

U.S. Fish & Wildlife Service

Seabirds of the Maine Coast

An Island Owner's Guide



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SEABIRD ISLANDS**

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An Island Owner's Guide



Maine Coastal Islands National Wildlife Refuge
National Wildlife Refuge System
U.S. Fish and Wildlife Service
Department of the Interior

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Seabirds in Maine

Seabirds spend the majority of their lives at sea, returning to coastal islands each spring to nest and raise their young. Sand and gravel covered beaches, grassy meadows and shrubs, and boulder-lined shorelines support up to 12 species of seabirds (i.e. common, Arctic, and roseate terns; Atlantic puffin; razorbill; black guillemot; Leach's storm-petrel; great black-backed, herring, and laughing gulls; double-crested and great cormorants). These seabirds need nesting islands that are free from predators and human disturbance. A single disturbance to a nesting colony can cause the loss of eggs, chicks, or permanent desertion of the nesting colony.

As human populations and development pressures continue to increase, seabirds are faced with many challenges. Historically, seabirds moved among islands as food resources, predation, and habitat characteristics changed. Today, when conditions on an island become unsuitable for nesting seabirds, the birds may no longer have the ability to move to a new nesting island. Many islands have been developed and no longer provide suitable habitat, are subject to excessive recreational pressures, or support populations of predators. Changing marine food webs and competition with commercial fisheries may also limit the seabirds' ability to locate fish to feed their young. Recently, researchers have documented high mortality rates in some Maine seabird colonies due to starvation.

Conservation agencies have worked for over 25 years to restore Arctic, common, and roseate terns, Atlantic puffin, and razorbills to Maine islands. Several of these species have been restored to historic breeding islands and now occur in higher numbers than previously recorded. Unfortunately, the birds are highly concentrated on 5-11 islands and remain vulnerable to predation, disease events, and oil spills.

The purpose of this guide is to promote seabird awareness and to serve as a resource for island owners interested in enhancing or protecting seabirds and their nesting habitat.

Petit Manan Light with laughing gulls. Petit Manan Island is one of 11 seabird island restoration sites in Maine.

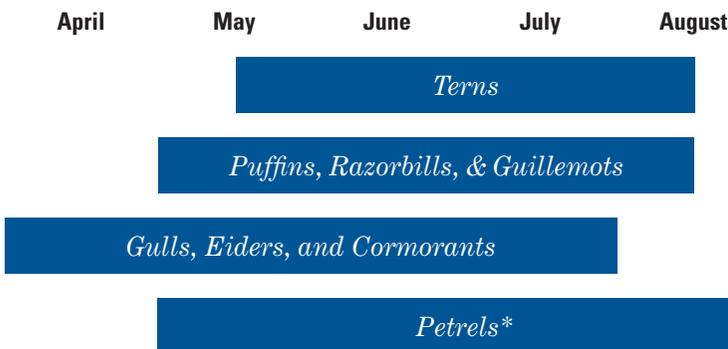
Seabirds and Climate Change

Climate change is predicted to change the temperature, sea-level, and salinity of the Gulf of Maine. Significant storm events may also become more common. These environmental changes could alter the marine food web that supports many important fish, shellfish, and seabird populations in the region. In particular, seabirds possess traits that make them sensitive to effects of climate change, such as low reproductive potential; nesting on low-lying islands that may be flooded by rising sea levels; strong fidelity to breeding sites; and reliance on marine systems that may fluctuate greatly depending on environmental conditions. To provide seabird populations with the best chances of adapting to climate change, we must reduce existing threats.

Life History and Identification

Knowing how to identify seabirds and understanding their life history requirements are crucial elements in any protection effort. Maine's seabirds spend most of their lives at sea and then migrate to the state's rocky coastal islands to find a mate and breed. Some species of seabirds form large, conspicuous colonies, while others come and go from the colonies at night to avoid detection by predators. In general, the seabird nesting season in Maine begins in early April and continues through late summer.

Seabird use of Maine's Islands



* Petrel chicks may remain in burrows until late October

Terns

Common, Arctic, and Roseate Terns

All three species of terns winter in the southern hemisphere and return to Maine each May to raise their young. They lay 1-3 eggs in shallow depressions on the ground. Common and Arctic terns generally prefer to nest in sparse vegetation or on open ground. Terns will be excluded from nesting when the vegetation becomes too tall and thick. Roseate terns select nest sites with extensive overhead cover, including rocks, vegetation, or debris that has washed ashore.

The U.S. Fish and Wildlife Service works in partnership with the Maine Department of Inland Fisheries and Wildlife, National Audubon Society, several universities, and private researchers. These members of the Gulf of Maine Seabird Working Group (GOMSWG) have worked for years to provide the seabirds with predator-free nesting islands. The birds also need an abundant supply of fish to feed to their young. On several managed tern colonies, we observe how often and what species of fish are fed to tern chicks. Our research has shown that herring and hake make up 40-70 % of the terns' diet. In some years, terns may not be able to locate sufficient fish to feed their chicks. The adult terns become desperate to feed the young birds and will try to feed them a variety of invertebrates or fish that are too large for the chicks to swallow. Managers are concerned that reductions in the availability of forage fish are directly affecting the survival rates of seabirds nesting throughout the Gulf of Maine.

What about Least Terns?

Least terns have a more southerly distribution and historically only nested on a few beaches in southern Maine. In recent years, least terns have experienced significant predation, human disturbance, and flooding during storm events. In the past five years, more than 30% of Maine's least terns moved to a coastal island, where efforts are underway to control predators.

