

A Natural History Guide to Birds of Mount Desert Island, Maine



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Printed by
Downtown Graphics & Printing, Inc.

Acknowledgments

This guide could not have been created without the help of many wonderful people. John Anderson served as my senior project advisor—he guided me to resources, gave helpful suggestions, and edited my writing. I am so thankful for John’s help both during the project, and for his guidance throughout my time at College of the Atlantic. Don Cass has been an excellent academic advisor and supported me through the project. Thank you to Kate Shlepr for giving me helpful advice as my student project advisor.

Along with John Anderson, I would also like to thank Steve Ressel and Scott Swann for encouraging my love of science, fieldwork, and natural history over the past four years and for teaching me so much. Dru Colbert and Ernie McMullen have encouraged my love of art, and have been wonderful teachers. Thank you to all faculty who have taught me and enriched my experience at COA.

I would like to thank Strickland Wheelock for being a wonderful birding mentor over the years. Strickland has taught me so much about identifying, finding, and appreciating birds in New England. Thank you to all Mass Audubon staff and volunteers who encouraged my early love of birds.

Thank you to the many photographers who allowed me to use their photos as drawing references. Special thanks to Cal Vornberger, who gave me permission to use his high quality photographs of several species. Thank you to Rich MacDonald and other contributors to the “Checklist of the Birds of Mount Desert Island,” which was an essential resource in deciding which birds to include in this guide.

I could never have self-published this book without Charlie Ferden, Joe Flannery, and other staff of Downeast Graphics. They professionally scanned my illustrations and arranged, bound, and copied the book that you are holding. Charlie was always helpful in answering my questions and keeping me involved in the process. Thank you to Bruce Hazam and College of the Atlantic’s financial aid department for giving me permission to use scholarship money to self-publish the book.

Carrie Graham and the Dorr Museum made it possible for me to have this book available to the public, and allowed me to display my original artwork. My work with the Dorr Museum has helped to inspire my passion for integrating art, science, and education.

My family and friends have been there for me and supported this project (and my crazy bird obsession) every step of the way. Words cannot express how thankful I am for them each and every day.

And of course, thank you to the birds for making my studies, adventures, and dreams possible!

Introduction

The habitats found on Mount Desert Island are incredibly diverse, which makes this an excellent location to find and observe birds. Forests, meadows, farms, backyards, wetlands, ponds, and rocky coastline all provide places to search for our beautiful feathered friends. Protected land inside Acadia National Park provides an added benefit by limiting human activity, which increases available habitat for some species. Whether you are a first time visitor or long-time resident of the island, there are always new discoveries to be made in this region's avian world.

Watching birds is a fascinating hobby, because they are found virtually everywhere. If you sit outside for even a few minutes, you are likely to see or hear a bird. Their high mobility, complex behaviors, and vocalizations make birds some of the easiest creatures to observe. When watching a bird, have you ever wondered about the purpose behind its behavior, anatomy, or habitat choice? Why do crows chase hawks, and why do robins cock their heads when worm hunting? Why do vultures have bald heads, and woodpeckers have atypical toe arrangements? Why is that bird here at this time of year, and where will it go for the winter or summer? This book attempts to answer some questions that might arise when the average observer is watching a bird. Birding is not simply about checking species off on a list. If you take the time to really watch birds and learn about their lives, you are sure to be amazed. Some of the more common species on Mount Desert Island—such as mallards, herring gulls, or American crows—can be some of the most fascinating to watch.

This book is not intended to be an identification guide, or a specific resource for birding hotspots on Mount Desert Island. Rather, the aim of the guide is to help answer questions about your observations, to encourage your curiosity, and to give a basic idea of habitats where species may be found in this region. On each species page, the natural history and behavioral information provided is meant to give you a picture of these birds' complex lives. Topics such as feeding, courtship, nesting, migration, and adaptations are illustrated in the corners of each species page. As you flip through the guide, I hope that you become enthralled by the beauty and diversity of these species.

Note- Please find a list of references used for the text of this guide at the back of the book. These references may be useful if you are interested in further researching a particular species. A list of photo references used for the illustrations is found after the text reference section.

How were species chosen for this guide, and why were the pages arranged as they are?

To choose species, a regional checklist (The Checklist of the Birds of Mount Desert Island, compiled by the Natural History Center) was used to prioritize some of the more common birds found on Mount Desert Island. In order to maximize diversity, I chose one or several of the more common species in each taxonomic group (for example, warblers). Several duck pages are included because ducks are easily visible and observable when scanning water with binoculars. When several species are shown on

the same page, this means that they are in the same genus (which means that they are very closely related). As a result, they may share some similar traits or behaviors, which can be jointly discussed in the corners.

On some of the multiple-species pages, less common birds are included. This is simply meant to make the observer aware of “look-alikes,” and sometimes to note interesting differences between the otherwise similar species. When less common species are included, this is noted in the text.

Plumages

The pattern and coloration of a bird’s feathers is known as its plumage. In the center illustrations, birds are shown either in breeding (spring/summer) plumage, or in winter plumage if they are only found on Mount Desert Island during the winter. In birds that are sexually dimorphic (males and females look different), males are shown in the center illustrations. This is simply because male plumage is typically most distinctive and easily recognizable. For this same reason, all center birds are in adult plumage. On many pages, female and immature plumages are shown and discussed in the corners.

Canada Goose

Branta canadensis

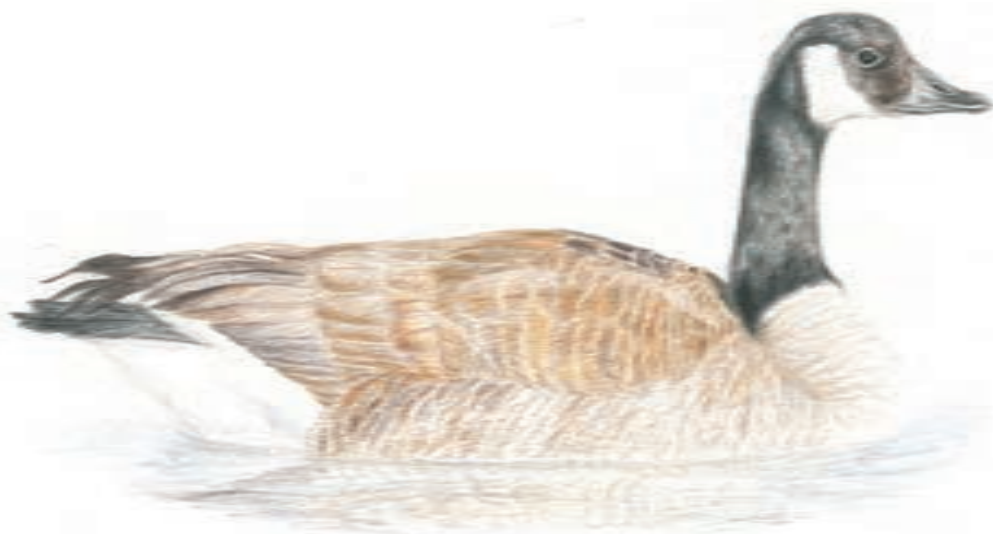
Center: Canada geese tend to be noisy, gregarious birds that hang out on lawns and golf courses. Although they may be abundant in some areas, these geese are still interesting subjects to observe and study. They are known for exhibiting strong pair bonds, demonstrating elaborate displays, and undergoing long migrations. Compared to surrounding areas in Maine, the Canada goose is relatively uncommon on Mount Desert Island. Its numbers have been increasing in recent years, especially among mallard and black duck flocks on the Somesville Mill Pond.

Top left: Geese often fly in v-formations during migration, but the purpose of this flight pattern is not known for certain. The pattern might allow orientation communication between individuals in order to help prevent collisions. Depending on food availability, some populations of Canada geese migrate, while others remain in one area as residents.

Top right: The courtship display involves holding the head slightly above ground or water level, opening the bill, and hissing. The male passes his neck around that of the female. Canada Geese have very strong pair bonds, and will return to the same nest site year after year.

Bottom left: The aggressive display can be quite frightening. A goose will typically begin with a warning by moving its head up and down and hissing. If the perceived threat does not move away, the goose will spread its wings and charge. Geese are very protective of their young.

Bottom right: The curious, precocial chicks will follow their parents in a line soon after hatching. When they are small, goslings sometimes huddle together on a parent's back to stay warm. They grow quickly, and eventually look rather disheveled with their combination of down and pinfeathers. A gosling becomes fully feathered at about two months of age.



