owls present. Availability of suitable cavities of sufficient depth away from other large owls may be the limiting factors in Maine.

Safe Dates: March 1st to July 1st (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: For observations of a silent Screech-owl within the safe dates and in appropriate breeding habitat, use code **H**. If you hear the monotonic thrilling song of Eastern Screech-owl within the safe dates, use code **S**. The simplest way to upgrade this to a "Probable Breeder" is to listen again at the same location 7 or more days later to upgrade the code to **S7**. As they mature, young birds will leave the nest cavity and climb nearby branches or trees. They remain in the care of their parents for 8-10 weeks. For any observations of recently fledged young not yet capable of flight, use code **FL**. If there is evidence of young in the nesting cavity, use code **NY**, but note that we strongly discourage closely approaching or disturbing nesting birds.


Photo David S. Hall

Great Horned Owl: Great Horned Owl nests can be found in a wide variety of habitats throughout the state, although they are typically found in coniferous forested areas. They typically nest using the old nests of other birds, but may use tree cavities, cliffs, abandoned buildings, and man-made nest platforms. Nocturnal surveys could be conducted as soon as mid- to late-January as territorial hooting typically ends when the first eggs are laid, perhaps by mid-February. Most calls are heard less than 1 hour after sunset (loud, deep hooting, "Who's awake? Me too!"). Some research suggests more calling occurs on clear, moonlit nights. During the breeding period, males usually roost and hoot in the vicinity of the nest. Females may respond or the pair hoot-duets.

Safe Dates: January 25th to August 1st (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: For observations of a silent Great Horned Owl within the safe dates and in appropriate breeding habitat, use code **H**. If you hear the hooting call of the Great Horned Owl within the safe dates, use code **S**. The simplest way to upgrade this to a "Probable Breeder" is to listen again at the same location 7 or more days later to upgrade the code to **S7**. If you hear a pair in winter or spring singing a duet of alternating calls, use code **P**. At six weeks of age, young owls will leave the nest cavity and climb nearby branches or trees. They remain in the care of their parents until late summer or early fall. For observations of these recently fledged young not yet capable of strong flight, or if you hear the begging call of juveniles, use code **FL**. If you find an active nest or nesting cavity, use code **ON**. If there is evidence of young in a nest or nesting cavity, use code **NY**, but note that we strongly discourage closely approaching or disturbing nesting birds.


Photo David S. Hall

Barred Owl: Barred Owls are a widespread owl species that can be found in Maine's forests, swamps, and riparian areas. They are territorial throughout the year and are vocal year-round. During February and March, calls ("Who-cooks-for-you? Who-cooks-for-you-all?") are most frequent with birds being more vocal between 6 and 8 PM. During the breeding period, males usually roost and hoot in the vicinity of the nest. Females may respond or the pair may sing strange sounding duets referred to as caterwauling. Barred Owls are cavity nesters and will nest in naturally formed nest cavities or in man-made nest boxes. Females are responsible for all incubating and brooding while males are responsible for hunting and providing food. After hatching, young remain in the nest until around 5 weeks old before moving to a nearby branch. They remain nearby under the care of their parents until Fall.

Safe Dates: March 15th to July 25th (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: For observations of a silent Barred Owl within the safe dates and in appropriate breeding habitat, use code **H**. If you hear one performing "who-cooks-for-you?" calls within the safe dates, use code **S**. The simplest way to upgrade this to a "Probable Breeder" is to listen again at the same location 7 or more days later to upgrade the code to **S7**. If you hear a pair in winter or spring singing a duet of alternating calls, use code **P**. For observations of recently fledged young perched near the nest site, use code **FL**. If there is evidence of young Barred Owls in the nesting cavity, use code **NY**, but note that we strongly discourage closely approaching or disturbing nesting birds.


Photo Travis Bonovsky

Long-eared Owl: While the breeding range of the Long-eared Owl encompasses the entire state, there have been few Maine summer records, and these have been primarily in the north and east. This is likely largely due to Long-eared Owls being secretive and rarely observed, not vocalizing often, and using a variety of habitats. Northward migration is usually finished by late April and southward migration beginning by late September. However, male breeding calls peak in February and March, with sporadic calling into June. Males perform a wing-clap display as part of courtship which also may be heard during the early part of breeding season. Males occasionally hoot (a monotone "hoo") during the day when nests are approached too closely. Usually found in areas with a mix of forested and open habitats, with nesting and roosting in dense vegetation and hunting in adjacent open habitats. Long-eared Owl nests are typically constructed in abandoned nests of other birds including crows, ravens, and hawks.

