

U.S. Fish & Wildlife Service

Long Island National Wildlife Refuge Complex
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Shirley, NY 11967
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https://www.fws.gov/refuge/target_rock/

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

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

September 2006

Target Rock

National Wildlife Refuge

Warblers' Loop & Rocky Beach Trail Guide

Welcome to the Target Rock National Wildlife Refuge, part of the Long Island National Wildlife Refuge Complex. Target Rock is one of more than 560 national wildlife refuges in the United States, comprising the National Wildlife Refuge System. The system's primary purpose is to provide and protect habitats for migratory birds, endangered species and fish. Target Rock NWR and the complex's other eight units are situated along the Atlantic Flyway, a major bird migration path on the east coast. Hundreds of waterfowl species and other birds use the refuges for nesting, wintering and migratory stopovers, while other wildlife find important habitat year-round.



S. Pollack

White-tailed deer

A Haven for Wildlife...

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

Once the grand estate of Ferdinand and Mary Eberstadt, this 80-acre refuge supports a variety of wildlife and their habitats. The U.S. Fish & Wildlife Service manages the refuge to protect migratory birds, endangered species and other wildlife. Target Rock's mature oak-hickory forest and rocky beach are home to a variety of songbirds, mammals, shorebirds, fish, reptiles and amphibians.

...And for You

Explore the Warblers' Loop Trail (1 mile long, about an hour walk) or go down the Rocky Beach Trail (3/4 mile, about a 45 minute walk). The terrain along both trails is hilly. Marked posts match the text in this guide. You can also stroll down Gardener's Path where you will find interpretive signs describing the wildlife and wildlife habitat. Enjoy spotting warblers in the spring, sea ducks on the bay in winter, harbor seals offshore, and flowering plants and shrubs reminiscent of the Eberstadt's formal gardens.

Screech owl



E. Sambolin

Enjoy your hike

For your safety and the protection of the wildlife and their habitat on the refuge, please stay on marked trails, taking precautions to guard against ticks and poison ivy. The U.S. Fish & Wildlife Service does its best to preserve this refuge in its natural state. We appreciate your help by packing out your garbage and “leaving only footprints” (please, no collecting of any kind).

From Garden to Shelter

1

Once a vegetable and cutting garden for the Eberstadt family, this area now provides food and shelter for several wildlife species. Songbirds eat the berries from the briars and brambles, while rabbits and other small mammals take cover in the protection of these thorny vines. If left undisturbed, the area will eventually become an oak-hickory forest like forests found elsewhere along this trail.



Cedar waxwing

S. Pollack

Bountiful Spruce

2

The Eberstadt family planted this stand of Norway spruce for the beauty and the grace of its drooping branches. Life abounds among these trees. Lush ferns carpet the ground, while saplings and shrubs fill out the landscape beneath the towering conifers. The spruce’s needles, twigs and seeds provide food for rabbits, squirrels, chipmunks, and seed-eating birds like cardinals and grosbeaks. Insect-eating birds like warblers and woodpeckers feed among the needles and along the bark. Like many conifer stands, this one provides important winter cover for several wildlife species.

Spring peeper



E. Sambolin

Wildlife Thrives on this Edge of Civilization

3

Target Rock and the other national wildlife refuges of the Long Island Complex provide critical habitats for migratory birds and other wildlife, especially within urbanized areas. At Target Rock, migratory songbirds find food, shelter, water and space they need on their journey along the Atlantic Flyway. Although deer were absent from Lloyd’s Neck since the 1950s, refuge managers and visitors have recently seen signs of them along this trail. As you walk, look and listen for signs of life. Tracks and other signs hint at what tread here before you. Bird songs, shrill croakings of spring peepers and the knocking of woodpeckers let you know there is life on the edge.



S. Follack

Red fox

Wildlife Watching Tips

Dawn and dusk are the best times to see wildlife. Try sitting quietly in one good location so wildlife can get used to your presence. Walk quietly in designated areas, keeping aware of the sounds around you. You will often hear more than you see.

Trees Feed Wildlife

4

The trees and shrubs at Target Rock NWR offer both food and shelter to many animals, from birds and mammals to reptiles and insects. The leaves below will help you learn these important plants.