Mallard (front)

Anas platyrhynchos

American Black Duck (back)

Anas rubripes

Center: Both of these species are common around the island, particularly on freshwater ponds and near the shores of sheltered harbors. They are typically seen feeding either by “tipping up” their tails to reach underwater vegetation and invertebrates, or by swiping their bills from side to side to scoop food from the water’s surface. These ducks tend to be gregarious.

Top Left: Mallards and black ducks frequently hybridize. Hybrids can be variable in appearance, with different mixtures of black duck and mallard characteristics. This hybrid has a partially green head, unstreaked body, and black upper tail coverts, which suggest a male mallard. However, its brownish body and partially brown head suggest a black duck.

Top right: The male mallard has a variety of courtship display behaviors. These include swimming with the head low to the water, shaking the head and tail, spurting water towards females, whistling, and emitting nasally calls. A female’s “inciting display” may provoke the male to attack other individuals so that she can assess his fitness. Only the female mallard is able to quack. The black duck display is very similar to that of the mallard, which might help to explain frequent hybridization between these species.

Bottom Left: Like many ducks, male mallards undergo a molting phase called eclipse plumage during the winter. For several weeks, they lose all flight feathers and resemble females in coloration. Although many other birds molt gradually, the loss of even a few flight feathers can impair a duck’s flight because of its high ratio of body mass to wing area. That is why it is more advantageous for a duck to lose many flight feathers during a short period. This male in eclipse plumage may look like a female, but the hint of green on his head and greenish yellow bill (unlike a female’s orange and black bill) give him away.

Bottom Right: Mallards and black ducks gather in large flocks on the Somesville Mill Pond during the winter. It is common to see them standing on the ice when the pond is frozen. A duck will tuck its bill into the back feathers to keep this exposed area warm, but how do they warm their unfeathered feet and legs? Like other birds, ducks have a countercurrent heat exchange system in the legs. In this system, arterial blood flowing down from the body passes venous blood flowing up from the feet. The venous blood picks up heat from the arterial blood so that it warms up before reaching the body. In turn, the arterial blood cools down upon reaching the feet in order to avoid losing heat to the environment. The lower legs also require little blood, because most muscle is in the upper legs and is kept warm beneath feathers.



Ring-necked Duck (middle)

Aythya collaris

Greater Scaup (back)

Aythya marila

Lesser Scaup (front)

Aythya affinis

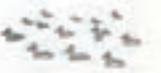
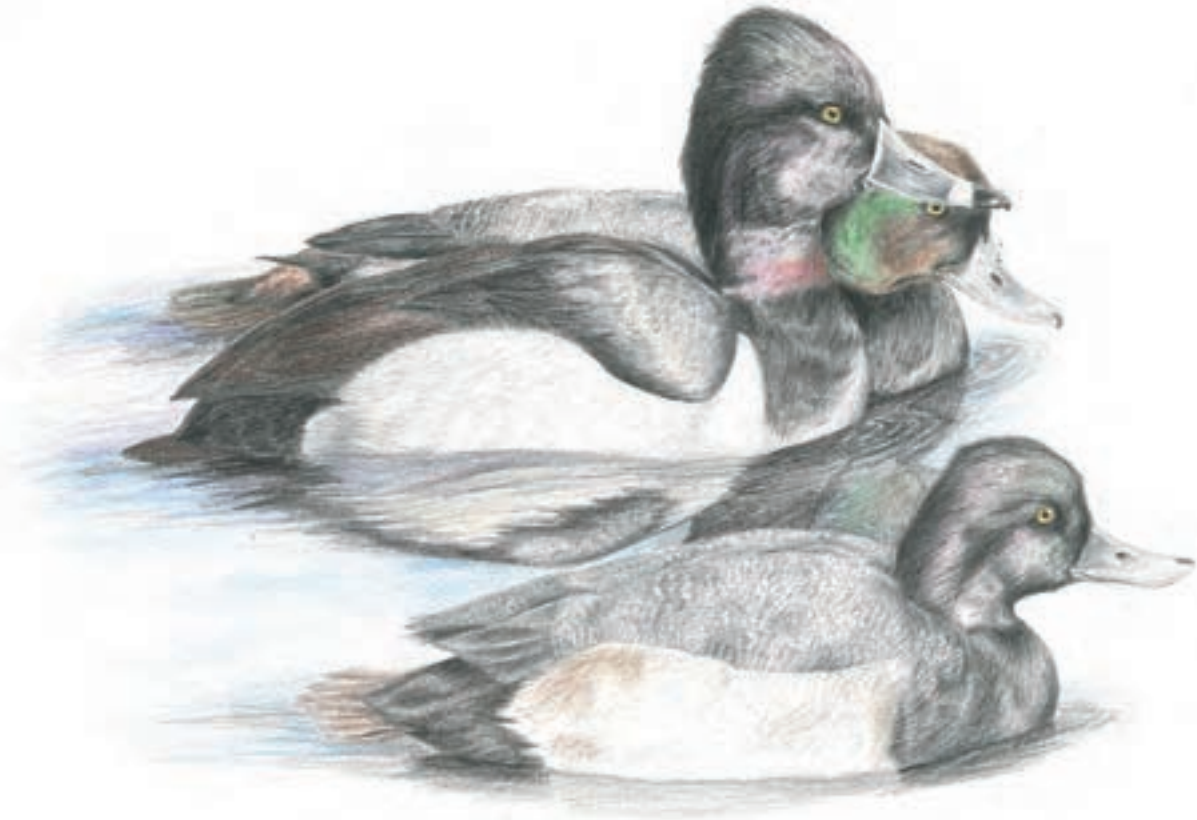
Center: These three species are closely related and similar in appearance. Although the ring-necked duck is by far the most common of them on Mount Desert Island, scaup may be seen occasionally. All three species feed by diving below the surface.

Top left: The female ring-necked duck is brown overall, and sports a black and white tipped bill like that of the male. In both scaup species, the female is brown with a splotch of white plumage near the base of the bill.

Top right: When distinguishing the two scaup species, habitat can provide a good identification clue. In New England, the greater scaup is much more likely to be seen offshore than on inland water bodies. Look for them along Ocean Drive in calm weather or in Hulls Cove when it is stormy. Scaup tend to prefer sheltered bays rather than exposed areas.

Bottom left: In contrast to the greater scaup, the lesser scaup is typically seen on inland lakes or ponds. Its habits are similar to those of the ring-necked duck. Like this species, it has a rounded head shape and purplish sheen on the male's head feathers. The greater scaup tends to have a more flattened head, with a green sheen in the male.

Bottom right: Ring-necked ducks may form large flocks during migration. Look for groups of this species on ponds around the island, particularly in early spring and late fall. At times, ring-necks may mix with the uncommon lesser scaup.



Common Eider

Somateria mollissima

Center: The common eider is abundant in bays around the island in fall and winter, and can almost always be seen at Otter Cliffs or from the Bar Harbor Town Pier. Eiders are often seen in large groups called rafts, which may include over one hundred individuals. In the breeding season, eiders may be heard emitting a strange, cow-like call. Females nest on small coastal islands such as Egg Rock and Great and Little Duck Island. After mating, males lose their flight feathers and move off shore for some weeks before re-joining the females in late summer and early fall.

Top left: Immature male eiders look a bit like they have been splashed with black or brown and white paint. As males molt into adult plumage, each one has a different pattern of white and dark coloration. Young males may be seen exclusively grouped together in large rafts.

Top right: Mussels make up a large portion of the common eider's diet on the North Atlantic coast. Although large mussels would provide more energy for eiders, they tend to prefer feeding on smaller ones. By feeding on small mussels that are easier to handle, these ducks reduce the risk of shell ingestion.

Bottom left: The female eider cares for her eggs and young without assistance from the male. To keep her eggs warm, she covers and surrounds them with a layer of her own down. Off the coast of Maine, eider nests are only found on islands with herring gull populations or on islands with human predator control. This may be because the gulls deter crows and ravens that might otherwise prey on eggs or young.

Bottom right: Eider chicks leave the nest and begin feeding near the intertidal immediately after hatching. They are excellent divers, even as tiny ducklings. Broods of chicks sometimes combine to form "crèches" of over 20 individuals, which may be "babysat" by adult females regardless of the chicks' parentage.



White-winged Scoter (middle)

Melanitta deglandi

Surf Scoter (back)

Melanitta perspicillata

Black Scoter (front)

Melanitta americana

Center: All three scoter species are relatively common along the shoreline of Mount Desert Island in fall and winter. Of the three species, the white-winged scoter is most easily seen. Scoters nest in Canada and Alaska, and fly south to winter along the Atlantic and Pacific coasts. These ducks may be seen in large flocks, particularly when they first arrive off the coast and when they are gathering to leave for spring.

