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U.S. Fish & Wildlife Service

# Monomoy
## *National Wildlife Refuge*

Piping plover
©Mark Wilson

*"Wilderness is a place where the wild potential is fully expressed; a diversity of living and nonliving beings flourishing according to their own sorts of order...to speak of wilderness is to speak of wholeness."*

—Gary Snyder

***Greater yellowlegs***
Lindsey Brown

## Welcome

This goose, designed by J.N. "Ding" Darling, has become a symbol of the National Wildlife Refuge System.

Sand stretches for eight miles off the elbow of Cape Cod, forming the barrier islands of North and South Monomoy and Minimoy. Here, among the varied habitats of oceans, dunes, freshwater ponds, and salt and freshwater marshes, lies the 7,604-acre Monomoy National Wildlife Refuge. Established in 1944, the refuge provides important resting, nesting and feeding habitat for migratory birds, including the federally protected piping plover and roseate tern. The visitor to this wilderness refuge encounters a very special place—a sanctuary that supports an amazing diversity of wildlife and plant species.

Monomoy is one of eight national wildlife refuges composing the Eastern Massachusetts National Wildlife Refuge Complex. These eight ecologically diverse refuges include Assabet River, Great Meadows, Massasoit, Mashpee, Monomoy, Nantucket, Nomans Land Island and Oxbow. Included among these protected places are inland and coastal wetlands, forests, grasslands and barrier beaches that provide important habitat for migratory and resident birds, mammals, reptiles, amphibians and plants.

*Monomoy National Wildlife Refuge*

Stephanie Koch/USFWS

USFWS

*The quiet season on Monomoy*

## A Dynamic Landscape

Bruce Flaig

*Common Tern*

Monomoy's barrier islands are constantly changing. Sand, eroding and drifting from the outer beaches of Cape Cod, is the foundation of the island refuge. Here, on edge of the vast Atlantic, storms, high winds, tide, and surf endlessly change terrain and shore. Yet in this apparently unstable world, a remarkable array of lasting habitats and niches have evolved making Monomoy a unique study in beach, dune, marsh, and grassland moor ecology.

The entire barrier island formation rests on a bed of glacial material that was left in the wake of glaciers that retreated an estimated 18,000 years ago. Depending on the episodic patterns of erosion and accretion of sand, Monomoy becomes slightly larger or smaller.

Monomoy evolved from a series of small sand-spit barrier islands in the 1800s to an arm of land connected to the mainland early in the 20th century. In 1958, a spring storm tore the sand spit from the mainland, creating a single island separated from Morris Island and Chatham. Twenty years later, the island split in two during a turbulent blizzard. Left in its wake was the present-day 2.5-mile stretch of North Monomoy and the 5-mile-long arm of South Monomoy.

Ed Moses/USFWS

*Monomoy Light*

## Once a Human Landscape

While Monomoy's character is shaped and reshaped by the sea, it also remains linked with the human history of the New England seacoast. Native people are believed to have inhabited the peninsula 6,000 to 8,000 years ago. The recorded history of the island began in the 16th century when French and English explorers began mapping the New England coast. By the 18th century, European settlers were firmly established along the Massachusetts coast, including sporadic settlements on Monomoy. By the 19th century, a small town known as Whitewash Village, grew along the southern end of Monomoy near Powder Hole. It flourished for three decades as a shipping and fishing port, and as a haven for lost and shipwrecked sailors. But sand drifting in an arc around the southern end of the island finally closed the inlet to boats. Even so, village residents were reluctant to leave, and the settlement persisted well into the 1930s, mostly as a summer community.

## Monomoy Lighthouse

In 1823, the federal government commissioned a lighthouse on four acres of land on the island's southern beach. The 40-foot, cast-iron tower lined in brick was lighted five years later and was fired by oil. After 1923, the more powerful lights at Chatham and Nantucket provided guidance for the ships, and Monomoy ceased to be used as a lighthouse. However, the structures at Monomoy Light were restored in 1988 and 2010 and are listed on the National Register of Historic Places.