Safe Dates: April 20th to July 25th (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: Because of this species' elusive nature, all potential breeding records should be carefully documented. The most likely breeding code for this species is **FL** for observations of recently fledged young not yet capable of strong flight. Young bird will stand on the edge of their nest for several days before moving into nearby branches.


Photo Tom Koerner

Short-eared Owl: The Short-eared Owl is Maine's only ground-nesting owl and is a very rare breeding bird in the northern portions of the state. These owls are usually active day and night and can often be observed from late afternoon to dusk. Unlike most of Maine's owls, Short-eared Owls are more often seen than heard. Their sounds and vocalizations include "hoo"s, barks, hisses, and bill snaps. Individuals are most active at dusk and dawn. The best way to try to observe this species is to scan for foraging owls in large grasslands or marshes during twilight. During the early breeding season, males perform aerial displays to court females. Nests are constructed from grasses and feathers on knolls, ridges, and hummocks in grasslands and grain stubble fields. Adults will occasionally feign injury to draw potential predators away from the nest.

Safe Dates: May 1st to August 1st (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: Short-eared Owls nests later than the other owl species and should not be coded before May in most cases. All potential breeding records should be carefully documented. The most likely breeding code for this species is **FL** for observations of recently fledged young not yet capable of strong flight. These young birds leave the nest from 2 to 3 weeks after hatching, but remain on the ground nearby under the care of their parents another few weeks.


Photo Dale Matthies

Northern Saw-whet Owl: The Northern Saw-whet Owl is a widespread owl species found in Maine's mixed and conifer forests. The edges of swamps and riparian zones along rivers and streams are particularly suitable for these owls. They are vocal in the spring, calling throughout the night, and peaking about 2 hours after sunset. These monotonous series of whistles which can be heard over great distances are used to advertise territories and court mates. Northern Saw-whet Owls are cavity nesters and nest within woodpecker excavations or man-made nest boxes. Fledged young typically stay in the vicinity of the nest and are fed by the male (and occasionally the female) for at least 1 month.

Safe Dates: April 1st to August 1st (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: Northern Saw-whet Owls can occasionally be found by day roosting in small conifers. For observations of these silent Saw-whet Owls within the safe dates and in appropriate breeding habitat, use code **H**. If you hear one singing its monotonous whistled song within the safe dates, use code **S**. The simplest way to upgrade this to a "Probable Breeder" is to listen again at the same location 7 or more days later to upgrade the code to **S7**. If there is evidence of young owls in the nesting cavity, use code **NY**, but note that we strongly discourage closely approaching or disturbing nesting birds.

Shorebirds:


Photo Dave Ellis

American Woodcock: Calling an American Woodcock a "shorebird" is perhaps a little misleading. Although this bird is related to others that do inhabit coastal areas, the American Woodcock is an inland bird which often inhabits young forests and abandoned fields. During the breeding season, male woodcocks perform courtship displays, which involve the birds spiraling up into the sky before a rapid, circling descent back to the very field from which they flew. This display produces a chirping, non-vocal sound referred to as "twittering". On the ground, the woodcock gives a "peent" call similar to the Common Nighthawk, though of a more nasally quality. This call and display can be heard both after sunset and sometimes into the night. American Woodcock nests are typically constructed on the ground in young, mixed woodlands composed of as birch, aspen, and spruce. Incubating females are well-camouflaged to blend into the leaf litter, as are recently hatched young. Young woodcocks are initially fed by the female parent, but quickly begin probing the ground for food on their own. These young birds become independent around 35-40 days after hatching.