Top left: Like other sea ducks, scoters have high wing loading. This means that the body mass is high in relation to the wing size, which makes take-off difficult. As a result, these ducks must paddle over the water's surface to become airborne. The white-winged scoter can be easily identified in flight by its white secondary feathers.

Top right: Both black and white-winged scoters can often be seen flying in lines above the ocean's surface. In flight, the black scoter's silvery underwings are apparent. When seen from a distance, the yellow knob on the male black scoter's bill is another useful identifying feature.

Bottom left: In the initial stage of a dive, the surf scoter leaps forward in an arc. Throughout this motion, the bird uses its feet rather than the wings to propel itself. Like eiders, scoters mainly feed on bivalves such as mussels.

Bottom right: During the surf scoter's courtship display, the male lifts his chest out of the water. He also briefly throws his head back during this display. Other surf scoter courtship behaviors include "water twitching" (dipping the bill in the water) and preening behind the wing.



Long-tailed Duck

Clangula hyemalis

Center: The long-tailed duck is one of the most beautiful sea ducks, sporting an elaborate tail and boldly marked plumage. Like scoters and eiders, it will sometimes form large flocks that can be seen along Ocean Drive and other coastal areas in winter. Longtails nest on tundra in northern Canada, and come to the Maine coast during late fall.

Top left: Each spring, the long-tailed duck undergoes a molt in which the plumage color drastically changes. It goes from black and white to black, brown, and white during this transformation.

Top right: The long-tailed duck is a very fast flying and agile species. The female, which has duller plumage and short tail feathers, is pictured here.

Bottom left: This species is known for its ability to dive to great depths. Long-tails may even reach depths of up to 60 meters, and they will often forage in strong currents. Other diving ducks such as scoters and eiders tend to make shallower dives and avoid powerful currents.

Bottom right: Long-tailed ducks may be heard calling in early spring. Their call is a strange, comical yelling sound that can carry for quite a distance. While calling, males may display by snapping their heads backwards.



Common Loon (front)

Gavia immer

Red-throated Loon (back)

Gavia stellata

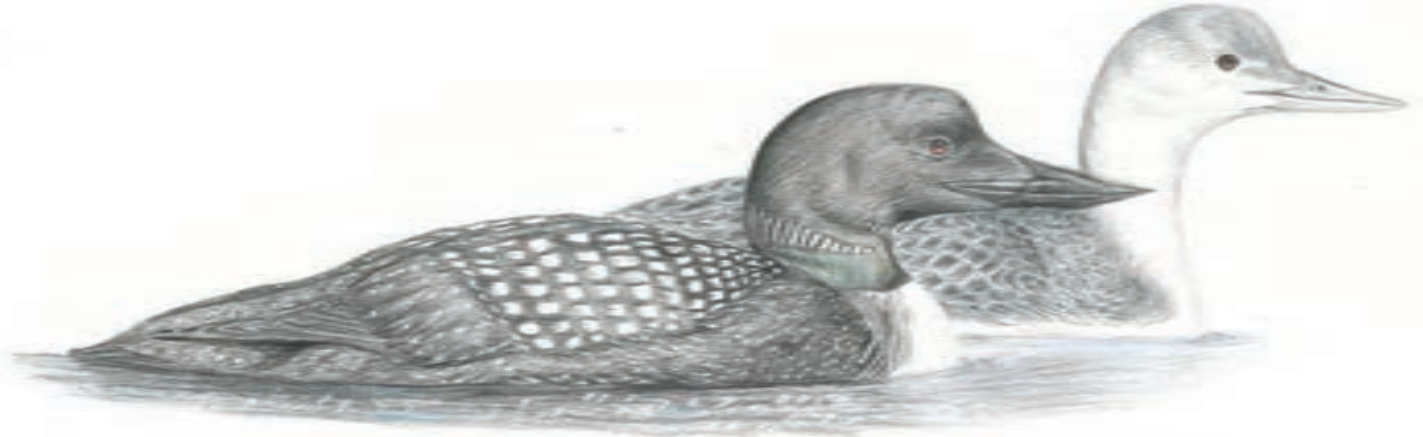
Center: Loons are elegant birds, with bold breeding plumages and haunting calls. During the spring and summer, common loons nest on lakeshores. They may be seen on Jordan Pond, Somes Pond, and Long Pond. You may also see them in sheltered areas such as Great Harbor. In the winter, this species is relatively abundant along the coast. Wintering loons may have territories or at least show high site fidelity; look for them off Sand Beach and in Southwest Harbor. Red-throated loons are much less common, but it is possible to see them during the winter. The latter species is thinner and smaller than the common loon, with a more slender bill.

Top left: When a loon feels very threatened, it may rise up vertically and even run across the water's surface. This display is sometimes called the "penguin dance," and is done if a predator comes too close to the nest. Unfortunately, human disturbance around nests may also cause this behavior. While boating on lakes, be careful to avoid disturbing loons. If you see a loon that seems stressed, leave the area right away.

Top right: In winter, the common loon loses its checkerboard pattern and develops a more subdued appearance. Individuals become gray above and white below. Loons must move to the ocean during winter in order to feed, since lakes freeze.

Bottom left: Between four and eight pairs of loons typically nest on Mount Desert Island each year. Loons often nest on small islands within lakes or on mats of floating vegetation so that they can avoid land predators. Unfortunately, this makes their nests very vulnerable to the wake of powerboats. It is critical to slow down if you think you are in loon habitat! These birds have legs placed far back on their bodies in order to propel themselves while diving, but this makes them very clumsy on land.

Bottom right: Loons typically have one to three brown, fuzzy chicks per nesting season. In order to save energy between bouts of swimming after their parents, the chicks sometimes ride on a parent's back. This also makes them less vulnerable to predators. Although they are semi-precocial, loon chicks are fed by their parents until they are old enough to fish for themselves.



Horned Grebe (front)

Podiceps auritus

Red-necked Grebe (back)

Podiceps grisegena

Center: Both of these wintering species are relatively common in bays and less sheltered offshore areas. Grebes are commonly seen along Ocean Drive from late fall to early spring, either singly or in small groups. They are also common at Pretty Marsh Landing. A careful eye may be needed to spot horned grebes, since they are very small and sometimes seem to spend more time diving than floating on the water's surface.

Top left: Horned and red-necked grebes do not breed on Mount Desert Island, but their elaborate courtship displays are worth noting. In both species, pair members may offer weeds to one another and synchronize behaviors such as head shaking.

Top right: Grebes eat their own feathers, and the reason for this behavior remains unclear. Grebes' gizzards are unable to grind bones, so an accumulation of feathers in the pyloric lobe of the stomach may block bones from entering the intestine. Balls of feathers may also protect the stomach walls from sharp bones before they are dissolved by stomach acid. However, if this is indeed the purpose of eating feathers, it seems strange that grebes have not evolved more efficient digestive tracts.

Bottom left: Grebes nest on floating vegetation such as bulrushes or cattails. As in loons, nestlings will ride on their parents' backs to stay safe and warm.

Bottom right: Grebes have lobed feet that allow efficient swimming. The lobes spread while pushing backwards against the water, and fold on the recovery stroke to reduce water resistance.



Double-crested Cormorant (left)

Phalacrocorax auritus

Great Cormorant (right)