*Abandoned camp on Monomoy*

USFWS

As the decades passed, rough-hewn summer cottages were taken down by the elements or abandoned when life-leases to the original owners expired. The last "camp" remained until the spring of 2000.

## A Wilderness Refuge

In 1970, Congress designated approximately 97 percent of the Monomoy islands as "wilderness," a space "where the earth and its community of life are untrammeled by man, where man himself is a visitor and does not remain." The wilderness designation limits the range of activity permitted within its boundary, providing refuge wildlife with a higher level of protection from human intrusion. Monomoy contains the only designated wilderness in southern New England.

***"In wildness is the preservation of the world."***

—Henry David Thoreau

*Seaside goldenrod*

USFWS

## Wings Over Monomoy

Monomoy National Wildlife Refuge provides habitat for hundreds of species of resting, feeding and migrating birds. The refuge is so important to migratory shorebirds that in 1999 North and South Monomoy were designated a Western Hemisphere Shorebird Reserve Network (WHSRN) regional site. WHSRN comprises organizations that promote and support the conservation of shorebirds. The designation brings needed attention to the refuge's critical role.

*American oystercatcher*

USFWS

### *Shorebirds and Seabirds*

The shorebirds' migration route originates in the Arctic and eastern Canada and heads south, taking them along an "outer coast" flyway that covers the whole outer Cape from Provincetown to Monomoy and west to Brewster and Harwich. It is one of three routes that bring migrating shorebirds, sea ducks and loons across Cape Cod in autumn, and leads large numbers of other shorebirds and seabirds, including thousands of common terns, to Monomoy.

Beginning in late July, shorebirds spotted on Monomoy include turnstones, sanderlings, least and semi-palmated sandpipers, black-bellied and semi-palmated plovers, dowitchers, red knots, dunlin, American oystercatchers and whimbrels. Some uncommon shorebirds seen in late summer, frequently around Labor Day, include Baird's, buff-breasted and western sandpipers, long-billed dowitchers, and American golden-plovers.

*Laughing gull chicks*

Stephanie Koch/USFWS

Blair Nikula

*Ruddy turnstone*

### *Waterfowl*

Freshwater ponds on the island make Monomoy one of the most diverse waterfowl areas in Massachusetts. Both adult and juvenile black ducks, blue- and green-winged teal, mallards, gadwall, and northern shovelers are evident on and around Monomoy by late August and early September. A steady influx of teal, northern pintail, gadwall, and American widgeon occurs through September. October and early November are the peak for eider, long-tailed duck, and scoter. In the fall, often more than a thousand waterfowl visit Monomoy.

### *Other Birds*

Weather and winds play an important role in determining the numbers of songbird migrants on Monomoy in the fall. Due to a phenomenon known as "wind drift," tail winds from the northwest that cause immature birds to veer from their preferred route over land, unusual sightings can be made, particularly on South Monomoy. Birds of prey, including northern harriers, great horned owls, peregrine falcons, merlins, sharp-shinned hawks and bald eagles may be seen throughout the fall migration.

# Monomoy
## *National Wildlife Refuge*

Nantucket Sound

MORRIS ISLAND

Morris Island Rd

Tisquantum

Wikis Way

Common Flats

South Beach

North Monomoy Island

Hospital Pond

Atlantic Ocean

South Monomoy

Powder Hole

Little Station Pond

Big Station Pond

Monomoy Point

**LEGEND**

- Refuge Headquarters
- Lighthouse
- Lake or Pond
- Marsh, Wetland, Swamp or Bog
- Intertidal Area
- Primary Route
- Secondary Route
- Road or Street
- Refuge Land
- Refuge Boundary

N

0 1 2 Miles

Bud Oliveira/USFWS

*Horseshoe crabs*

## Other Creatures Great and Small

Monomoy is the largest haul-out site of grey seals on the Eastern Seaboard. Seals, sought for more than a century by bounty hunters and fishermen who mistakenly believed the marine mammals were depleting fishing stocks, are now making a comeback. Bounty hunting was banned in Massachusetts in 1962, and marine mammals were further protected in 1972, when the federal Marine Mammal Protection Act was passed. Since then seal populations have grown along the East Coast. Largely protected from human intrusion, Monomoy offers some of the most desirable habitat for seals in the region. Harbor and grey seals have continued to thrive on Monomoy. Harp and hooded seals are seen occasionally. As many as 7,000 grey seals can be spotted all year long on Monomoy; harbor seals can be found from August through May.

