

# Maine Breeding Bird Atlas

## Conducting Crepuscular and Nocturnal Observations in Your Atlas Block

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**MAINE  
BIRD  
ATLAS  
2018-2022**



A Project of the Maine Department of Inland Fisheries and Wildlife



Every evening as the sun sets, 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 a 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. This information will be a big help to our atlas effort. 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 many crepuscular or nocturnal species.

### **When to survey:**

**Crepuscular:** Survey anytime 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.

**Nocturnal:** Survey anytime 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. Seeking out the Eastern Whip-poor-will requires a little extra planning, but is well worth the effort. Eastern Whip-poor-wills sing their onomatopoeic songs on moonlit nights in May and June. Visiting portions of your block with good potential Whip-poor-will habitat (fields on the margins of open forests, particularly in riparian areas with sandy soils) after the moon has risen and is unobscured by clouds is the best way to encounter this species.

### **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.

Luckily there are few species that you may hear, particularly during the nocturnal efforts, and 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 and includes recordings of their calls. 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. In many cases, the highest code that can be observed will be indicators that the birds are “Possible” breeders. These behaviors include “Singing birds” or “In Appropriate Habitat”. 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, 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.

### **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](mailto:mainebirdatlas@gmail.com)



# Maine’s Crepuscular and Nocturnal Bird Species

## Nightjars:

**Eastern Whip-poor-will:** Seeking out this cryptic-plumed bird requires a little extra planning, but is well worth the effort. Although it is difficult to see this bird, the Eastern Whip-poor-wills loudly sing their onomatopoeic songs on moonlit nights in May and June. Visit portions of your block with good potential habitat (fields on the margins of open forests, particularly in riparian areas with sandy soils) after the moon has risen and is unobscured by clouds. There are two windows to seek out these birds because they only sing on moonlit nights: May 21st to June 6th and June 20th to July 6th.



Photo John Winze

**Safe Dates:** May 25th to July 25th (applicable for only the S or H codes).

**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 in the appropriate breeding timeframe and in appropriate breeding habitat, 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**.

**Chuck-will’s-widow:** Chuck-will’s-widow are not known to breed in New England, though they have been very rarely reported as far north as Maine. These large, cryptic nightjars have similar habits to the Eastern Whip-poor-will (it also has an onomatopoeic song) and thus can be found under similar conditions. These birds are also known to call at dusk and tend to inhabit more open habitat than its native relative.



Photo Mary Alice Tartler

**Breeding Evidence:** Hearing vocalizations of birds 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 in appropriate breeding habitat, 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**.

**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”. 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.



Photo David S. Hall

**Safe Dates:** June 5th to July 25th (applicable for only the S or H codes).

**Breeding Evidence:** If you hear the vocal “peent” or “beret” call while the birds are in flight in the appropriate breeding timeframe, 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:

**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. 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.



Photo Raul F.

**Safe Dates:** March 1st to July 1st (applicable for only the S or H codes).

**Breeding Evidence:** If you hear a Screech-owl in the appropriate breeding timeframe, 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**.

**Great Horned Owl:** 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 rendered “who-hoo-ho-oo”). 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. 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.



Photo David S. Hall

**Safe Dates:** January 25th to August 1st (applicable for only the S or H codes).

**Breeding Evidence:** If you hear a Great Horned Owl in the appropriate breeding timeframe, 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**.

**Barred Owl:** Barred Owls 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 more 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.



Photo David S. Hall

**Safe Dates:** March 15th to July 25th (applicable for only the S or H codes).

**Breeding Evidence:** If you hear a Barred Owl in the appropriate breeding timeframe, use code **S** and upgrade to **S7** if heard at the same location 7 or more days later. If you hear a pair in winter or spring singing a duet of alternating calls, use code **P**. For 7 or more singing Barred Owls anywhere in the Atlas block on the same day, use code **M**.



**Long-eared Owl:** There have been few summer records of Long-eared Owls in Maine. Long-eared Owls are secretive and rarely observed, do not vocalize often, and use 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 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.



Photo Travis Bonovsky

**Safe Dates:** April 20th to July 25th (applicable for only the S or H codes).

**Breeding Evidence:** All potential breeding records should be carefully documented. The most likely breeding code for this species is **FL** for observations of recently fledged young.

**Short-eared Owl:** Maine’s only ground-nesting owl. Usually active day and night and most often observed from late afternoon to dusk. Short-eared Owls are more often seen than heard. 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. Adults occasionally feign injury to draw potential predators away from the nest.