Phalacrocorax carbo

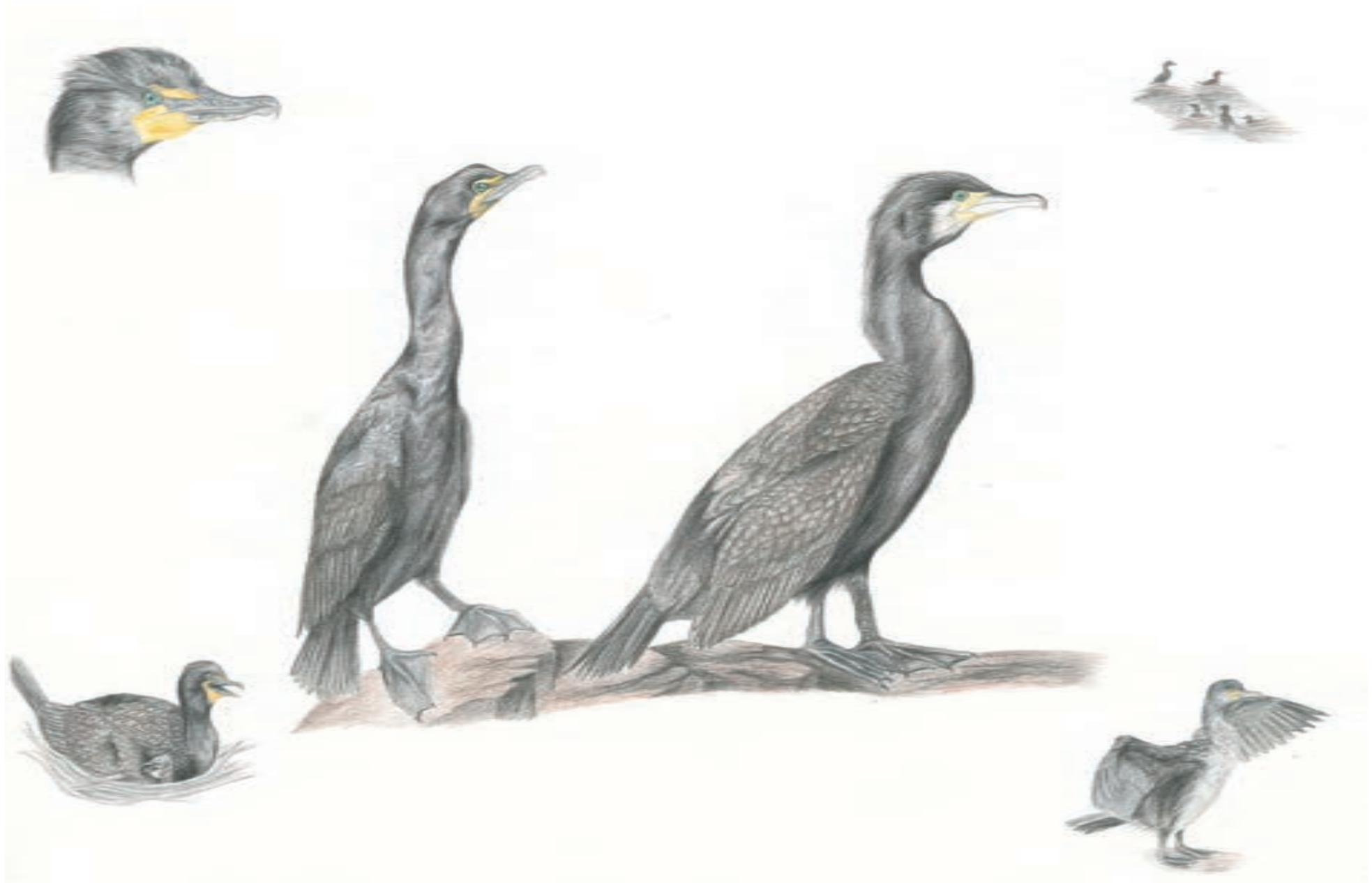
Center: The double-crested cormorant is quite common on the island throughout much of the year. During winter, it is replaced by the rare great cormorant. The latter species has a limited winter range along part of the Atlantic coast. Both species are fish-eating divers.

Top left: The double-crested cormorant is named for its feather tufts, which grow on each side of the head during the breeding season. These tufts may be either black or white.

Top right: Double-crested cormorants do not nest on Mount Desert Island, but a colony of them nests on Thrumcap in Frenchman Bay. Cormorants once built their nests in trees that covered the small island. However, accumulated cormorant droppings have killed the trees, so the birds now build ground nests.

Bottom left: Like pelicans, cormorants have throat pouches, which they vibrate when they pant in order to stay cool. This behavior is known as gular fluttering, and it allows moisture to evaporate from the respiratory tract. The hyoid (tongue bone) powers rapid throat movements during panting.

Bottom right: Cormorant feathers are structurally different from those of ducks, which may reduce their water repellency. These birds are sometimes seen sitting with wings outstretched, which has been explained as a way to dry the feathers. However, wing spreading is also performed by birds that have been out of the water for hours. Like panting, this may be a thermoregulatory behavior. A juvenile great cormorant is pictured here.



Great Blue Heron

Ardea herodias

Center: This beautiful bird may be seen fishing at the edges of ponds and marshes. It is sometimes seen along the edge of the marsh behind Sand Beach or in the marshes next to Thompson Island. Also look for great blue herons flying overhead near fresh or brackish water.

Top left: Great blue herons typically gather to nest in groups called rookeries. The gangly chicks hatch in large nests made from sticks, which are often situated in dead treetops. Chicks develop rapidly, and typically fledge at about eight weeks of age. This species does not nest on Mount Desert Island itself, but is known to nest on smaller surrounding islands. In recent years, bald eagles have taken over some large heron rookeries.

Top right: In flight, a heron will fold its long neck into an s-shape. This species will sometimes emit a harsh grunting call, especially while flying.

Bottom left: Herons are excellent fishers, with dagger-like bills to grab their prey. It is amazing to watch a fishing heron's slow, patient movements followed by a quick strike.

Bottom right: Herons will sometimes stand on one leg as a way to keep the feet warm beneath feathers. This juvenile can be distinguished from an adult by its streaked appearance and lack of head plumes.



Turkey Vulture

Cathartes aura

Center: Turkey vultures were once rare in New England, but have expanded their range northward within the last quarter century. They are now a fairly common sight on the island, and tend to arrive beginning in late March each year.

Top left: The turkey vulture flies with its wings held upward at a dihedral angle (above the horizontal). This bird also teeters in flight, which is a good way to distinguish it from other birds of prey. Turkey vultures are very efficient fliers, and can soar for hours without flapping. They often save energy by circling on pockets of warm air called thermals.

Top right: Whether vultures have the ability to smell out carrion has been a subject of debate since at least Darwin and Audubon. Most birds have little or no sense of smell, but some argue that vultures may be able to pick up the reek of rotting carrion. This would be useful since they are scavengers, and scent would provide good cues to locate carcasses. The vulture's bare head may be a factor in thermoregulation and/or prevent bits of meat from becoming stuck in feathers.

Bottom left: Turkey vultures will nest in a variety of places, including caves, crevices, cliffs, and abandoned buildings. A vulture will simply scrape a depression in the nest substrate, in which she typically lays two eggs. This species does not nest on Mount Desert Island, but may do so in the future given its range expansion.

Bottom right: Like cormorants, turkey vultures sometimes perch with their wings outstretched. In this species, the behavior is primarily for thermoregulation. Wing spreading is typically done at times when solar radiation is intense, which would maximize heat gain.



Bald Eagle

Haliaeetus leucocephalus

Center: This species has made quite a comeback since its former decline in North America. Pesticides, hunting, and habitat loss once brought the national bird to near extinction. Eagles were common in New England in early colonial times, but were heavily hunted in part because of the threat they posed to domestic fowl. The Town of Vinalhaven offered a five cent bounty for each eagle killed in the early nineteenth century, and by 1948 fewer than 50 pairs nested in Maine.

Following this, DDT contaminated eagle prey and caused females to lay fragile, thin-shelled eggs. Since this pesticide was banned in 1972, the bald eagle has become relatively common and increasing on Mount Desert Island. It is most easily seen along the coast and near waterways.

Top left: Bald eagles breed on Mount Desert Island and many of the smaller islands in surrounding bays. Pairs build massive stick nests, which may weigh up to a ton and span up to eight feet in width.

Top right: Bald eagles can be identified in flight by their long wings, which are held nearly flat compared to the turkey vulture's angled wings.

Bottom left: Bald eagles will capture fish from near the water's surface, and are also scavengers that steal food from other birds. Eagles that nest on offshore islands along the coast of Maine often feed on nesting seabirds. Given the increase from a few dozen to about 2,000 bald eagles in Maine, this may have a serious impact on seabird populations.

Bottom right: Eagles can be aged based on plumage, up until approximately four years of age. The fishing juvenile at left has a dark brown head, suggesting that it is less than a year old. As an eagle ages, it develops more white on the head and tail, and light-colored eyes. The eagle shown here is probably in its third or fourth year, based on its mottled brown and white head. It will acquire adult plumage at about five years of age.



Killdeer (back)

Charadrius vociferus

Semipalmated Plover (front)

Charadrius semipalmatus

Center: These two plover species share similar field marks, but differ in size and habitat choice. The larger and more common killdeer may be seen in open areas, such as soccer fields and golf courses. By contrast, the semipalmated plover prefers shoreline habitat.

Top left: The killdeer has a conspicuous rufous tail, which it fans during courtship. In another breeding display, both members of a pair may spiral high into the air while repeatedly calling. This species is very vocal, and gets its name from its “kill-deer, kill-deer” call.