Safe Dates: April 15th to July 25th (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: If you hear an American Woodcock give its "peent" call within the safe dates, use code **S**. The simplest way to upgrade this to a "Probable Breeder" is to listen again at the same location 7 or more days later to upgrade the code to **S7**. If you see or hear the twittering flight courtship display performed by the male, use code **C**. Males performing courtship displays from singing grounds can be fairly close together. If 7 or more calling American Woodcocks are heard in these scenarios, use code **M**. Young American Woodcocks leave the nest and beginning probing for food on their own within just a few days of hatching. If you encounter young woodcocks foraging in your block, as long as they are not capable of strong flight, you can use code **FL**.


Photo Amber Hart

Wilson's Snipe: Another inland shorebird, the Wilson's Snipe is more likely to be found near water than the woodcock. These birds inhabit bogs, swamps, fens, and the marshy edges of lakes and rivers. Like the woodcock, this bird also performs a flight display which produces a non-vocal sound. The bird flies up into the air and then rapidly descends while fanning its tail feathers. This produces a haunting, tremulous sound referred to as "winnowing". The function of these winnowing flights is to defend territories and threaten competitors. During courtship, both males and females give a "tsch" call. Prior to copulation, a chicken-like series of clucks is given. Nests are constructed by the female and consist of a shallow scrape in the mud lined with woven grasses. Nests are typically well-hidden by vegetation on the boundary of a wetland area. As eggs hatch and young develop, the male leaves with the first two chicks while the female cares for those remaining. A week after hatching, young birds are led to foraging areas by their parents where they are initially feed and begin probing on their own.

Safe Dates: May 15th to July 25th (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: If you hear a nonvocal winnow, this is used for territory advertisement and you can use code **S**. The simplest way to upgrade this to a "Probable Breeder" is to listen for winnowing again at the same location 7 or more days later to upgrade the code to **S7**. If the courting call performed by male and female snipe or pre-copulation clucking is heard, use code **C**. Wilson's Snipe young leave the nest and begin foraging soon after hatching. Within 6 weeks, young snipe will gather into loose foraging groups. If you observe any of these recently fledged young, as long as they are not capable of strong flight, you can use code **FL**.

Other Crepuscular/Nocturnal Birds:

This compilation of other birds you may encounter during these crepuscular and nocturnal surveys is by no means a complete list. Note that many of these birds are also frequently active during the day.


Photo Logan Parker

Veery: The Veery is associated with young, damp forests, particularly those near streams or swamps. At dusk, this bird sings an ethereal song rendered "de-vee-ur, vee-ur, veer, veer". The Veery's call is a highly variable "veer". Females construct their cupped nests on the ground or low in small trees such as red maple or alder. While females alone incubate eggs and brood their young, both parents are involved in feeding their young. Veery gather a wide variety of insect prey including caterpillars, grubs, and flies and eventually dragonflies and butterflies. When the nest is threatened, adults will often emit a high distress call ("seer") and will attack threats to the nest if they persist. The brood is split up with both parents assuming sole responsibility for some of the young birds. About 3 weeks after leaving the nest, young become independent.

Safe Dates: June 1st to August 1st (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: If you hear a Veery singing their ethereal songs within the safe dates, use code **S**. The simplest way to upgrade this to a "Probable Breeder" is to listen for singing again at the same location 7 or more days later to upgrade the code to **S7**. For silently perched or calling ("veer") Veery, use code **H**. If you observe agitated behavior such as adults giving the "seer" distress call, use code **A**. If a pair are observed together and are interacting, use code **P**. If 7 or more singing birds are observed within your block, use code **M**. Look for females collecting wet leaves for nest building (code **NB**). For birds observed carrying food (variety of insects including butterflies and dragonflies), use code **CF**. Veery remind in the care of their parents for 3 weeks after leaving the nest and may be observed foraging together. If recently fledged young are observed and are not capable of strong flight, use code **FL**.


Photo Sue Bishop

Swainson's Thrush: The Swainson's Thrush is a songbird often associated with spruce-fir forests and can be found in the northern half of the state. This thrush has a buffy face with a spectacled appearance due to a distinct eye-ring. It is overall gray-brown with a white belly and brown spots on its throat and chest. This bird sings its ethereal, uprising song throughout the early morning and evening. Females construct a nest of plant materials in the forests understory within dense thickets of deciduous shrubs or conifer saplings. Females are the sole incubators and are highly cautious when approaching the nest to avoid detection. Males sing near the nest site during incubation and delivers food to the incubating female. Once hatched, young are fed regurgitated insects by both parents. Young remain in the nest for approximately 2 weeks before departing with their parents.