Photo Tom Koerner

**Safe Dates:** May 1st to August 1st (applicable for only the S or H codes).

**Breeding Evidence:** This species nests later than the other owls 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.

**Northern Saw-whet Owl:** Saw-whet Owls can be vocal in the spring, calling throughout the night, and peaking about 2 hours after sunset. Calls are a monotonous series of whistles that can be heard over great distances. Fledged young typically stay in the vicinity of the nest and are fed for at least 1 month. Breeds in a variety of habitats. Conifer woodlands on the edges of swamps or streams are particularly good habitats to check. Nests are in old woodpecker or flicker cavities.



Photo Dale Matthies

**Safe Dates:** April 1st to August 1st (applicable for only the S or H codes).

**Breeding Evidence:** If you hear a Saw-whet Owl in the appropriate breeding timeframe, 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**.

## Shorebirds:

**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. This plump, long-billed bird inhabits young forests and abandoned fields. During the breeding season, male woodcocks perform courtship displays which involve the birds spiraling up into the



Photo Dave Ellis



sky before a rapid, circling descent back to the 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 with a more nasally quality. This call and display can be heard both after sunset and sometimes into the night.

**Safe Dates:** April 15th to July 25th (applicable for only the S or H codes).

**Breeding Evidence:** If you hear an American Woodcock giving its “peent” call (without an aerial display) in the appropriate breeding timeframe, use code **S** and upgrade to **S7** if heard at the same location 7 or more days later. For 7 or more birds anywhere in the Atlas block on the same day giving the “peent” song without an aerial display, use code **M**. For twittering aerial courtship display performed by the male, use code **C**.

**Wilson’s Snipe:** Another inland shorebird, the Wilson’s Snipe is at least 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”.



Photo Amber Hart

**Safe Dates:** May 15th to July 25th (applicable for only the S or H codes).

**Breeding Evidence:** If you hear a Wilson’s Snipe in the appropriate breeding timeframe, use code **S** and upgrade to **S7** if heard at the same location 7 or more days later. For 7 or more singing birds anywhere in the Atlas block on the same day, use code **M**. For winnowing courtship display/sounds performed by the male, use code **C**.

## Thrushes:

**Veery:** The Veery is a thrush species associated with young, damp forests, particularly those near streams or swamps. It has tawny plumage on its upper parts, a buffy chest, and pure white belly. 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”.

**Safe Dates:** June 1st to August 1st (applicable for only the S or H codes).

**Breeding Evidence:** If you hear a Veery in the appropriate breeding timeframe, use code **S** and upgrade to **S7** if heard at the same location 7 or more days later. For 7 or more singing birds anywhere in the Atlas block on the same day, use code **M**. If you observe agitated behavior, use code **A**. If a pair of Veery are observed together, use code **P**.



Photo Logan Parker

**Swainson’s Thrush:** The Swainson’s Thrush is a songbird often associated with coniferous forests (although this bird will also inhabit mixed conifer-hardwood forests as well). 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, up-rising song throughout the evening before going silent for the night.

**Safe Dates:** June 15th to July 25th (applicable for only the S or H codes).

**Breeding Evidence:** If you hear a Swainson’s Thrush in the appropriate breeding timeframe, use code **S** and upgrade to **S7** if heard at the same location 7 or more days later.



Photo Sue Bishop



**Hermit Thrush:** This thrush species 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 dusk its sings a two-part song that is both haunting and ethereal. It is rendered “oh, holy holy, -ah, purity purity, -ehh sweetly sweetly”. The Hermit Thrush typically stops singing about 30 minutes after sunset.



Photo Logan Parker

**Safe Dates:** May 20th to August 1st (applicable for only the S or H codes).

**Breeding Evidence:** If you hear a Hermit Thrush singing in the appropriate breeding timeframe, use code **S** and upgrade to **S7** if heard at the same location 7 or more days later. For 7 or more singing birds anywhere in the Atlas block on the same day, use code **M**. If a pair of Hermit Thrush are observed together, use code **P**. If you observe agitated behavior, use code **A**.

**Wood Thrush:** The Wood Thrush is the thrush species most associated with 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 evening around sunset. Its song has been described as flutelike and variable with 2 to 10 notes. Agitated birds will give a “pit-pit-pit” if you wander too near their nesting site.