Top right: In order to distract a suspected predator (or human) from the nest, a killdeer may feign injury. The bird may call, drag its wing on the ground as if broken, and draw plenty of attention to itself while remaining just out of reach. If a large hoofed mammal comes too close, the display is different; in this case, the bird spreads its wings in an attempt to frighten the animal.

Bottom left: A killdeer nest consists of little more than a scrape on the ground, often in gravel. Since these birds often nest in suburban areas, it is important to be cautious if you suspect that a nest is nearby. The eggs are very well-camouflaged, and could easily be stepped on by an unsuspecting person.

Bottom right: The semipalmated plover is named for its partially webbed feet, which may help it to avoid sinking while crossing mudflats. This species is known for its foot trembling behavior, which is used to expose prey. When a plover vibrates one foot on the substrate, this may startle invertebrates from below the surface.



American Woodcock

Scolopax minor

Center: The American woodcock (also known as the “timberdoodle”) is a member of the shorebird group, but it is actually found in woodlands and brushy areas. The species can be seen on Mount Desert Island each spring beginning in late March. Look and listen for these birds at the Kebo Valley Golf Course, Great Meadow, and other open areas bordered by forest.

Top left: The woodcock’s courtship display is a delightful early sign of spring. At dawn or dusk, listen for the male’s sharp “peent!” call to locate a displaying bird. After several calls, the bird will fly high into the air. Its wings make a characteristic whistling sound, which is eventually accompanied by vocal twittering as the woodcock rises higher. Suddenly, the bird becomes silent and usually plummets back to the approximate spot from where it took off. It then resumes the “peent!” call, and may continue this display several times in a row.

Top right: This species has a movable upper bill tip, which enables it to more easily grasp worms below the soil’s surface. Earthworms make up the majority of the woodcocks’ diet.

Bottom left: Woodcock chicks are fed for a few days after hatching, but soon forage for themselves. The chicks’ cryptic coloration allows them to camouflage with surrounding leaf litter. They will “freeze” in response to danger or their mother’s alarm call.

Bottom right: Woodcocks have eyes that are placed very high and far back on their heads. This gives them a wide field of vision so that they can keep an eye out for predators while feeding.



Herring Gull (middle)

Larus argentatus

Ring-billed Gull (front)

Larus delawarensis

Great Black-backed Gull (back)

Larus marinus

Center: All three of these gull species are relatively common in coastal areas around Mount Desert Island. Ring-billed gulls are most often seen further inland than the other two species, and usually constitute most of the “parking lot gulls” that you will see in Ellsworth. By contrast, the herring gull is a typical everyday sight along the shore. Herring and ring-billed gulls may also be seen foraging on lawns, in search of worms.

Top left: The adult herring gull has a prominent red spot on the lower bill. Gull chicks will peck at this spot to solicit food regurgitation by a parent. The adult great black-backed gull also has a red bill spot, which may serve a similar function.

Top right: At low tide, look for gulls dropping mussels along the shore. A gull will fly up, pause to drop its prey on rocks, and land to eat it. Gulls become more efficient in this behavior as they age, probably through trial and error learning. Large numbers of gulls may be seen dropping mussels along the shore of Hull’s Cove and on the bar of Bar Island.

Bottom left: Herring and great black-backed gulls nest on small islands near MDI, such as Great Duck Island, Thrumcap, and Egg Rock. A herring gull clutch consists of one to three eggs, and the downy young are fed by their parents until a few weeks after fledging. Gull chicks often die before fledging, and mortality has been increasing in Maine. In Hancock County, between 1996 and 2008, great black-backed gull numbers decreased by 62 percent and herring gull numbers decreased by 25 percent. This population decline is continuing, and may largely be a result of bald eagle predation.

Bottom right: Gull calling becomes very frequent during the breeding season, which is when the “long call” is most often observed. During this call, a herring gull stretches its neck and emits a series of “kyew-kyew-kyew” notes. Black-backed gulls will also do this, and the latter species’ call is hoarser and lower pitched.



Black Guillemot

Cephus grylle

Center: The guillemot is a common sight along Ocean Drive, off the Bar Harbor town pier, and in other coastal areas around MDI. Guillemots breed on nearby small islands such as Petit Manan and Great Duck, and they may also be seen wintering offshore.

Top left: In flight, note the guillemot's white wing patches and brilliant red feet. Some birders refer to it as a "flying football" because of its plump body shape, but it is a graceful and strong flyer.

Top right: This species has a high-pitched, whistling call that can be heard during the breeding season. Courting guillemots may call while swimming or walking in circles. The bright red mouth lining and feet play a role in courtship.

Bottom left: These birds nest in rock crevices, and lay one to three eggs per clutch. Unlike most other alcids (a group of seabirds which also includes the Atlantic puffin), adult guillemots forage inshore and close to their nest sites during the breeding season. They dive to depths of up to 50 meters, and catch rock gunnel as a primary prey.

Bottom right: During winter, the guillemot's plumage changes dramatically from black and white to a lovely mixture of gray and white. Some fishermen call them "sea pigeons" because of their winter plumage and pigeon-like shape.



Chimney Swift

Chaetura pelagica

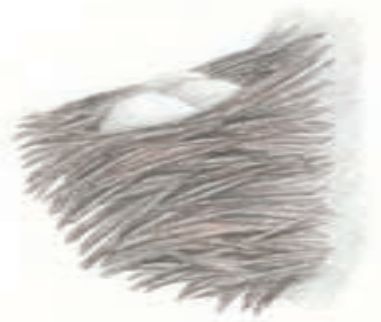
Center: These bat-like, insect-eating birds are typically seen on the wing. Listen for their high-pitched twittering and look for them overhead, especially in suburban areas. Swifts are migratory, but they nest in chimneys and other tall, man-made structures on Mount Desert Island.

Top left: During courtship flight, a pair of chimney swifts will fly together with their wings held stiffly upward. Both individuals twitter during this display.

Top right: Chimney swifts once nested in hollow trees, but as their name implies, they now typically nest inside chimneys. Urbanization has allowed this adaptable species to expand its range. The nest is made of twigs, and attached to a chimney wall using saliva. The female usually lays three to five eggs per clutch. Within a colony, parents and helpers may share nest care duties.

Bottom left: This species uses chimneys both for nesting and roosting. Large groups of swifts may huddle together in roosts that contain thousands of birds.

Bottom right: The chimney swift has pampodactyl feet (the first and fourth toes can rotate forwards and backwards). This allows them to cling to wall edges with all four toes pointing forwards. Rigid tail feathers also aid stability while hanging. However, chimney swifts are unable to perch upright.



Ruby-throated Hummingbird

Archilochus colubris

Center: This species is commonly seen in gardens and woodland edges from spring to early fall. Tiny ruby-throats migrate to Central America for the winter, and must drastically increase their weight before this journey. Some individuals follow the coast of Texas, while others cross the Gulf of Mexico.

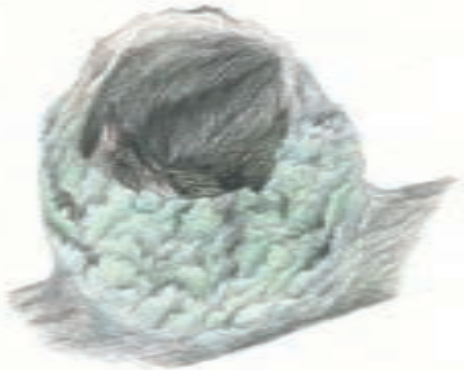
Top left: Unlike males, the female ruby-throated hummingbird lacks a gorget (patch of red feathers on the throat). The gorget's iridescence is produced by refracted light rather than actual pigment.

Hummingbird feeders filled with sugar water provide a good food source for these birds, especially after long migrations. On Mount Desert Island, look for hummingbirds returning to feeders in late April to early May.

Top right: Hummingbirds are very agile, quick fliers, and they can even fly backwards. This species is able to beat its wings 53 times per second! A hummer can also twist its wings in an insect-like manner, which allows it to generate lift on both the upstroke and downstroke. To maintain a high energy level, a hummingbird may consume twice its body weight in nectar and insects every day.

Bottom left: A ruby-throat nest is a small cup, which may be constructed from lichens, milkweed down, leaves, or moss. Spiderwebs and pine resin are used to attach the nest to a branch. One to three small eggs are laid in each brood, and young are fed for about three weeks before fledging.

Bottom right: Like other hummingbird species, the ruby-throat cannot cope well with cold temperatures, even at a resting metabolic rate. If its body temperature remained normal on cold nights, it would lose too much heat to the environment. Instead, it goes into a state of torpor in which the body temperature and metabolic rate are reduced. This allows a hummer to save energy and survive on stored food during the night.