Federal and state laws protect seabirds and marine mammals from disturbance and harassment. Please help us protect these species for future generations.



Common Tern

State-listed special concern

Estimated Population in Maine

8,100 pairs nesting on 16 islands

Did you know? By the end of the 19th century, humans nearly eliminated common terns from the Atlantic coast for the millinery (hat making) trade. Common terns spend the winter in the Caribbean and South America. Common terns have a orange/red bill with a dark tip.



Arctic Tern

State-listed threatened

Estimated Population in Maine

2,900 pairs nesting on 7 islands. In the lower 48 states, over 95% of Arctic terns nest on four islands in Maine.

Did you know? Arctic terns have the longest known migration of any animal, flying more than 40,000 miles each year. They nest in Maine, but spend our winter in Antarctica. Look for the Arctic's solid red bill to distinguish it from other terns.



Roseate Tern

State and federal-listed endangered

Estimated Population in Maine

151 pairs nesting on 4-5 islands. Two islands support 95% of roseate terns in Maine.

Did you know? Roseate terns may be less defensive of their nests than Maine's other tern species and often rely on common and Arctic terns in the surrounding colony to defend them. Roseates have a mostly black bill.

Threats to Maine's Seabirds

Marine wildlife are extremely vulnerable to both natural and human-caused changes to their environment. Threats include:

- Habitat loss and destruction
- Disturbance
- Predation
- Changes in abundance and distribution of forage fish
- Global climate change
- Contaminants including oil spills, pesticides, and non-point source pollution
- Discarded plastic and fishing gear



Alcids

Atlantic Puffin, Razorbill, Black Guillemot, and Common Murre

The term “alcid” is used to describe this group of marine birds that spend the majority of the year “at sea”, only coming to land to nest. Alcids are colonial nesters, and will also form large concentrations on loafing ledges and on the water. They generally lay their eggs in burrows or crevices, and fly with rapid wing beats, without gliding or soaring. Maine is the only state to support breeding populations of Atlantic puffins and razorbills. It takes about five years for the birds to reach maturity and they only lay one egg per season.

Puffins and razorbills feed predominantly on herring and hake, catching the fish by propelling themselves underwater with their wings. Puffins can dive up to 60 meters to find fish while razorbills can dive to 120 meters. Both species can capture and carry multiple fish in their bills before returning to their rapidly growing chicks.

Black guillemots are the most abundant species of alcid in Maine, and forage in water up to 30 meters deep. Unlike puffins and razorbills, guillemots spend the winter closer to their breeding islands and are readily observed from the mainland. It has been difficult for managers to obtain an accurate estimate of the breeding population in Maine because the birds nest on over 160 islands and it is unclear if birds observed near an island are actually breeding on that island. Guillemot burrows can be difficult to locate and are frequently on steep cliffs or inaccessible ledges. During survey efforts we document the number of adults observed on or adjacent to breeding colonies.

Common murrelets have recently begun to visit several seabird nesting islands in Maine. In 2009, the staff on Matinicus Rock confirmed the first breeding attempt by common murrelets in Maine in over 100 years. Common murrelets can dive to 100 meters to find fish and invertebrates.

Atlantic Puffin

State-listed threatened

Estimated Population in Maine

1,000 pairs nesting on 5 islands

Did you know? Atlantic puffins nest on five islands in the United States, and all of the islands are in Maine. In an effort to “jump start” puffin restoration efforts in Maine, National Audubon Society brought puffin chicks from Newfoundland to Maine and hand raised them on several islands.



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Razorbill

State-listed threatened

Estimated Population in Maine

600 pairs nesting on 6 islands

Did you know? Razorbills nest on six islands in the United States, and all six are in Maine. Young razorbills leave their burrows when they are approximately 18 days old, and are raised at sea by their fathers.



© John Anderson

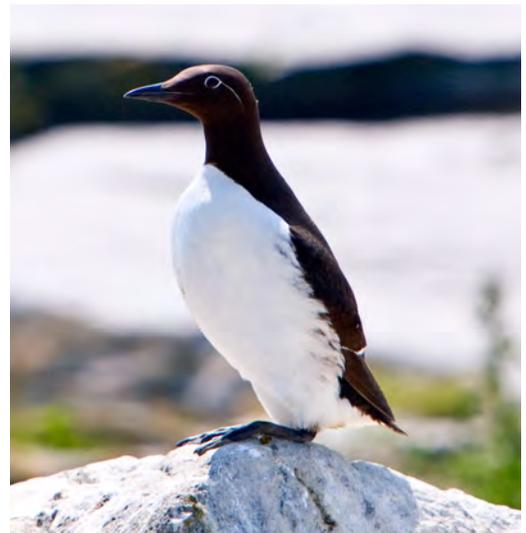
Common Murre

Protected migratory bird

Estimated Population in Maine

Recently documented first nesting attempt in the state

Did you know? Murres last successfully nested in Maine in 1883, but they have visited several islands in recent years. One pair attempted to nest on a Refuge island in 2009. Murres generally have a solid black head, but some birds are “bridled” and have a white eye-ring and white line extending away from their eye.



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To provide marine bird populations with the best chances of adapting to climate change, we must minimize existing threats.



Linda Welch / USFWS

Black Guillemot

Protected migratory bird

Estimated Population in Maine

Approximately 12,000 adults recorded near 160 islands

Did you know? Unlike other alcids, guillemots can lay two eggs per year and they forage closer to their breeding islands. Guillemots feed on small fish and eels found on the ocean floor.