*Harbor seal*

F. Sorensen/USFWS

Mammals, including coyotes, deer, muskrats, and voles inhabit the refuge. Fowler's toads and a few species of snakes have also made a home on the islands. During summer and fall, butterflies, dragonflies, and damselflies are abundant. More than 160 species of plants have been identified. The dominant vegetation is beach grass, but in summer the freshwater marshes on the south island are a canvas of color, from the muted hues of dusty miller and rose mallow to the golden tones of hudsonia grass and wild asters.

Monomoy's beaches provide important spawning habitat for horseshoe crabs. Refuge biologists monitor the horseshoe crab population due to the importance of their eggs as a shorebird food source.

## Making Space

*Roseate tern*

USFWS

One of the most significant management efforts on Monomoy is the creation of a "safe harbor" for coastal birds. By the early 1990s the refuge's resident populations of great black-backed and herring gulls had skyrocketed. Their survival success was tied to the growing human population on Cape Cod, for the birds routinely flew to open landfills where they found a large food source. The gulls on Monomoy overwhelmed smaller, less aggressive birds, particularly terns, which could not compete for nesting sites with the gulls.

In 1996, the Service began a restoration project by creating a "gull-free-zone" on a portion of South Monomoy, and within the next few years the seabirds and shorebirds showed a significant comeback that has continued into the new millennium. Today, more than ten species of seabirds, shorebirds, and water birds nest on the islands. The refuge supports the largest nesting colony of common terns on the Eastern Seaboard. This project has directly benefitted the federally protected roseate tern and piping plover.

*Tern monitoring on Monomoy*

Stephanie Koch/USFWS

Tim Simmons

*Northeastern beach tiger beetle*

Piping plovers and roseate terns are not the only federally protected species to receive attention from refuge staff. From 2000 to 2003, northeastern beach tiger beetle larvae were collected from a Martha's Vineyard beach and successfully re-located to Monomoy. The federally endangered tiger beetle has been on a downward population trend because of impacts by off-road vehicles and beach habitat manipulation (e.g., construction of seawalls and jetties). Once found in "great swarms" along coastal beaches from Virginia to southeastern Massachusetts, only three populations of tiger beetles currently exist north of Chesapeake Bay.

## Our Friends and Volunteers

The refuge is fortunate to have both an active friends group and a dedicated corps of volunteers who actively work to support the U.S. Fish and Wildlife Service in meeting its mission on Monomoy. Our partners staff the visitor center, present interpretive programs, help maintain refuge facilities, assist with wildlife surveys, advocate for the preservation of Monomoy Lighthouse, and publicly support a variety of refuge management activities. Our friends and volunteers provide efforts appreciated by the refuge and its wild inhabitants.

## Things to do at the Refuge

Monomoy National Wildlife Refuge provides visitors with many wildlife-dependent recreation opportunities. The refuge has long been a favorite destination for birders and anglers. Refuge visitors also enjoy hiking, fishing, photography, wildlife observation, and guided natural and cultural history programs and tours.

The refuge headquarters and visitor center are located on Morris Island. Exhibits, informative brochures, and a bookstore are available. The visitor center is open seasonally; call ahead

USFWS

*Birdwatching on Monomoy*

for hours and an activity schedule. A 3/4-mile nature trail on Morris Island winds through a variety of coastal habitats. Overlooks along the trail provide views of the refuge's North and South Monomoy islands.

Would you like to help us help wildlife? Consider becoming a refuge volunteer. Volunteers conduct wildlife surveys, take photographs, lead tours and education programs, and help in the visitor center. If interested, please contact the refuge manager.