Photo Logan Parker

**Safe Dates:** June 1st to August 1st (applicable for only the S or H codes).

**Breeding Evidence:** If you hear a Wood Thrush singing in the appropriate breeding timeframe, use code **S** and upgrade to **S7** if heard at the same location 7 or more days later. For 7 or more singing birds anywhere in the Atlas block on the same day, use code **M**. If a pair of Wood Thrush are observed together, use code **P**. If you observe agitated behavior, use code **A**.

**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 before and after sunset. Robin calls are a distinctive “wick-wick-wick”.



Photo Logan Parker

**Safe Dates:** May 10th to August 1st (applicable for only the S or H codes).

**Breeding Evidence:** If you hear an American Robin singing in the appropriate breeding timeframe, use code **S** and upgrade to **S7** if heard at the same location 7 or more days later. For 7 or more singing birds anywhere in the Atlas block on the same day, use code **M**. If a pair of Wood Thrush are observed together, use code **P**. If you observe agitated behavior, use code **A**.

## Other Crepuscular/Nocturnal Birds:

**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 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.

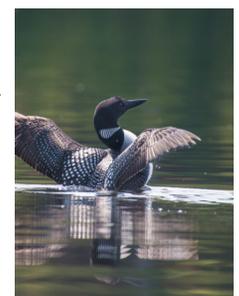


Photo Logan Parker



**Safe Dates:** May 15th to July 20th (applicable for only the S or H codes).

**Breeding Evidence:** If you hear Common Loon wails, yodels, or tremolos in the appropriate breeding timeframe, use code **S** and upgrade to **S7** if heard at the same location 7 or more days later. For a silent Common Loon on a potential breeding lake, use code **H**. If you observe a Common Loon visiting a potential nest site, use code **N**. For Common Loons observed courting, displaying, or copulating, use code **C**. If territorial defense by Common Loon is observed, use code **T**. If a pair of Common Loons are observed or heard performing a “duet” together, use code **P**.

**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. Gives a guttural, bark-like “Quock” call 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”). Vocalizations are rare.



Photo Logan Parker

**Safe Dates:** May 1st to August 1st (applicable for only the S or H codes).

**Breeding Evidence:** All potential breeding records should be carefully documented. The most likely breeding codes for this species are **NY** for observations nests with young, **ON** for nests occupied by incubating adults, and **NB** for adult observed building nest.

**Yellow-crowned Night-heron:** The Yellow-crowned Night-heron is not known to breed in Maine. These birds have been observed in state during the breeding season, however. These birds were observed in the same regions of the state inhabited by the Black-crowned Night-heron (primarily coastal areas). In their known range, this heron species inhabits swamps and forested wetlands. This bird gives a raspy “scaup” and “whoop” calls throughout the night.



Photo Tim Lumley

**Safe Dates:** May 25th to July 15th (applicable for only the S or H codes).

**Breeding Evidence:** Breeding behaviors are only occasionally or rarely heard. All potential Yellow-crowned Night-heron breeding records should be carefully documented.

**Yellow Rail:** This small rail species is notoriously difficult to observe. It inhabits the margins of sedge-dominant wetlands in the extreme northern part 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.



Photo Jim Scraff

**Safe Dates:** June 1st to August 1st (applicable for only the S or H codes).

**Breeding Evidence:** Breeding behaviors are only occasionally or rarely heard. All potential Yellow Rail breeding records 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, 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 (though they are not colonial nesters). Chimney Swifts give a high-pitched, buzzy chip call referred to as a “chipper call”. These birds are frequently seen foraging at dusk before heading to their nesting or roost sites.



Photo David S. Hall

**Safe Dates:** May 20th to August 1st (applicable for only the S or H codes).

**Breeding Evidence:** If you hear the buzzy calls of Chimney Swift in the appropriate breeding timeframe, use code **S** and upgrade to **S7** if heard at the same location 7 or more days later. For 7 or more singing birds anywhere in the Atlas block on the same day, use code **M**. If you observe a Chimney Swift visiting a potential nest site, use code **N** and upgrade this to **ON** if you observe it repeatedly flying in and out of the same potential nest location. For Chimney Swift observing courting, displaying, or copulating, use code **C**.

**Northern Mockingbird:** The Northern Mockingbird is a mimic which boasts an impressive vocal repertoire. Male birds 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. Northern Mockingbirds are known to sing long after sunset and more commonly on moonlit nights.



Photo Logan Parker

**Safe Dates:** May 15th to August 15th (applicable for only the S or H codes).

**Breeding Evidence:** If a pair of Northern Mockingbirds are observed together, use code **P**.