Seth Sheldon/USFWS

Black Guillemot (winter plumage)

During the winter months, black guillemots take on a mottled black and white appearance.

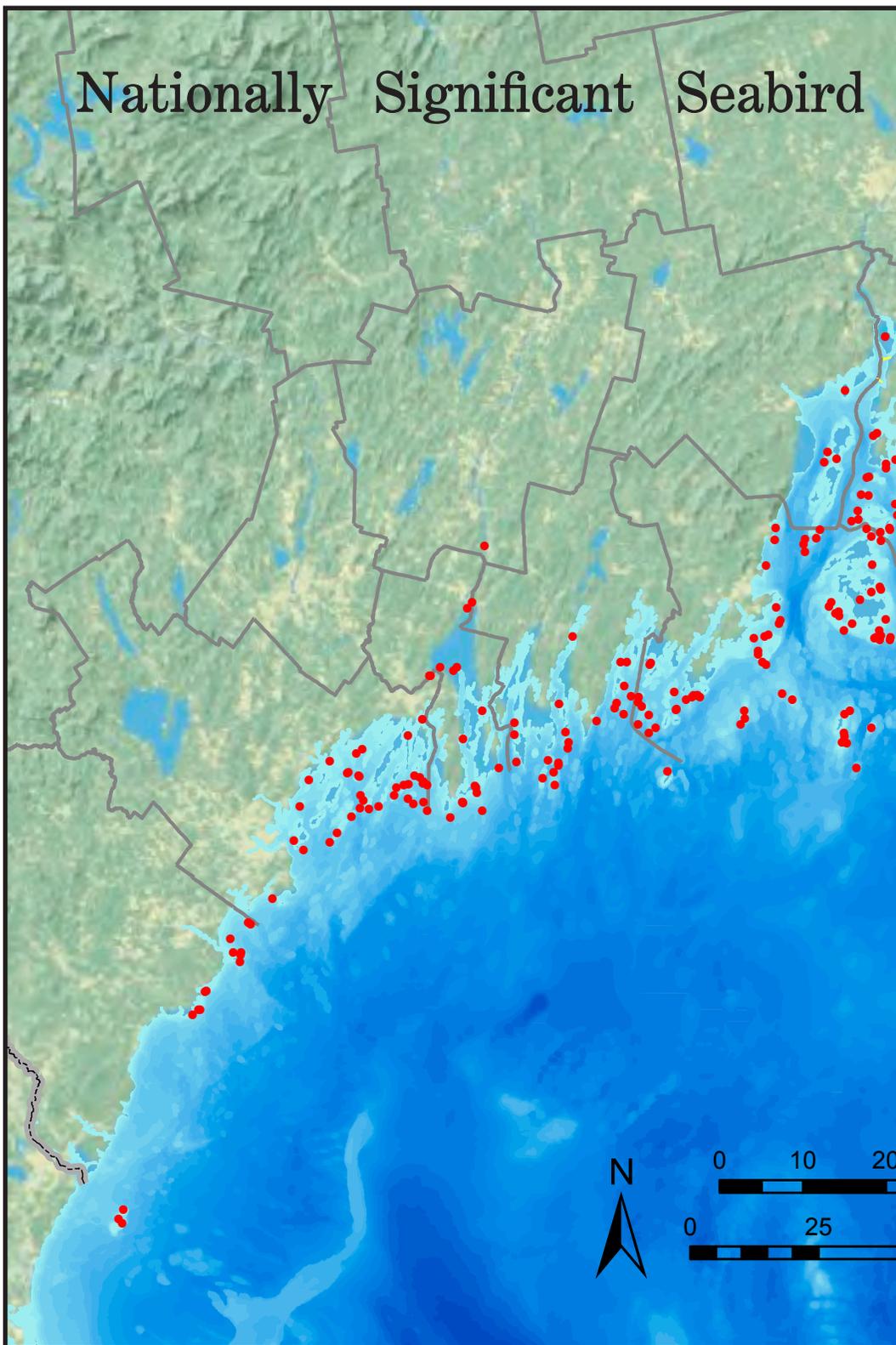


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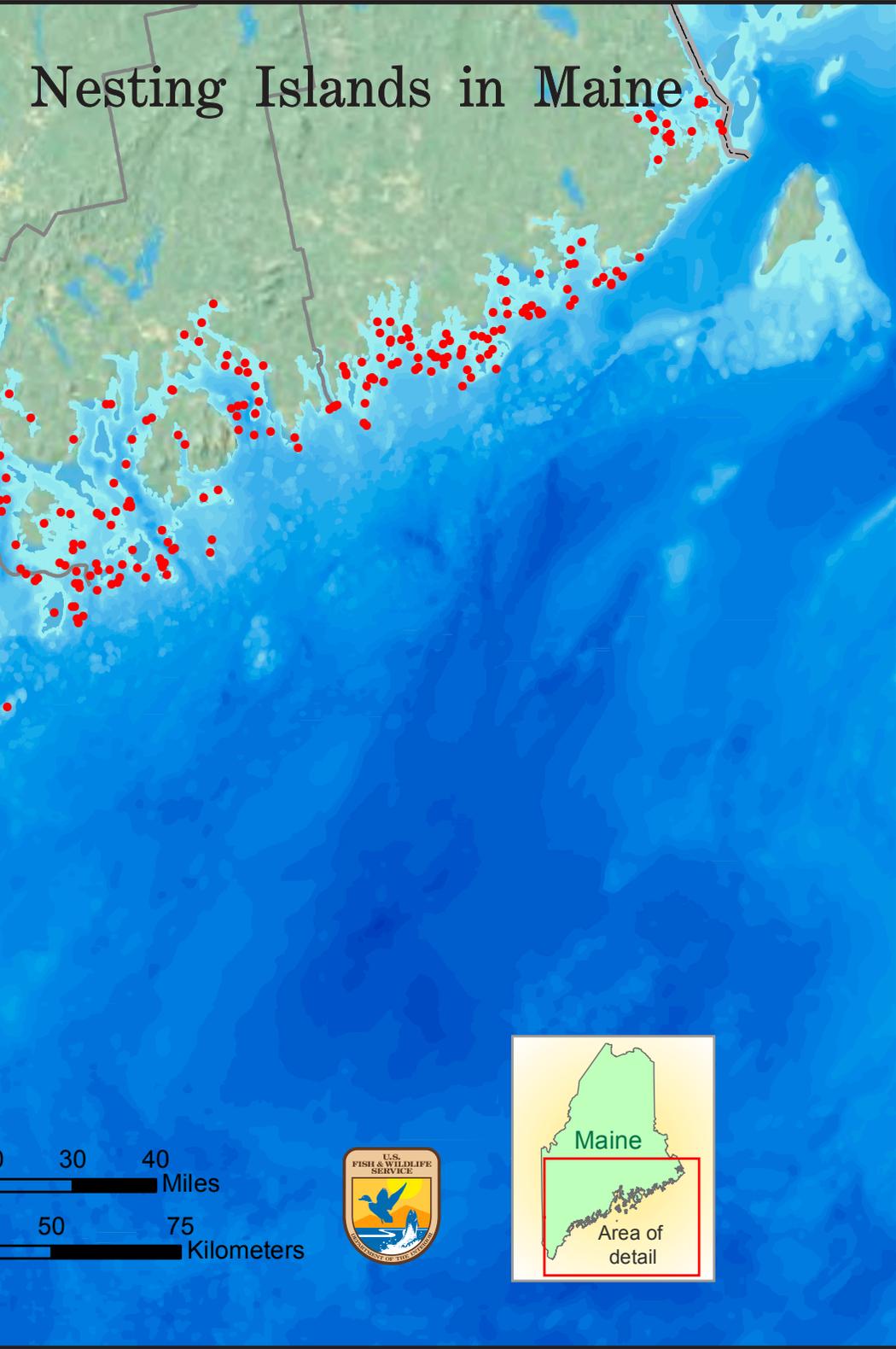
Nationally Significant Nesting Islands

There are over 4,600 islands along the Maine coast, and over 600 islands have historical or current nesting populations of seabirds, wading birds, waterfowl, and bald eagles. Conservation agencies reviewed available information on these islands and determined that 377 islands were nationally significant based on the number of seabirds breeding on the island, the diversity of seabird species breeding on the islands, or the presence of a threatened or endangered species.

Nationally Significant Seabird



Nesting Islands in Maine



Gulls

Great Black-backed, Herring, and Laughing Gulls

All three species of gulls build vegetation-lined nests on the ground. Great black-backed gulls tend to nest on prominent rock ledges, while herring gulls will nest in vegetation or on exposed rock ledges. Gulls initiate nesting in late April or early May, several weeks earlier than many of the other seabirds. This allows gulls to select many of the best breeding sites. They will eat a variety of fish, invertebrates, seabird eggs, and chicks. Gulls will also take advantage of readily available food sources such as landfills and bait discarded from fishing boats.

Maine represents the northern limit of laughing gull breeding distribution. The three islands with nesting laughing gulls (Petit Manan, Eastern Egg Rock, and Matinicus Rock) are managed tern colonies, where the larger herring and great black-backed gulls have been eliminated. A small number of laughing gulls have attempted to nest on other managed tern colonies, but have yet to establish true breeding colonies. Within Maine, laughing gulls tend to nest in tall, dense vegetation. Similar to terns, laughing gulls initiate nesting in mid to late May.