Belted Kingfisher

Megaceryle alcyon

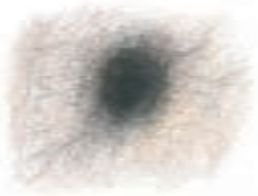
Center: This beautiful bird may be seen perched at the edges of freshwater ponds, such as Jordan Pond and Little Long Pond. It tends to be rather noisy and conspicuous, especially in flight.

Top left: Both male and female belted kingfishers have a loud, rattling call. This call can have a variety of functions, including territoriality. If a kingfisher is alert or excited, it will raise its crest feathers as shown here. In a more relaxed state, it will lower the crest.

Top right: The kingfisher hunts by plunge diving, either from a perch or from a hovering position in the air. Its long, spear-like bill works well for grabbing slippery fish underwater. After a fish is caught, the bird returns to its perch and immobilizes the prey by hitting it against a branch or stabbing it. Indigestible remains from the swallowed fish are regurgitated in a pellet.

Bottom left: A kingfisher nest consists of a burrow dug into the side of a muddy bank. The parents use their bills and feet to dig this hole. In an interesting role reversal compared to many bird species, the male is usually more involved in nest duties than the female.

Bottom right: Unlike most bird species, the male kingfisher is less colorful than the female. He is a bicolored slaty blue and white, without the female's rufous breast band.



Downy Woodpecker (left)

Picoides pubescens

Hairy Woodpecker (right)

Picoides villosus

Center: These two species are relatively common on Mount Desert Island, particularly in open forest areas, along woodland edges, and at residential birdfeeders. In the spring, listen for males announcing their territories by drumming on trees, telephone poles, and even aluminum siding on houses. These species create round holes when foraging for insects in trees, which can be distinguished from the pileated woodpecker's rectangular holes. You can attract downy and hairy woodpeckers to your backyard by setting out suet feeders, especially during the winter.

Top left: Woodpeckers typically have a distinctive, up-and-down rolling flight. On the downstroke, they tend to hold the wings close to the body for slightly longer than some other bird species. This causes a woodpecker to momentarily drop, and then recover on the upstroke.

Top right: Like other woodpeckers, these two species nest in tree cavities. Both species will also use tree cavities for roosting during the non-breeding season. This drawing shows a juvenile downy woodpecker surveying its surroundings from a nest hole, and perhaps getting ready to take its first flight.

Bottom left: Many bird species have anisodactyl feet, with three toes pointing forwards and one toe (called the hallux) pointing backwards. By contrast, woodpeckers have zygodactyl feet. This means that two toes point forwards and two toes point backwards. This allows a woodpecker to strongly grip tree trunks. Several other taxonomic groups of birds, including owls and parrots, also have zygodactyl feet. Small differences in foot structure between owls, parrots, and woodpeckers suggest that each group independently evolved this toe arrangement via convergent evolution.

Bottom right: The woodpecker tongue is attached to very long, modified hyoid bones, which branch into two forks that extend around the back of the skull. The tongue thus wraps around the woodpecker's skull, and can extend well beyond the bill to catch grubs and other insects. The tip of the tongue is also very sensitive in order to detect prey, and it is barbed and sticky to enhance capturing ability.

Note the tufts of feathers at the base of this downy woodpecker's bill. These feathers prevent woody debris from entering the nostrils during excavation.



Eastern Phoebe

Sayornis phoebe

Center: The phoebe is a familiar backyard bird with a bold and spunky demeanor. This species is a common sight along forest edges and in clearings. Listen for its emphatic “fee bee, fee bay!” song, which is an early sign of spring in late March. While most passerine birds learn their songs, flycatchers are born with an instinctive ability to sing.

Top left: Phoebes often perch in conspicuous locations, such as this post. They tend to flick their tails almost constantly, which is a useful behavioral field mark. The function of tail flicking is uncertain, but phoebes increase the rate of flicking when they have spotted a predator. The behavior may be a signal to tell predators that they have been seen. Predators also may learn to associate tail flicking with alert, difficult-to-catch phoebes that are not worth the energy of pursuit.

Top right: Like other flycatchers, phoebes tend to catch insects in midair while hovering. The phoebe usually sits in one location, flies out to catch its prey, and returns to its perch.

Bottom left: Phoebes often nest on man-made structures, such as bridges and rafters. A phoebe nest has repeatedly been in use on the informational kiosk at Sieur de Monts Spring. The phoebe’s cup nest is generally constructed using moss, lichens, grass, and mud. The inside of the nest is often lined with down.

Bottom right: Like some other insect-eating birds, the phoebe has conspicuous rictal bristles. These are whisker-like feathers at the base of the bill. It was once thought that rictal bristles help to “scoop” insects into the bill. Researchers now suspect that these feathers protect the eyes from flying insects, much like our own eyelashes help to keep out dust. They may also be used to provide tactile information. Note the broad bill on this phoebe, which effectively grabs insects from the air. A small hook at the bill tip likely aids prey capture.



Blue-headed Vireo (bottom)

Vireo solitarius

Red-eyed Vireo (top)

Vireo olivaceus

Center: These vireos may be seen on Mount Desert Island during both the migration seasons and the breeding season. The blue-headed vireo arrives as early as late April, while the red-eyed vireo typically returns in May.

Top left: Unlike most other vireo species, the blue-headed vireo prefers coniferous habitat during the early breeding season. Since the species arrives before deciduous trees have leafed out, early breeders tend to nest in conifers and are strongly associated with hemlock. Unfortunately, a hemlock-killing pest called the woolly adelgid is threatening vireo nesting habitat.

Top right: The red-eyed vireo is known for its highly complex song. A male may have about 50 song variations in his repertoire. Amazingly, he may sing over 22,000 short bursts of vocalizations in a single day! Look for this species high in the treetops, where it may sing tirelessly.

Bottom left: Red-eyed vireo nests often include strips of material from wasp nests. This material may deter predators that have learned to associate it with stinging insects, especially since vireo nests are shaped similarly to wasp nests.

Bottom right: While the red-eyed vireo primarily eats insects during the breeding season, its diet changes to mainly fruits and berries during the late summer to winter. Berries may comprise over 40% of this species' diet during fall migration.



American Crow (front)

Corvus brachyrhynchos

Common Raven (back)

Corvus corax

Center: The American crow is an adaptable bird found in virtually every habitat on Mount Desert Island—from parking lots, to forests, to the rocky intertidal. The larger raven is less common, but it may be seen occasionally in a variety of habitats. Both species are highly intelligent and social. Although some of us may take crows for granted, their complex behavior is fascinating to observe.

Top left: Gawky crow fledglings are often seen and heard in the fall, soon after they have left the nest. Young crows noisily follow their parents and beg for food until they become independent. A fledgling can be told apart from an adult by its more nasal calls, its blue rather than brown eyes, and pink edges to the bill gape.

Top right: Both crows and ravens are highly acrobatic fliers, and may be seen tumbling and chasing through the air in a seemingly playful manner. Raven play may also involve hanging upside down and engaging in tug-o-war.

In flight, the raven can be distinguished from a crow by its long, wedge-shaped tail, which is distinct from the crow's more rounded tail. Ravens also tend to have a more gliding flight than crows, with fewer wingbeats.

Bottom left: Corvids (the taxonomic family of birds that includes crows and ravens) may join together to mob raptors such as this osprey, but the purpose of mobbing is not always clear. It may sometimes function to chase potential predators away from the corvids' nests.

Bottom right: Both crows and ravens have a complex repertoire of calls. Some of these calls seem to have clear meanings, such as the "knocking" used by female ravens to assert their dominance. The "yell" is used by ravens to recruit other birds to a carcass. Although this may seem strangely altruistic, juvenile ravens have a purpose in recruiting others to food. Recruited groups of young birds can overwhelm resident adults at a carcass, which allows the juveniles to gain access to food that might otherwise be defended.

Ravens are known for their ability to mimic sounds and even human speech. Certain mimicked sounds may be associated with particular individuals, in a similar manner to our own use of names. We have only begun to understand the wide variety of meanings behind different calls, and there are many crow and raven vocalizations that remain mysterious to us.



Tree Swallow

Tachycineta bicolor

Center: In early spring, these swallows are a welcome harbinger of warmer days. Look for them in fields, clearings, and above ponds as they swoop acrobatically in pursuit of insects.