Safe Dates: June 15th to July 25th (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: The secretive nature of the Swainson's Thrush and concealment of their nest site means these behaviors are only observed occasionally. If you hear a bird singing their uprising, ethereal song within the safe dates, use code **S**. The simplest way to upgrade this to a "Probable Breeder" is to listen for singing again at the same location 7 or more days later to upgrade the code to **S7**. For silently perched or calling ("peep") birds, use code **H** if within the safe dates. If a bird is observed carrying nest building materials (grasses, plant stems, rootlets, mosses, and pieces of bark), use code **CN**. If an incubating female is found on a nest, use code **ON**. If a Swainson's Thrush nest with young is observed, code use **NY**, but note that we strongly discourage closely approaching or disturbing nesting birds.

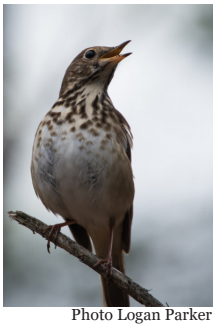
Photo Logan Parker

Hermit Thrush: The Hermit Thrush is a widespread songbird which inhabits a wide array of forests types including coniferous, hardwood, and mixtures. Its plumage is a duller brown than other native thrushes aside from its chestnut-colored rump and tail. At dawn and dusk, males sing a two-part song that has been described as both haunting and ethereal, rendered "oh, holy holy, -ah, purity purity, -ehh sweetly sweetly". The Hermit Thrush typically starts singing 30 minutes before sunrise and stops singing about 30 minutes after sunset. Males arrive to the nesting grounds before females and defend territories with vocalizations and communicative displays. Their bulky nests are constructed either on the ground or in a small tree or shrub and are difficult to find. Materials used in the nest include grasses, mosses, twigs, mud, animal hair, rootlets, and pine needles. Adults coax their young out of the nest approximately 12 days after hatching.

Safe Dates: May 20th to August 1st (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: If you hear a Hermit Thrush singing its ethereal song within the safe dates, use code **S**. The simplest way to upgrade this to a "Probable Breeder" is to listen for singing again at the same location 7 or more days later to upgrade the code to **S7**. For silently perched or calling (a rapidly repeated "chuck") bird, use code **H**. When agitated at the nest, Hermit Thrush call (a high-pitched "eeee") and use communicative displays such as crest raising and even strikes to ward off threats (code **A**). Males defend territories through hostile behavior such as wing-flicking, gaping, and chasing (code **T**). Hermit Thrush territories can be fairly close together, however. Although nests are often well-concealed, there are many observations which can be used to confirm breeding. If an incubating female is found sitting on a nest, use code **ON**, but note that we strongly discourage closely approaching or disturbing nesting birds. If birds are observed carrying food (grasshoppers, beetles, spiders, moths), use code **CF**. Young Hermit Thrush leave the nest under their parent's care about 12 days after hatching. If recently fledged young are observed and are incapable of strong flight, use code **FL**.


Photo Logan Parker

Wood Thrush: The Wood Thrush is the thrush species most associated with Maine's deciduous forests. It prefers shady deciduous and mixed forests with a shrubby understory, moist soil, and dense leaf litter. It is a rich, red-brown above and has a plump, white belly covered with bold, dark spots. Like its fellow thrushes, this bird sings an ethereal song in the early mornings around dawn and in the evening around sunset. Its song has been described as flutelike and variable with 2 to 10 notes. Males arrive before females to establish and defend territories through vigorous singing and displays such as wing-flicking and crest raising. In rare occasions, territorial defense may include physical contact between males. Nests are constructed low in trees or shrubs by the female with occasional support from the male. Agitated birds will give a "pit-pit-pit" if you wander too near their nesting site. Nestlings are fed insects and fruits by the male and occasionally the female. Young birds continue to be cared for by both parents after leaving the nest until the female leaves to initiate a second brood after about two weeks. Wood Thrush are highly vulnerable to Brown-headed Cowbird parasitism.