During the early stages of tern restoration, managers believed that laughing gulls could nest among the terns, with little conflict. In recent years we have observed an increasing rate of stealing food from the terns, direct predation on tern eggs and chicks, and competition for nesting habitat.

Gull Control on Managed Tern Colonies

Great black-backed and herring gulls contribute to the seabird diversity of the Gulf of Maine, but their populations need to be managed on some islands in order to protect other seabird species like terns. Great black-backed and herring gulls prey on tern eggs and chicks. Another problem is that gulls initiate nesting earlier in the season than terns and often occupy the best nesting sites before the terns arrive. In an effort to restore tern populations within Maine, conservation agencies prohibit great black-backed and herring gulls from nesting on a small number of managed tern colonies. Gull populations on other Maine islands are not managed in this fashion.

Great Black-backed Gull

Protected migratory bird

Estimated Population in Maine

Approximately 9,500 pairs nesting on 190 islands

Did you know? Great black-backed gulls are the largest gulls in North America, and can weigh over 4 lbs. They don't begin breeding until they are 4-5 years old, but can live as long as 20 years.



Linda Welch/USFWS

Herring Gull

Protected migratory bird

Estimated Population in Maine

Approximately 25,000 pairs nesting on 180 islands

Did you know? Herring gulls are the most common gull species in the northeast. They don't begin breeding until they are 4-5 years old, but can live more than 30 years.



Linda Welch/USFWS

Laughing Gull

State-listed special concern

Estimated Population in Maine

4,500 pairs nesting on 3 islands

Did you know? Laughing gulls eat a diverse diet of terrestrial and aquatic invertebrates, fish, berries, and seabird eggs. While in breeding plumage, laughing gulls are easily distinguished from herring and great black-backed gulls by their dark red beaks, black heads, and thin, white eye crescents.