Top left: Tree swallows are cavity nesters, and will also use nest boxes. A single pair may defend multiple nest sites, and this behavior potentially serves several functions. Such defense may provide additional sites in case of nest failure, allow a chance for males to mate with multiple females, or reduce the risk of a single site being usurped by another pair. Tree swallows also aggressively defend their nests from predators, and will even swoop at humans. The species is highly vocal, with a variety of gurgling and chattering calls.

Top right: Like other swallows, this species has an excellent ability to maneuver through the air. Each long wing ends abruptly in a point, which reduces drag during flight. This is facilitated by the small wingtip area, which in turn reduces the size of air vortices (small "whirlpools" of air that reduce the efficiency of the birds' wings). If the wingtip area were larger, this would enlarge the wingtip vortices and increase drag.

Bottom left: This species often lines its nest with the feathers of other birds. When feathers are added to nests, this increases chick growth rate by providing insulation.

Bottom right: During fall migration, tree swallows gather to migrate together during the day. At night, migrating swallows roost in flocks that may contain anywhere from a few to hundreds of thousands of individuals!



Black-capped Chickadee

Poecile atricapillus

Center: This bird is a curious, seemingly cheerful species. It is a common visitor to backyard feeders, and is also seen in a variety of habitats year-round. Even on the coldest winter days, chickadees can be found busily flitting about in the treetops.

These birds are typically seen in pairs during the breeding season. During the non-breeding season, they have a social hierarchy among feeding flocks in which pair bonds are sometimes maintained. Higher-ranking pairs tend to have more access to food and greater fitness than lower-ranked pairs.

Top left: Chickadees prefer feeders filled with black oil sunflower seed, as well as suet feeders. Winter is the best time to feed them, when they need more energy to stay warm and fuel an increased metabolic rate.

Other birds such as the tufted titmouse (pictured here), nuthatches, kinglets, and woodpeckers often flock together with chickadees. This allows them to follow each other to food sources, and provides more eyes to spot predators. Other species will also respond to the chickadee's alarm call by mobbing. Subtle variations in the "chick-a-dee" call convey information about the level of threat presented by a predator. This information is then used to direct mobbing intensity by the flock.

Top right: This species is occasionally leucistic in a pied pattern, meaning that the pigment melanin is absent from patches of the feathers. Pied leucism is found in a variety of other birds as well, but the condition is rare. When seen, it can create a puzzling identification challenge for birders.

Bottom left: Compared to some other birds, chickadees are very neat and patient eaters. A chickadee will typically take one seed, find a perch, and hammer at the seed's shell until it cracks open. If you watch them closely, you may also notice chickadees storing seeds in bark crevices. This behavior is most common during fall and winter, when food may be scarce. The chickadee has a remarkable memory, and can find food caches weeks after hiding them.

Bottom right: These acrobatic birds often hang upside down while feeding. Such maneuverability allows them to find a variety of food sources, such as insects hiding in bark crevices.



Red-breasted Nuthatch (left)

Sitta canadensis

White-breasted Nuthatch (right)

Sitta carolinensis

Center: Nuthatches are the only North American birds that regularly move down tree trunks headfirst. Look for them foraging on trees and visiting backyard birdfeeders, especially feeders with suet. They use sharp claws and especially the elongated hallux (back toe) to easily grip bark. These acrobatic little birds may be found among mixed flocks of chickadees, and they are year-round residents on Mount Desert Island.

Top left: Like a variety of other birds, in both nuthatch species male birds will feed their mates to strengthen the pair bond. This may also compensate for some of the female's energy expended in producing eggs. Each species has particular calls, poses, and flight patterns associated with courtship.

Top right: The white-breasted nuthatch has a repeated "yank-yank-yank" call, as well as a single-note "yank" call that is given frequently. Red-breasted nuthatches sound similar, but have a more emphatic call and slower call rate. The latter species sounds a bit like a toy trumpet.

Bottom left: The red-breasted nuthatch prefers coniferous forest for nesting, while the white-breasted nuthatch is more common in deciduous forest. The latter species is especially common in areas with nut-bearing trees such as oaks.

Bottom right: Like the black-capped chickadee, nuthatches will store seeds for later. Since nuthatches have longer bills than chickadees, they are able to hide seeds in more difficult to reach locations, such as deep bark crevices. This helps to prevent cache pilfering by other birds.



Golden-crowned Kinglet (bottom)

Regulus satrapa

Ruby-crowned Kinglet (top)

Regulus calendula

Center: These tiny birds are bundles of energy, often found hopping and flitting around in forest treetops. Both species tend to be found in flocks during the migration and non-breeding season. The presence of a kinglet flock can be detected by their high-pitched, squeaky calls.

Top left: Since kinglets are very small, they must forage almost constantly to maintain their high metabolic rates. Kinglets almost never sit still during the day, and it can be challenging to get a good view of them because they are always bouncing around. During the winter, golden-crowned kinglets like this one must be particularly efficient in their foraging in order to keep warm. They are known to feed on geometrid moth caterpillars during the winter. While the golden-crowned kinglet may be found wintering on Mount Desert Island, ruby-crowned kinglets are only found here during the migration and breeding seasons.

Top right: The female golden-crowned kinglet has a completely yellow crown, without the male's orange center patch. This species can be quickly told apart from the ruby-crowned kinglet by its striped rather than unmarked face.

Bottom left: When courting females and in aggressive interactions with other males, the male golden-crowned kinglet flares his orange crown. Most of the time, this orange patch is more concealed.

Bottom right: The female ruby-crowned kinglet usually lacks a red crown. The species can be distinguished from the golden-crowned kinglet by its white eye ring and unstriped face.



American Robin

Turdus migratorius

Center: This familiar species is often seen on lawns, soccer fields, and other open suburban areas during the breeding and migration seasons. Large flocks may be seen in early spring, when they group together to migrate. Movements tend to be sporadic and are dependent on food availability and weather. The robin is easily recognized by its reddish orange breast and belly, which is brightest and most obvious in the male.

Larger and darker individuals—also known as “Newfoundland” or “black-backed” robins—may be seen on Mount Desert Island as they continue their northward migration. These individuals breed in eastern Canada, and some pass through Maine along their journey.

Top left: In fall and winter, robins may occasionally be seen in flocks feeding on berries and other fruit. This dietary transition occurs as invertebrates become more difficult to find late in the year.

Top right: The female robin lays a clutch of three to seven light blue eggs. The nest is cup-shaped and made from grasses, twigs, and sometimes litter such as string. Mud is often used to hold the nest’s shape.

Bottom left: The juvenile robin has a spotted breast and belly, unlike the adult’s unmarked underside.

Bottom right: During the breeding and spring migration seasons, adult robins feed mainly on worms and insects. Nestlings have a similar diet, which consists largely of larvae and worms. Robins seem to rely on visual cues to locate earthworms. When a robin cocks its head towards the ground, this likely gives it a better view of a worm end in its burrow. Contrary to popular belief, it is unlikely that robins use auditory cues to detect worms.



Gray Catbird

Dumetella carolinensis

Center: Catbirds are fairly common from spring until fall, and are most easily noticeable when they return in mid-spring. A single catbird may perch in a tree or shrub and sing its jumbled song for hours. Its shorter call, which sounds like a mewing cat, has earned this species its name. The adult catbird is gray overall, with a dark crown and rufous undertail coverts (feathers under the tail).

Top left: The catbird is known for its often aggressive behavior, especially when defending its territory and nest. During aggressive encounters, it may fluff its feathers, fan the tail, and call noisily.

Catbirds are also known to destroy the eggs of other passerine species. The reason for this behavior is unknown, since catbirds do not seem to use these eggs as a food source. Unlike most other passerines, catbirds will usually eject brown-headed cowbird eggs that are laid in their nests. The cowbird lays its eggs in the nests of other birds, and host parents often care for the resulting chicks. However, catbirds are able to recognize these foreign eggs in almost all cases.

Top right: This species has a highly complex song. As a member of the mimid family (which includes mockingbirds) it is able to imitate a variety of other bird songs and sounds. A male catbird's rate of song production may correlate positively with his rate of chick feeding, thus providing an honest signal for females.

Bottom left: Catbirds prefer shrubby undergrowth habitat, especially for nesting. The species' numbers have increased as gardens and fencerows have created more suitable nesting habitat.

Bottom right: The juvenile catbird can be identified by its pale edges to the bill gape, mostly gray undertail coverts, and loosely disheveled appearance of the plumage.



Cedar Waxwing

Bombycilla cedrorum

Center: Waxwings are known for their tendency to flock, high-pitched calls, and frugivorous (fruit-eating) diet. The crest of head feathers is raised during excitement or as a sign of alertness, and lowered when the bird is more relaxed. Notice the namesake red waxy tip on each secondary wing feather. This species' sleek brown plumage distinguishes it from the grayer, much less common bohemian waxwing, which is an occasional winter visitor to Mount Desert Island.