Safe Dates: June 1st to August 1st (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: If you hear a Wood Thrush singing its ethereal song within the safe dates, use code **S**. The simplest way to upgrade this to a "Probable Breeder" is to listen for singing again at the same location 7 or more days later to upgrade the code to **S7**. For silently perched or calling (a repeated "bup-bup") Wood Thrush, use code **H**. If you observe agitated behavior such as crest-raising or agitated calling ("pit-pit-pit"), use code **A**. If a pair are observed together and interacting prior to nesting, use code **P**. For birds observed carrying food (fruit or soft-bodies insects), use code **CF**. If a nest with young is observed or heard (young give a flat "chip" call), code use **NY**, but note that we strongly discourage closely approaching or disturbing nesting birds.

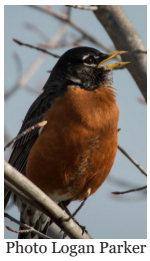
Photo Logan Parker

American Robin: The American Robin is the most widely distributed thrush in North America and likely the most recognizable. These dark-mantled, red-breasted birds are just as likely to be found in cities and suburbs as they are to be found in forests. Like other thrushes, the American Robin sings a loud complex song. Males sing from tree tops, roofs, powerlines, and other high vantages immediately in the mornings and before and after sunset. Robin calls are a distinctive "wick-wick-wick". Females are responsible for nest building and must wait until mud (a key feature in the robin's nest) is available. The location where the nest is constructed is highly variable, but tends to be in places that often both structural support and cover from the elements. The female is solely responsible for incubating the eggs and receives little to no support from her mate. This means the nest is left unguarded for short periods when the female is foraging for food. Both parents typically feed the hatched young, however. Nestlings are offered soft-bodied insects, worms, and fruits. After approximately 2 weeks, nestlings will fledge and remain under the care of their parents for another 3 weeks. In some cases, the adults will start a second brood. In such cases, the male will continue to rear the first brood while the female starts incubating the second.

Safe Dates: May 10th to August 1st (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: If you hear an American Robin singing ("cheerily, cheer up, cheer up, cheerily, cheer up") within the safe dates, use code **S**. The simplest way to upgrade this to a "Probable Breeder" is to listen for singing again at the same location 7 or more days later to upgrade the code to **S7**. For silently perched or calling (a repeated "wick-wick-wick") birds, use code **H**. When agitated, adults will give chuck or chirp calls (code **A**) and will even attack potential threats (code **T**). If you observe an bird visiting a potential nest site, use code **N**. If an nest with young is observed or heard, code use **NY**, but note that we strongly discourage closely approaching or disturbing nesting birds. For birds observed with bills full of food items to feed to their young, use code **CF**. Recently fledged young remain in the care of their parents for several weeks after leaving the nest. If recently fledged young are observed that are incapable of strong flight, use code **FL**.

Ovenbird:


Photo Logan Parker

The Ovenbird is one of the most recognizable songbirds of Maine's forest due in large part to its loud, emphatic song – "teacher, teacher, teacher!". In contrast to its vociferous singing, this warbler is a secretive ground-nesting songbird whose domed nest is well-camouflaged within the leaf litter of deciduous forests. Although Ovenbirds sing their familiar refrain during the mornings and evenings, these birds perform a second song (known as the "flight song") as part of courtship during the twilight hours and at night. The flight song is highly variable, but typically begins with a few soft chip notes given from the perched male. This is followed by a rambling song (which may include a "teacher" phrase) given as the bird ascends into the air to hover and perform a courtship display. The nests of the Ovenbird are typically constructed in areas with deep leaf litter well away from forest edges. Nests are an oven-like dome constructed by the female from leaves, plant stems, bark, and animal hair (for lining). Female Ovenbirds incubate the eggs and brood recently hatched young while the male guards the nesting territory and gives alarm calls if a potential predator approaches. Both parents feed their young (primarily caterpillars and ground beetles) and approach/depart the nest on foot to avoid detection.

Safe Dates: May 25th to August 1st (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: Although there are many behaviors and vocalizations to look and listen for when observing Ovenbird during the daylight hours, listening for the flight song is the most likely evidence of breeding that will be heard during your crepuscular/nocturnal efforts. Ovenbird flight songs are given as part of a courtship display (code **C**). If the typical Ovenbird song ("teacher, teacher, teacher!") is heard during a survey, use code **S** and upgrade to **S7** if heard in the same block 7 or more days later.