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Cormorants

Double-crested and Great Cormorants

Cormorants may build nests in trees, but after several years the buildup of fecal material will eventually kill the trees. The birds will then construct their stick nests on the ground. The nests are typically built on prominent ledge areas along the perimeter of an island.

Maine represents the southern limit of great cormorant nesting distribution in North America. The number of breeding pairs of great cormorants and the number of islands supporting great cormorants has been decreasing in recent years, possibly due to predation. Great cormorants are present in the Gulf of Maine during the winter months, long after double-crested cormorants have flown south.

Both species of cormorants appear to be particularly sensitive to disturbance on nesting islands. When a predator is perceived, cormorants will fly from their nests, leaving eggs and chicks vulnerable to gull predation. In recent years, managers have observed significant bald eagle predation on some cormorant colonies, and now believe that eagles could be limiting cormorant survival and productivity rates.

Petrels

Leach's Storm-petrel

With the exception of a few pairs of Leach's storm-petrels nesting in Massachusetts, Maine represents the southern limit of petrel breeding range in the eastern United States. The birds lay a single egg and raise their chick in burrows excavated in the soil. Petrels are nocturnal, only flying to and from their burrows at night. The birds feed on invertebrates and fish oils collected from the surface of the water. When petrels go to sea to forage they often leave their egg unattended, resulting in a longer incubation period than we observe in many other species of seabirds. On average, it takes 43 days for the egg to hatch. The chicks will fledge from the burrow when they are 60-65 days old, which means they may not leave their nesting islands until September or October.

Island visitors may not realize an island has nesting petrels because the birds nest in burrows and are only active around the islands at night. Unfortunately, island visitors could easily crush petrels in their burrows if they walk through a nesting area.

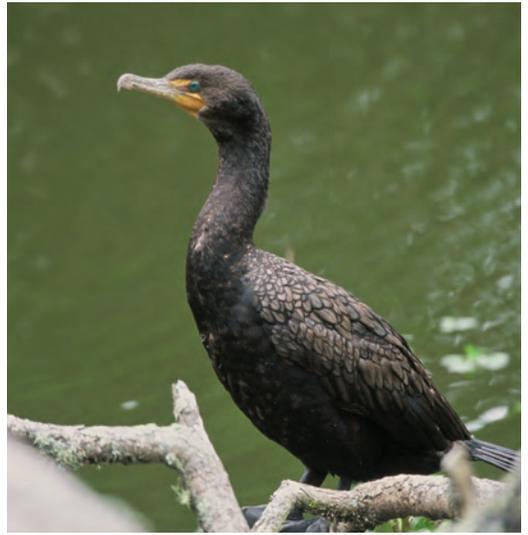
Double-crested Cormorant

Protected migratory bird

Estimated Population in Maine

9,800 pairs nesting on 80 islands

Did you know? At rest cormorants often hold out their wings to dry wet feathers. Cormorant colonies are often conspicuous because of the large stick nests on the ground, visible whitewash, and the smell of guano. Double-crested cormorants fly to the southeastern US for the winter.



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Great Cormorant

State-listed threatened

Estimated Population in Maine

72 pairs on 7 islands

Did you know? Great cormorants are generally larger than double crested cormorants and are present in Maine year-round.



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Leach's Storm-petrel

State-listed special concern

Estimated Population in Maine

10,000 pairs nesting on 33 islands

Did you know? While foraging, petrels hover on the water's surface and often appear to be walking on the water. They feed on marine invertebrates and some small fish.



C. Schlawe/USFWS

Eiders

Common Eider

Common eiders are colonial nesting sea ducks that share many life history characteristics with seabirds. It takes eiders 2-3 years to reach maturity, they produce very few young each year, and they can live for over 20 years. With the exception of a small number of birds breeding in New Hampshire and Massachusetts, Maine represents the southern limit of the breeding range for common eider. The birds build their down-filled nests in areas of tall, dense vegetation. The females generally sit on their eggs for the entire incubation period, eating or drinking very little during this period. Male eiders do not help incubate the eggs or raise the ducklings. Females may lose up to 45% of their body weight during the 26 day incubation period, and cannot afford to be flushed from their nests during this critical time. Unattended eggs are frequently predated by gulls. Females that exert too much energy during incubation may have to abandon their eggs in order to save themselves. Shortly after the ducklings hatch the female leads them to the water to begin feeding on invertebrates. Groups of ducklings, known as crèches, are frequently raised by several females.

Researchers have documented that more than 95% of ducklings may be predated within the first few weeks of leaving their nest. Gulls will capitalize on any form of disturbance and attack the females and their ducklings. Your presence on a nesting island may cause the hens to flee their nests, leaving the eggs and ducklings vulnerable to predation. Please do not approach female eiders and their young during this vulnerable period.

Common eiders undergo an annual molt of their feathers between mid- July and mid-September, leaving them flightless for about one month until they grow new feathers. The birds try to conserve energy while they re-grow their feathers, and excessive disturbance may affect their survival. Eiders may form large, dense flocks during this time period. Please do not approach these flocks.

Common Eider (male)

Status

Protected migratory bird with legal hunting season

Estimated Population in Maine

Approximately 25,000 pairs nesting on 320 islands



© Jim Fenton

Did you know? Common eiders are the largest duck in the northern hemisphere. They are especially conspicuous since they tend to nest in large colonies on coastal islands. During the non-breeding season, eiders form large aggregations along coastal areas.