Arrowwood



Black cherry



Eastern red cedar



Flowering dogwood



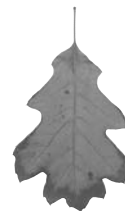
Gray birch



Maple-leaved viburnum



Mountain laurel



Northern red oak



Red maple



Rose



Sassafras



Shadbush



Shagbark hickory



White oak

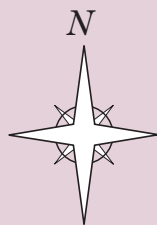
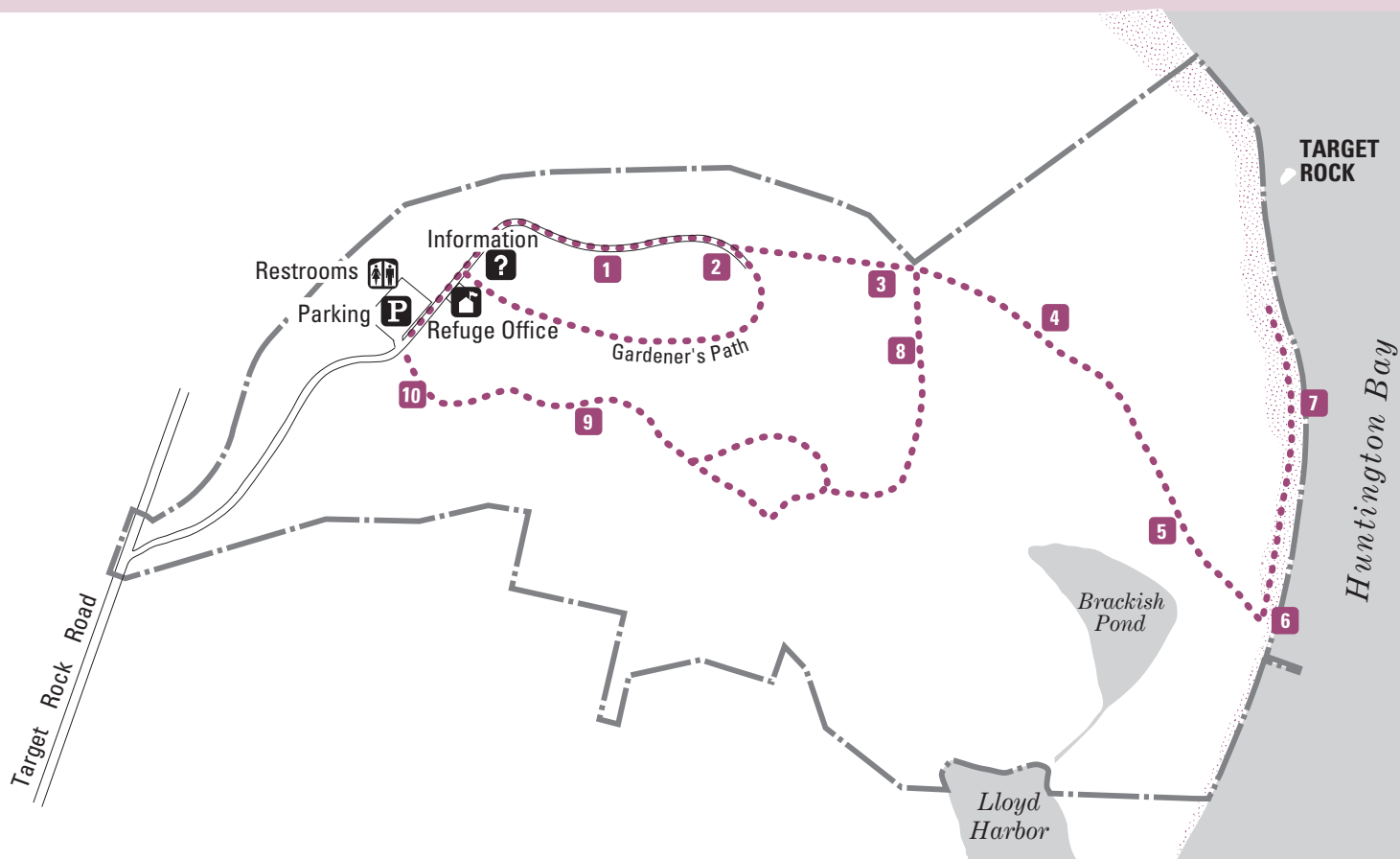


Yellow poplar

Target Rock

National Wildlife Refuge

Warblers' Loop & Rocky Beach Trail



0 400 800 Feet

LEGEND

- | | |
|--------------------|--------------------|
| Restrooms | Refuge Boundary |
| Information Center | Nature Trail |
| Refuge Office | 1 - 10 Trail Stops |
| Parking Area | |



S. Pollack

Wetlands teem with Life

5

Wetlands like brackish pond provide important habitat to Long Island's wildlife. Daily, the tide from Huntington Bay floods this pond and mixes with the incoming freshwater. The result is a pond with a salinity lower than the bay, teeming with life from plants to birds, turtles, mammals and fish.

Wildlife

Microscopic plants and animals inhabit the pond and serve as small fish. Black ducks and other puddle ducks feed on the invertebrates and aquatic plants. Herons and egrets silently stalk the water's edge preying on fish.

Plants

A ring of smooth cordgrass lines the pond. Its roots are adapted to filter out excess salt from absorbed water. As the land becomes drier, cordgrass gives way to high-tide bush, a woody plant that produces distinctive white flowers in early autumn. Red cedar and other trees border the upland pond's edge. The sun-loving cedar bears bluish berries, providing food for robins, catbirds, mockingbirds, thrushes and others.