## Accessibility

North and South Monomoy islands are accessible by **boat only.** You may reach the islands by private boat or, in season, you may view the islands by commercial ferry. Portions of the islands may be closed seasonally; check ahead by contacting the refuge visitor center or visit us at www.monomoy.fws.gov. There is road access to Morris Island, with limited parking available at the visitor center.

*Short-billed dowitchers*

Blair Nikula

## Wildlife Watching Tips

Dawn and dusk are the best times to see wildlife.

Observe from the sidelines. Leave “abandoned” young animals alone. A parent is probably close and waiting for you to leave. Do not offer snacks; your lunch could disrupt wild digestive systems.

Use binoculars or a long lens for a closer look.

Try sitting in one good location. Let wildlife get used to your presence. Many animals that have hidden will reappear once they think you are gone.

Walk quietly and remain in designated areas, being aware of sounds and smells. Often you will hear more than you will see.

Teach children the value of quiet observation. Other wildlife watchers will appreciate your consideration.

Look for animal signs. Tracks, scat, feathers, and nests left behind often tell interesting stories.

***Piping plover***
**Richard Kuzminski**

## A Few Simple Rules

- Seals are protected by the Marine Mammal Protection Act. It is against the law to touch, feed or otherwise harass seals. Harassment occurs when *your* behavior changes *their* behavior.

- Public use of designated trails within the refuge for nature study, hiking and photography is permitted from one-half hour before sunrise to one-half hour after sunset. Fishing on the portions of the Monomoy Islands that are not posted as closed to public use is permitted from sunrise to sunset. Surf fishing from the Morris Island shore is permitted 24 hours a day. There are no picnic areas or campsites on the refuge. Hunting, fires and camping are not permitted.

- Pets are **not** allowed on North and South Monomoy islands. On Morris Island, pets must be kept on a short, hand-held leash.

- Motorized vehicles and bicycles are restricted to the refuge entrance road and parking areas. Bicycles are not allowed on the trails. A bicycle rack is available at the trailhead.

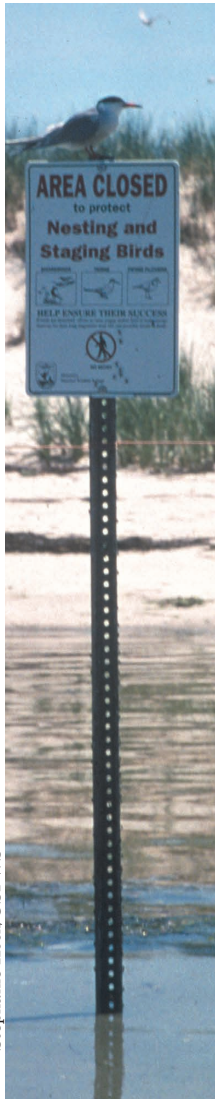
- The disturbance, destruction, or removal of wildlife, vegetation and facilities are prohibited.

- To reduce disturbance to wildlife, entering areas marked with "area closed" and "beach closed" signs is prohibited.

***This is your refuge to enjoy. Please respect the wildlife and other visitors.***

***Remember to take only memories and leave only footprints.***

*Area closed sign*




Stephanie Koch/USFWS

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*Sunset at Monomoy NWR*

## Part of a Greater Whole

Monomoy National Wildlife Refuge is one of more than 560 refuges in the National Wildlife Refuge System, administered by the U.S. Fish and Wildlife Service. The National Wildlife Refuge System is the only network of lands and waters in the world managed specifically for the protection of wildlife and wildlife habitat. Units of the system stretch across the United States from northern Alaska to the Florida Keys, and include small islands in the Caribbean and South Pacific. The character of the refuges is as diverse as the nation itself.

## Directions to the Refuge

To reach the refuge headquarters and visitor center on Morris Island, take U.S. Route 6 east to State Route 137 south to State Route 28. Take Route 28 east to the rotary in the center of Chatham. From the rotary take Main Street, up the hill to a T-intersection. Turn right and proceed past the Chatham Lighthouse and Coast Guard Station. Bear left after the lighthouse onto Morris Island Road, then take the first right. Follow Morris Island Road to signs for the refuge on the left.