© Jim Fenton

**Common Eider (female, *right*),
Eider crèche (*below*)**



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Nest Identification

Many seabird species will use the materials available on each island to build nests (pictures not to scale). Alcids and petrels nest in burrows, and their eggs are generally not visible from outside the burrow.



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Cormorant nests

Cormorant nests are typically constructed of sticks, vegetation, seaweed, and debris found near the nest site. There may be abundant guano surrounding the nest. Eggs are a pale blue color that is often obscured by a whitish buildup of feces and dirt. Average clutch size is four eggs. Young chicks are mostly featherless with black skin.



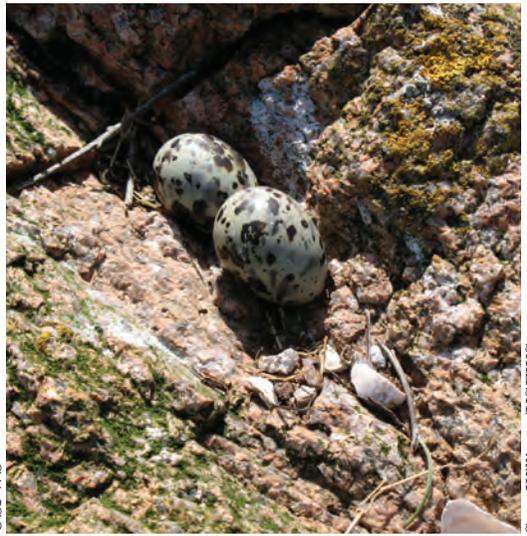
Sara Williams/USFWS

Eider nests

Eider nests are distinguished by pale green eggs surrounded by down. Nests are frequently located in dense vegetation. Eiders have an average clutch size of four eggs. When disturbed, eider hens will often cover their nests with down to conceal the eggs from predators.



USFWS



Sara Williams/USFWS

Tern nests (above)

Terns nest on various substrates including sand, gravel, low vegetation, or rock ledges. Nests often begin as natural depressions in vegetation or rocks, but terns will also scrape sand to create shallow depressions for the eggs. Clutch size ranges from one to three eggs, and terns will re-lay eggs if their nest is lost to predation or flooding. Egg coloration is highly variable, and can range from cream to brown or slightly green, with black and brown speckles. The color of eggs and chicks helps to camouflage them from predators, but increases your risk of stepping on them.

Gull nests (below)

Gull nests vary greatly by species. Great black-backed and herring gulls usually start with a bowl scraped into the substrate and then they add vegetation found around the nest site throughout incubation. They might use the same nesting location year after year, but will construct new nests. Great black-backed gulls generally nest in prominent locations on the islands, while herring gulls will nest on ledges or adjacent to vegetation. Laughing gull nests tend to be constructed in dense vegetation, using available grasses. The average clutch size for gulls is three eggs. Gull eggs are larger than tern eggs.



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Mao Teng Lin/USFWS

Other Wildlife Species Found on Maine Islands

Careful management of a seabird island can also benefit other wildlife species that rely on coastal islands for nesting, feeding, roosting, or stopovers during migration.

Bald eagles (*top left*)

Coastal islands provide nesting, roosting, and foraging habitat for bald eagles. Disturbance may cause adults to flush from their nests leaving eggs and chicks vulnerable to predation. Disturbance early in the season may prevent the eggs from hatching due to exposure to extreme temperatures. Later in the summer, chicks may injure themselves by jumping from nests while trying to avoid human disturbance.

Wading birds (*top right, great blue heron*)

Hérons, egrets, and ibis all nest on coastal islands. Disturbance may cause adults to flush from the nests leaving eggs and chicks vulnerable to predation.

Shorebirds (*middle left, semipalmated sandpipers*)

Hundreds of thousands of migrating shorebirds forage along the Maine coast in late summer and early fall. The inter-tidal habitat surrounding the coastal islands and along the mainland provides an abundance of invertebrates. Successful migration depends on the shorebirds' ability to gather enough invertebrate prey to fly to their next feeding location. Human disturbance will cause the birds to flush from feeding and roosting sites, wasting valuable energy they need to complete their migration.

Migrating Songbirds (*middle right, least flycatcher*)

Many species of songbirds nest, forage, or rest on coastal islands. The wide diversity of habitats found on coastal islands provides the birds with a variety of seeds, fruits, and invertebrates. Modifying the habitat on an island could significantly alter its value to songbirds.

Harbor seals (*bottom, harbor seal pup*)

Seals give birth between mid-May and mid-June on many of the islands and ledges along the Maine coast. Disturbance can cause seals to flee, leaving pups exposed and vulnerable. Please stay far enough away from ledges so that seals do not flee into the water. Maine also supports a large population of gray seals, a species that gives birth to their pups in January or February.



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Craig Snapp



USFWS



Seth Sheldon/USFWS



SEABIRD NESTING ISLAND

Area closed to public use April 1 - August 31 to protect sensitive nesting birds. Please help us conserve this island and the future of Maine's seabirds.

This island is part of the National Wildlife Refuge System and managed by:



**Maine Coastal Islands
National Wildlife Refuge**

For information call: (207) 546-2124
Find us on the web at: <http://maine.nwr.usfws.gov>

Conservation Efforts

A single human visit to a seabird island during the critical nesting period can eliminate all productivity for the year. Nesting seabirds and common eiders perceive people as predators and leave their nests. Gulls will quickly take advantage of the disturbance and consume the unprotected eggs and chicks of the nesting birds. Remember, federal and state laws protect seabirds from disturbance and harassment (see Appendix A for details).