Habitat for Hairstreak

6



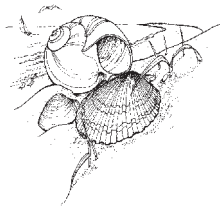
Andrea Stewart

Olive hairstreak

This stand of eastern red cedar serves as home to one of Long Island's largest populations of olive hairstreak butterflies. The olive hairstreak is bright green with white and red-brown markings on its bottom wings and has a wingspan of about an inch. Adults lay their eggs on the cedars, while the hatched caterpillars feed on and are protected by these trees. Each year there are two caterpillar hatchlings leading to two age-classes of adult butterflies. The first class takes flight in mid-May, the other in mid-July to early August. You may see an olive hairstreak in the early morning resting on the beach's damp sand.

Beach life Dynamic...

7



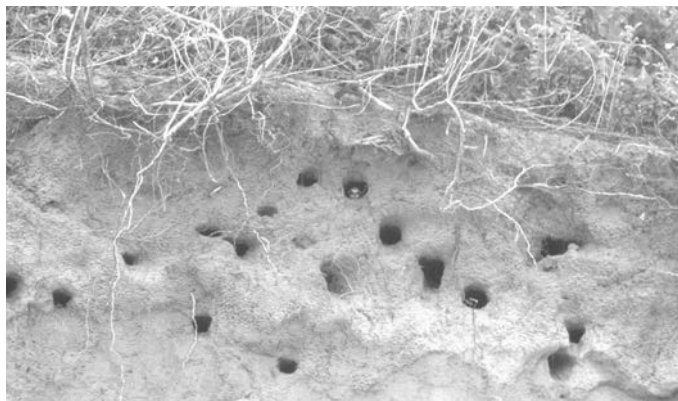
You can enjoy the ever-changing life at Target Rock NWR's rocky shore in all seasons. Plants and animals living within the intertidal zone, covered at high tide and exposed at low, must be able to cope with rapid and constant wind, wave, temperature, and moisture changes as well as exposure to predators.

As you walk, you may see smooth periwinkles, barnacles, oysters, blue mussels and marine worms. Plants found in the intertidal zone include sea lettuce, air-bladder laden rockweed (sea wrack), and red algae (Irish moss).

Target Rock Headlands



R. W. Parris



E. W. Parris

Bank swallows nesting

...And Fragile

The high, exposed bank you will see farther down the beach provides nesting habitat for belted kingfishers and for a colony of bank swallows. The bank swallow uses its feet and bill to dig a 2-3 foot tunnel into the bank and lines the end with grass to form a nest.

The beach at Target Rock is important nesting habitat for piping plover, a federally designated threatened species. Plovers create small indentations, called scrapes, in the sand, often ringing them with shells and other materials. Plovers' light sandy color, their speckled eggs, and modest scrapes, camouflage them and their young from predators like fox, raptors, raccoons, and pets.

To protect nesting piping plovers, bank swallows, and other wildlife that need the beach for a part of their life cycle, part of the beach is closed from April 1 - August 31.



Mark Wilson

Piping plover

Formal Gardens House Wildlife

8



Andrea Stewart

Azalea

You have been walking through what was once the Eberstadt's formal garden, called the wild garden. Spring and summer showcase its magnificent beauty, while a variety of songbirds find important cover from predators and the weather: Catbirds, cardinals, common yellowthroats, and Carolina wrens use the dense understory formed by the azaleas, rhododendrons and yews. Ground nesters like the ovenbird seek shelter in the thick ground cover of ivy, wood ferns, Solomon's seal and mayapple.



S. Pollack

Northern cardinal

Snag: Not Just a Dead Tree

9



E. Sambolin

Though some of the trees around you are dead (snags), they are very important to wildlife. Woodpeckers search for insects in the rotting wood and may even nest in a hole they bore out with their beaks. Many songbirds, raccoons and flying squirrels also nest in tree cavities. Eventually, the snag will fall to the ground and decay, enriching the soil from which new trees and other plants will grow.

Northern flicker

**Target Rock NWR:
Managed for
Wildlife & for You**

10

Cormorant



Target Rock National Wildlife Refuge is truly a haven for wildlife. Its diverse habitats of mature oak-hickory forest, wetlands and bay beach give food, shelter, water and space to many of Long Island's wildlife species. Piping plover, a federally threatened bird species, finds habitat critical to its survival on Target Rock beach and adjacent lands. Waterfowl and other migratory birds use the refuge as nesting, feeding, breeding and stopover grounds. Some make the refuge a home year-round. Foxes, rabbits, squirrels, chipmunks, and bats use the forest and old fields at Target Rock. Spring peepers and other amphibians and reptiles abound in and around the wetlands.

Wildlife comes first on all national wildlife refuges. However, some refuges are also able to provide wildlife-dependent opportunities to the public, like the nature trails here at Target Rock. We hope you have enjoyed your visit!

Directions

From the Long Island Expressway (I-495), take Route 110N to Huntington. Left/west on Route 25A (Main Street). Right/north onto West Neck Road to Lloyd Harbor Road. Straight onto Target Rock Road. Entrance is on right. Refuge hours are 1/2 hour before sunrise to 1/2 hour after sunset. An entrance fee is charged.

**For More
Information**

Target Rock NWR is one of nine refuge units managed on Long Island. For more information about Target Rock or other refuges, please call the Long Island National Wildlife Refuge Complex Headquarters at 631/286 0485.

R. W. Parris



Improving the nature trail