Common Loon: For observers near lakes, evening and nighttime choruses may include the haunting vocalizations of the Common Loon. These loons breed on lakes with clear water, abundant fish, and lots of small islands (which often serve as nesting sites). Common Loons are capable of a number of vocalizations including wails, yodels, and tremolos. Pairs will often sing duets comprised of all these vocalization types just after sunset and sometimes into the night. Birds are highly territorial in the early weeks of the breeding season during which territorial vocalizations (yodeling) and fighting between individuals may be observed. Pairs of loons can be observed foraging together by day prior to incubation. Both pair members assist in the creation of their nest sites constructed at the water's edge and both members incubate eggs once laid. Chicks leave the nest with their parents within 24 hours of hatching and are initially completely dependent on their parents for food (such as crayfish and small fish). Young loon chicks may be carried on the back of their parent.


Photo Logan Parker

Safe Dates: May 15th to July 20th (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: If you hear Common Loon wails or tremolos within the safe dates, use code **S** and upgrade to **S7** if heard at the same location 7 or more days later. For a silent bird on a potential breeding lake, a loon may be considered in appropriate breeding habitat (**H**) if within the safe dates. Nest sites may be obscured by vegetation and difficult to see. In such cases when a loon is observed visiting a probable nest site, you can use code **N**. Common Loons may be observed courting, displaying, or copulating on open water (code **C**). If territorial defense (which may consist of yodeling vocalization and physical altercations) is observed, use code **T**. Once hatched, chicks are always in the presence of their parents and can be highly visible (code **FL**). When a chick is discovered, behaviors such as feeding young (code **FY**) can often be observed.

Black-crowned Night-heron: Observers along the Maine coast may encounter the reclusive Black-crowned Night-heron. This heron species is most active during the evening and night (hence the name). They inhabit swamps, marshes, and the edges of rivers, streams, lakes, and lagoons with fresh, salt, or brackish waters during the breeding season. Nest sites are selected by males and are typically constructed by the pair in a small tree over water. These birds give guttural, bark-like "Quock" calls while perched or in flight. Pairs have a distinct vocalization when a partner returns to the nest with food ("Woc-a-woc, woc, woc, wock-a-woc"), however, vocalizations are only rarely heard. Both parents incubate the eggs and feed their young upon hatching. Young beg for food with a distinct and persistent "Yak! Yak! Yak!" vocalization.

Photo Logan Parker

Safe Dates: May 1st to August 1st (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: The secretive and nocturnal nature of this species means breeding behaviors are only rarely observed. Consequently, all potential breeding records should be carefully documented. Should a colony site be located, observers may see pairs working to construct their nests (code **NB**). Visiting the colonies later in the season increases the chances of observing incubating adults on nests (code **ON**) or nests with young (code **NY**), but note that we strongly discourage closely approaching or disturbing nesting birds.

Yellow-crowned Night-heron: The breeding range of the Yellow-crowned Night-heron ends well south of Maine. Nonetheless, this species has been documented within the state during the breeding season. In their known range, this heron species inhabits swamps and forested wetlands. Yellow-crowned Night-herons form small colonies or nest as more scattered pairs. Platform nests are constructed from sticks in trees near water. Nest building is an important part of courtship in this species and nests may be initiated in several places before the final site is selected. Both parents incubate their eggs and brood hatched young. Young birds are fed on a diet of fish and crustaceans which are regurgitated into the center of the nest by their parents. This bird gives a raspy "scaup" and "whoop" calls throughout the night.

Photo Tim Lumley

Safe Dates: May 25th to July 15th (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: The Yellow-crowned Night-heron is a very rare breeder in Maine, and has been observed occasionally in the state during the breeding season. This bird's secretive and nocturnal nature makes observing breeding behaviors a challenge. Consequently, all potential breeding records should be carefully documented.