Top left: This species typically has a yellow tail tip, but the coloration can change depending on diet. If a cedar waxwing feeds on an invasive species of honeysuckle, its tail tip may become orange. This is caused by a red carotenoid pigment called rhodoxanthin, which is found in these honeysuckle fruits.

Top right: Cedar waxwings are almost always found in flocks, often perched in and around fruit trees. Flocks will wander extensively in search of locally abundant food sources.

Bottom left: This fledgling cedar waxwing can be recognized as a young bird by its streaky belly, brownish rather than black chin, and lack of red waxy tips. Like other passerine fledglings, it also has a soft bill gape (rather than the hardened gape of an adult) so that its mouth can open widely while being fed. Its appearance is disheveled as new juvenile feathers are growing.

Bottom right: The cedar waxwing has a voracious appetite for berries and other fruits, such as these crabapples. If a waxwing eats a large amount of fermented fruit at once, it may stagger around and become disoriented in a "drunken" state.



American Redstart (left)

Setophaga ruticilla

Yellow Warbler (right)

Setophaga petechia

Yellow-rumped Warbler (bottom)

Setophaga coronata

Center: Like many other warblers, these species are brightly colored and have beautiful songs. They migrate as far south as Central and South America for the winter, and return to North America to nest. These species may be found in a variety of habitats, especially at forest edges. When singing, they are often found in treetops, but may feed at various vegetation heights.

Top left: The yellow warbler's song typically sounds a bit like "sweet, sweet, I'm-so-sweet!" An individual male will sing several song variations, and song also varies between individuals. In many warbler species, song type varies depending on context.

Top right: Female and sub-adult yellow warblers have little to no red streaking on their bellies, unlike adult males. There can be wide variation in plumage between individuals of this species.

Bottom left: Female and immature yellow-rumped warblers have browner plumage overall, compared to the male's grayish blue coloration.

There are six subspecies of yellow-rumped warbler, one of which is commonly found on Mount Desert Island. These subspecies can be divided into two categories based on appearance—the myrtle warbler and Audubon's warbler. The myrtle warbler is found on the east coast and has a white throat and black cheeks, while the western Audubon's warbler has a yellow throat and gray cheeks.

Bottom right: The female American redstart is gray and yellow, while the male is black and orange. Immature males are similar to females in appearance, but often have black spots in some areas. Males often fan their brightly colored tails, which appears to flush insects while foraging.



Song Sparrow (top)

Melospiza melodia

Swamp Sparrow (bottom)

Melospiza georgiana

Center: The song sparrow is quite common on Mount Desert Island during the nesting season, while the swamp sparrow is less common. Both species prefer undergrowth habitat, and the swamp sparrow tends to be found in wet areas such as Great Meadow, near Sieur de Monts Spring. The song sparrow is more of a generalist, and can be found in a wide variety of brushy habitats.

Top left: Like some other passerines, individual song sparrows develop “dialects” which may improve identification of individuals and can also optimize sound transmission in different habitats. A young song sparrow may learn a particular song type from older conspecifics in neighboring territories. The song typically begins with several widely spaced notes, followed by a jumble of quick notes.

Top right: The swamp sparrow has a slow, trilled song that stays at the same overall pitch. This species also learns its song, and is highly selective in its ability to learn song patterns. In a study of swamp sparrow song learning, individuals would only imitate syllables from their own species’ song. When presented with song sparrow syllables that were very similar to swamp sparrow song, the birds did not imitate them.

Bottom left: Song sparrows often hop about and feed on the ground. Scatter some seed on the ground or on a platform to encourage this and other sparrows to visit your yard.

Note the thickly streaked belly and large dot in the center of the song sparrow’s breast. These are good identifying field marks.

Bottom right: The song sparrow lays a clutch of three to six eggs in a cup-shaped nest. It often nests low in bushes or even on the ground, in well-concealed locations. Multiple broods may be raised within one nesting season.



Northern Cardinal
Cardinalis cardinalis

Center: This bright species is fairly common in brushy undergrowth on Mount Desert Island. It is a familiar feeder visitor, and prefers striped or black oil sunflower seed that is scattered on the ground or on a platform. Cardinals are year-round residents here, and it is a beautiful sight to see scarlet males contrasting with surrounding white snow.

In this species, the plumage actually becomes brighter as feathers wear down. A male with freshly grown feathers appears to have a grayish cast over his plumage. As the gray tips wear off in the spring, this reveals brighter red coloration beneath.

Top left: As early as January, cardinals are among the first birds to begin singing. The species has a variety of songs, all of which tend to be loud and include “whoit, whoit” notes. Females of this species will also sing occasionally. Males sing while defending territories, but females do not begin singing until just before nesting. Duets between mated pairs may function in synchronizing reproductive activities or pair bonding.

Top right: The juvenile appears similar to an adult female, but lacks the adult’s defined black face mask. The bill is gray, and turns red as the bird ages.

Bottom left: Feather mites and abnormal molting patterns may cause some cardinals to go “bald-headed.” This feather loss typically occurs in summer and fall, when birds are undergoing molt.

Bottom right: Although female cardinals lack the brilliant red plumage of the male, they are still beautiful in a more subdued way. The female is beige, with red points on the crest, wings, and tail. Like the adult male, she has a red bill and black face mask.



Red-winged Blackbird

Agelaius phoeniceus

Center: During the breeding season, red-wings typically establish territories in marshes or other open areas. Males make their presence clear by displaying and calling loudly. During migration, these birds will gather in flocks. They are among the earliest migrants to return to Mount Desert Island in the spring, and may be seen in flocks mixed with common grackles. Seawall and Great Meadow are some good spots to observe red-winged blackbirds.

Top left: Red-winged blackbirds will vigorously defend their territories from intruders, including raptors such as this American kestrel. Larger birds are considered a potential threat to eggs and nestlings. As the size of a male's harem (and thus the number of nests that contain his offspring) increases, his aggressiveness in driving predators away typically increases.

Top right: While singing, a male red-winged blackbird will puff his feathers and spread his wings and tail. This functions to attract females and drive away other males. In spreading the wings, he reveals brilliant red and yellow patches known as epaulets.

This species is highly polygynous, meaning that a male will often have multiple mates. One male may have as many as 15 females nesting in his territory! A female's choice of mate can be affected by a variety of factors, including territory quality, male reproductive experience, and male body size.

Bottom left: A pair will typically nest among wetland vegetation or shrubs, weaving the nest material around stems or branches. The female lays a clutch of three to five eggs.

Bottom right: The female is strikingly different in appearance from the male. Unlike his glossy black plumage with red and yellow shoulders, the female is streaked brown. This plumage characteristic may have evolved to provide camouflage during nest incubation.



American Goldfinch (top)

Carduelis tristis

Pine Siskin (bottom)

Carduelis pinus

Center: These finches can be found visiting feeders, sometimes in large flocks. Both species are very social. The American goldfinch is far more common, and is most often seen in open and suburban areas. Pine siskins can be found at forest edges, and tend to prefer conifers.

Top left: During the winter, male American goldfinches become similar in appearance to the females. Their brilliant yellow feathers are replaced with drab brownish plumage. The wing feathers from the previous autumn remain into spring, and their whitish edges wear away until the wings look almost completely black.

Top right: Goldfinches are sometimes rather aggressive at birdfeeders. A goldfinch will often drive a competitor away by spreading its wings and opening its bill.

Bottom left: Goldfinches have a fondness for thistle seed, and will also feed on a variety of other seeds. Thistle seed can also be purchased to feed birds, which is the best way to attract the species to your yard. Notice the short, conical bill that is typical of finches. This allows them to efficiently crack seeds.

Bottom right: Pine siskins also eat seeds, and will feed on a variety of seed types. These include conifers, alder, birch, and thistle. During migration and winter, large flocks may gather at birdfeeders.



Text References

The following sources were used while researching information for the guide pages. These letters represent the text areas for which sources were used:

C= center; TL= top left; TR= top right; BL= bottom left; BR= bottom right

Pers. obs.= personal observation; Pers. comm.= personal communication

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Page 62- Gray Catbird

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Page 64- Cedar Waxwing

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Page 66- American Redstart, Yellow Warbler, and Yellow-rumped Warbler

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Page 68- Song Sparrow and Swamp Sparrow

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Page 70- Northern Cardinal

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Page 74- American Goldfinch and Pine Siskin

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