Seasonal Closures

Federal and state conservation agencies in Maine have established regulations to protect nesting seabirds during the critical nesting season. Islands owned by conservation agencies that support nesting common eiders, gulls, and double-crested cormorants are closed to trespass from April 1 to July 31. Islands supporting nesting terns, alcids, storm-petrels, and great cormorants are closed from April 1 to August 31.

Universal Sign Project

Proper signage warns visitors that islands are closed for the nesting season. In the past, however, it was difficult for people to read the signs without going ashore, which would disturb the birds and cause them to flee from their nests. Adding to the confusion, each conservation agency used a unique island closure sign representing their own specific agency.

In 2005, the Universal Sign Project implemented a single 2' x 3' sign with a large bird image, that represents all conservation agencies, to help coastal visitors recognize seabird nesting islands from the water. These signs are being placed on islands along the coast to indicate to visitors that the island is closed during the seabird nesting season. We also post small signs at local boat ramps, in retail and rental shops, and provide brochures to licensed boat owners. If you own a seabird nesting island and would like to post your property free of charge with one of these signs, please contact us at one of the addresses listed on last page of this document.

This universal sign project was funded by the Friends of Maine's Seabirds Islands.

USFWS

Predator Control

To enhance seabird survival and productivity rates, managers limit predator populations on 11 islands in Maine. This generally means we prevent great black-backed and herring gulls from nesting on the managed islands. A variety of techniques have been used to eliminate the gulls including: harassment, egg and nest destruction, shooting, broadcasting gull distress calls, and an avicide that poisons the breeding gulls. Once the breeding population of gulls has been removed from the island, seasonal technicians stay on the island throughout the summer keeping new pairs of gulls from establishing nesting territories. Predator control efforts may also involve mammal trapping or removal of great horned owls. All predator control efforts on the islands require federal and state permits. The ability to maintain seabird restoration islands as “predator free” nest sites is a critical tool in our management effort.

Social Attraction

Conservation agencies have utilized a technique developed by National Audubon Society to re-establish tern and alcid colonies on several islands in Maine. The first step in “social attraction” efforts is to remove the population of breeding gulls or other predators from the island. If the island has recently supported terns or alcids they may return on their own. However, some islands have not supported nesting terns in decades and it is necessary to actively attract the birds to the site using social attraction equipment. Sound systems are erected to continuously play the sounds of a tern colony, and tern, puffin, and razorbill decoys may be scattered throughout the area. This method of re-establishing seabird colonies has been highly effective on several islands within the Gulf of Maine and has been utilized around the world.



Steve Kress

U.S. Fish and Wildlife Service Efforts to Conserve Seabirds



The USFWS works with Maine Department of Inland Fisheries and Wildlife and National Audubon Society as the lead conservation agencies working to protect and manage Maine's seabird nesting islands. Conservation activities include island acquisition, habitat restoration, monitoring and inventorying seabird colonies, controlling predators, and reducing or eliminating invasive plants. We conduct research on factors limiting seabird productivity and survival, the effects of contaminants on seabird populations, seabird foraging ecology, and we try to understand movement patterns of seabirds among the islands in the Gulf of Maine. We develop outreach and education materials to help inform the public about the specific challenges that seabirds face and to help reduce disturbance on the breeding colonies.

The need to conserve and protect seabirds and their habitats will become more challenging as the human population continues to grow and the use and demand for marine resources increases. In addition to existing challenges, researchers believe that seabirds will face significant threats from climate change including changes in the distribution and abundance of their primary food items, flooding of nesting islands due to sea level rise, and the potential for increased outbreak of diseases. To provide seabird populations with the best chance of adapting to climate change, we must work together to reduce existing threats.

Habitat Protection Efforts:

Private Island Owner

Many nationally significant nesting islands have been protected by private landowners for generations. They have protected the islands and their biological values by conserving the islands' natural resources and in general limiting development.

Conservation Easement

Conservation easements are a legal document that, while leaving the land in private ownership, guide the future use of the property in an effort to protect the natural resources. A landowner may donate or sell the easement to a conservation agency or organization that will ensure that the conditions of the easement are met over time. Easements allow the landowners to continue using their property, may significantly reduce estate and property taxes, and may be adapted to meet the particular needs of a landowners and resources of the property.

Acquisition by Conservation Agency

Private island owners may elect to sell their islands to a conservation agency or organization through fair market value or bargain sales. Although funds for direct purchase of land are generally limited, conservation agencies and land trusts have recently purchased a number of nesting islands from landowners interested and willing to sell their islands. Acquisition by a conservation agency permanently protects the island from future development, provides compensation to the island owner, and may provide significant tax savings (i.e. bargain sales).

Please consult with biologists from U.S. Fish and Wildlife Service or Maine Department of Inland Fisheries and Wildlife to assist you with planning efforts and management actions on coastal islands.