Yellow Rail: One of Maine's rarest breeding birds, the Yellow Rail is notoriously difficult to observe. It inhabits the margins of sedge dominant wetlands in the extreme northern portions of Maine. On its breeding grounds, the Yellow Rail silently skulks hidden among dense emergent vegetation by night. Breeding males give a repetitive, ticking "click-click, click-click-click" call only well after sunset. This call has been likened to the call of a spring peeper or an insect. This rail species constructs two nests: one for incubating and one for brooding young. Yellow Rail incubation nests are constructed of fine grasses and are covered with a canopy of vegetation. While incubating, female Yellow Rails rarely leave their nests and do so only to quickly eat. Within two days of hatching, the recently hatched chicks are moved to the brooding nest. Within 3 weeks of hatching, young Yellow Rails begin feeding themselves.

Photo Jim Scraff

Safe Dates: June 1st to August 1st (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: Breeding behaviors are only occasionally seen or rarely heard. All signs of breeding within the state of Maine should be carefully documented.

Chimney Swift: The Chimney Swift is an agile insectivore popularly described as "a cigar with wings". These birds nest in hollow trees, abandoned buildings, silos, barns, and, true to their name, chimneys. This means these birds can be observed foraging high above cities and suburbs as well as above forests, open areas, as well as lakes and ponds. Birds will frequently forage and roost together in large flocks. Birds give a high-pitched, buzzy chip call referred to as a "chipper call". These birds are frequently seen out foraging at dusk before heading to their nesting or roost sites. Pairs select nest sites which are dark and well-sheltered. Both males and females gather twigs which are cemented together using their saliva to form the nest which is attached to a vertical wall. Both birds incubate their eggs and rarely ever leave them unguarded. Both parents feed and brood their young and may be assisted by additional adult helpers. After about 2 weeks, the young will leave the nest and cling to the wall with their nest mates. In the first week of flights, family groups will return to the area near the nest site and roost together. Family groups break up or depart for communal roosts soon after these first flights.

Photo David S. Hall

Safe Dates: May 20th to August 1st (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: If you hear the buzzy calls of Chimney Swift within the safe dates, use code **S**. The simplest way to upgrade this to a "Probable Breeder" is to listen for singing again at the same location 7 or more days later to upgrade the code to **S7**. For silently foraging Chimney Swift, use code **H**. If you observe a bird visiting a potential nest site such as a chimney, hollow tree, or other suitable site, use code **N**. Chimney Swift are one of the few birds which copulate while inflight (code **C**). Adults gather materials for nest building by breaking off twigs from tree tops (code **CN**).

Northern Mockingbird: The Northern Mockingbird is a mimic which boasts an impressive vocal repertoire. Males have as many as 150 distinct songs, each phrase of which is repeated 2-6 times each. Songs consist of imitations of other birds, non-bird animals, and mechanical noises. These birds are found in varied habitats, ranging from parks, gardens, and cemeteries in developed areas to areas of regenerating forest. Birds are known to sing long after sunset and more commonly on moonlit nights. These birds build multiple nests during the nesting season and typically rear 2, even 3, broods of young each year. Nests are built in trees and shrubs using twigs, grasses, leaves, and human debris (cigarette filters, twine, laundry lint, and more). Many nests go unused. The female incubates eggs and broods hatched young while the male and female both provide food (grasshoppers, spiders, ants, beetles, moths, and sometimes fruit). Males are the primary nest defenders and attack potential predators. Young fledge within 10-12 days after hatching. After leaving the nest they continue to be fed and protected by the parents. Males may feed a brood up to 3 weeks after fledging when another brood is commenced by the female.

Photo Logan Parker

Safe Dates: May 15th to August 15th (applicable for **S** or **H** codes, and use codes in the "Probable" breeding category with caution if outside these dates).

Breeding Evidence: Although many breeding behaviors associated with the early part of the nesting season are uncommonly observed in Northern Mockingbirds, their propensity for nest building and raising multiple broods means observing confirming evidence can be fairly easy in this species. If a bird is observed carrying nest building materials such as twigs, grasses, or human debris, use code **CN**. If a bird is observed engaged in building a nest, use code **NB**. If an incubating female is found on a nest, use code **ON**, but do not disturb the nest. If a nest with young is observed or heard (nestlings give a high-pitched "peep"), use code **NY**, but note that we strongly discourage closely approaching or disturbing nesting birds. For birds observed feeding insects or fruit to their young, use code **FY**.