What You Can Do to Help Protect Seabirds and Their Habitats

- Please comply with seasonal closure dates of islands. If you own a seabird nesting island, consider placing a Universal Seabird Sign on your island.
- Do not introduce predators to islands and keep pets off islands during the nesting season.
- Prior to altering habitat conditions on a seabird nesting island, consult with a wildlife biologist to determine the potential consequences for seabirds, waterfowl, eagles, and other wildlife. Many actions will require you to obtain a permit from the Maine Department of Environmental Protection.
- Help us maintain native plant communities. Do not introduce non-native or invasive plants to islands. Nesting habitat on some islands in Maine is threatened by invasive plants.
- Do not dump oil, litter, or waste overboard. Even small quantities can kill birds. Seabirds are often harmed by eating plastic particles from trash that are mistaken as food. Consider participating in “Coastal Cleanup” efforts.
- Protect seabird nesting islands and adjacent waters from further development.
- Help maintain healthy populations of forage fish. Avoid over fishing and polluting nursery areas for herring, hake, and other fish that are important to seabirds and valuable to commercial fisherman.
- Abundant food allows more gull chicks to be produced and reach adulthood. Please do not feed unused lobster bait to gulls. Research has shown that a significant percentage of the food items fed to gull chicks is discarded lobster bait. To discourage gulls from following the boat and eating bait, place unused bait in a bucket and dump it at one time. Gulls will learn to avoid boats that do not routinely provide food to them.
- Do not approach flocks of molting eiders or females with ducklings. These birds are already faced with significant energetic demands to grow new feathers or simply grow to adult size; they do not need to expend valuable energy avoiding boat traffic.



Appendix A

Regulations Protecting Colonial Nesting Seabirds and Waterfowl

Migratory Bird Treaty Act

Federal prohibition, unless permitted by regulations, to “pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, carry, or cause to be carried by any means whatever, or export, at any time or in any manner any migratory bird (including eggs, feathers, and nests)”.

Federal Endangered Species Act

Enacted in 1973, this law protects endangered and threatened species and their habitats. Federal agencies must ensure that no agency action will “jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of [critical] habitat of such species”. This applies to organizations, landowners, and private developers that receive federal funds or permits. In addition, all individuals are prohibited from “taking” any listed threatened or endangered species. A “taking” includes harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting to engage in such conduct. The U.S. Fish and Wildlife Service is charged with enforcing the Endangered Species Act.

Maine Endangered Species Act

Enacted in 1975, this law protects state-listed endangered and threatened species and their habitats. Local and state governments are prohibited from funding, permitting or carrying out projects that would significantly alter “essential” habitat or violate protection guidelines determined by the Commissioner of the Maine Department of Inland Fisheries and Wildlife. Individuals are prohibited from importing, exporting, hunting, trapping, possessing, selling, transporting, feeding or harassing any endangered or

threatened species without a permit from the Commissioner. The Maine Department of Inland Fisheries and Wildlife is charged with enforcing the Act.

Essential Habitat

For state-listed species Essential Habitat identifies habitats that are “currently or historically providing physical or biological features essential to the conservation” of state endangered or threatened species, and which may require special management considerations. This designation provides assurance that local and state government activities will not adversely effect endangered species habitat. Maine Department of Inland Fisheries and Wildlife should be consulted regarding questions related to Essential Habitat.

Maine Natural Resource Protection Act and Significant Habitat

Passed in 1988, the Act applies to the following protected natural resources: coastal wetlands and sand dunes; freshwater wetlands; great ponds; rivers, streams, and brooks; fragile mountain areas, and significant wildlife habitat. The intent of the Act is to prevent any unreasonable impact to, or destruction of the resources and to encourage protection or enhancement. Permits are required for activities that occur in, on, or over any protected natural resource or any land adjacent to any great pond, river, stream, brook, coastal wetland, and some freshwater wetlands. Seabird Nesting Islands are considered Significant Habitat.

Island Closures

Islands owned or held by conservation easement by USFWS and Maine Department of Inland Fisheries and Wildlife that support nesting common eider, gulls, and double-crested cormorant are closed from April 1 to July 31. Islands supporting nesting terns, alcids, storm-petrels, and great cormorant are closed from April 1 to August 31.

For additional information you may wish to contact:

Maine Coastal Islands National Wildlife Refuge (NWR)

Maine Coastal Islands NWR biologists are willing to work with owners and regulators of seabird nesting islands to protect these valuable resources. If you would like additional information related to these birds nesting on your island, or measures you can take to help preserve these species, please contact the Refuge at:

PO Box 279, 14 Water Street, Milbridge, ME 04658 207-546-2124

PO Box 1735, 9 Water Street, Rockland, ME 04841 207-594-0600

Maine Department of Inland Fisheries and Wildlife

You may also wish to contact the Maine Department of Inland Fisheries and Wildlife at:

Wildlife Resource Assessment Section (Bangor): 207-941-4466

Gray Regional Office: 207-657-2345

Sidney Regional Office: 207-547-5300

Jonesboro Regional Office: 207-434-5927

Friends of Maine's Seabird Islands (FOMSI)

FOMSI is a non-profit organization whose mission is to support Maine Coastal Islands National Wildlife Refuge in its efforts to conserve, protect, and enhance the rich diversity of coastal habitats, seabirds, and other wildlife. For more information please visit:

www.maine seabirds.org



“Wild beasts and birds are by right not the property merely of the people who are alive today, but the property of unknown generations, whose belongings we have no right to squander.”

Theodore Roosevelt



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**Maine Coastal Islands
National Wildlife Refuge**

**P.O. Box 279
14 Water Street
Milbridge, ME 04658
207/546-2124**

**P.O. Box 1735
9 Water Street
Rockland, ME 04841
207/594-0600**

www.fws.gov/northeast/mainecoastal

**Federal Relay Service
for the deaf and hard-of-hearing
1 800/877-8339**

**U.S. Fish & Wildlife Service
<http://www.fws.gov>**

**For Refuge Information
1 800/344-WILD**

June 2012



**View of Western Brothers Island
from Eastern Brothers Island
Seth Sheldon/USFWS**