

Rachel Carson  
National Wildlife Refuge  
321 Port Road  
Wells, ME 04090  
207/646 9226

Hearing-impaired visitors may  
call the Maine Relay Center:  
TDD/Voice: 1 800/457 1220

U.S. Fish & Wildlife Service  
1 800/344 WILD  
<http://www.fws.gov>

October 1999



# Rachel Carson

## *National Wildlife Refuge*

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U.S. National Department



*"...All the life of the planet is interrelated... each species has its own ties to others, and...all are related to the earth."*

*Rachel Carson  
1907-1964*



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

#### **Welcome**

Rachel Carson National Wildlife Refuge was established in 1966 in cooperation with the State of Maine to protect valuable salt marshes and estuaries for migratory birds. Scattered along 50 miles of coastline in York and Cumberland counties, the refuge consists of ten divisions between Kittery and Cape Elizabeth. It will contain approximately 7,600 acres when land acquisition is complete.

The proximity of the refuge to the coast and its location between the eastern deciduous forest and the boreal forest creates a composition of plants and animals not found elsewhere in Maine. Major habitat types present on the refuge include forested upland, barrier beach/dune, coastal meadows, tidal salt marsh, and the distinctive rocky coast.



*This tidal salt marsh provides a serene, protective habitat for a vast array of wildlife on the refuge.  
USFWS photo.*

*Cover: Semi-palmated sandpipers.  
Photo by Bill Silliker, Jr.*

## History

The southern Maine coast has been treasured for over 11,000 years. The Abenaki, Sokaki and Saco peoples established thriving cultures using the coastal rivers that provided fresh water, transportation routes, abundant fish, shellfish, and lowland wildlife.



*The threatened piping plover is a small shorebird that can be found nesting and feeding on beaches. Photo by Bill Silliker, Jr.*

The French explorer Samuel de Champlain arrived in the region in 1604. Shortly thereafter and into the 1700's, European settlers made their livelihood from the coast and adjacent marshes. They also pressed inland to clear land for development and to obtain lumber for the emerging shipbuilding business.

In the 1800's, southern Maine shipbuilding reached its height. Vessels up to 400 tons were manufactured in Kennebunkport, and locally-built schooners boosted trade. The fishing industry supported many people and commercial hunters made their living from the wildlife frequenting local marshes.

Recreational use of the Maine Coast increased in the 19th and 20th Centuries. Interest and access were particularly spurred by the arrival of the railroad in 1842. Thousands of visitors came by train, trolley and later, automobile. Now, tourism and recreational activities rank highest in the area's economy. Over 360,000 nature enthusiasts from all over the world visit the refuge annually.



*Rachel Carson on the dock at Woods Hole, MA in 1950. Photo by Edwin Gray. Used by permission of RCHP.*

## Rachel Carson

Rachel Carson was a world-renowned marine biologist, author and environmentalist. She served as an aquatic biologist and Editor-in-Chief for the U.S. Fish & Wildlife Service. During her tenure, she composed a series of articles on Atlantic Coast wildlife refuges.

Ms. Carson was born in Pennsylvania in 1907. Though the mystery of the sea and its creatures captivated her at an early age, the Maine coast particularly inspired her. Beginning in 1952, she summered on Southport Island, where she studied its beach and tide pools to research *The Edge of the Sea* (1955).

Through tireless investigation for her greatest work, *Silent Spring* (1962), she linked the unrestrained use of post-World War II chemical pesticides with fearsome, biological consequences. Overcoming industry and government pressure to abandon her research, she persevered. Carson simply and convincingly explained the connections between humans and all creatures of the Earth. She alerted generations to use chemicals with utmost caution, warning that their improper use has dreadful effects on public health and the environment.

Rachel Carson died in 1964, a victim of cancer. As fitting recognition of her tireless work, this refuge, first known as the Coastal Maine National Wildlife Refuge, was renamed in her honor on October 28, 1969 and formally dedicated June 27, 1970.



## Wildlife

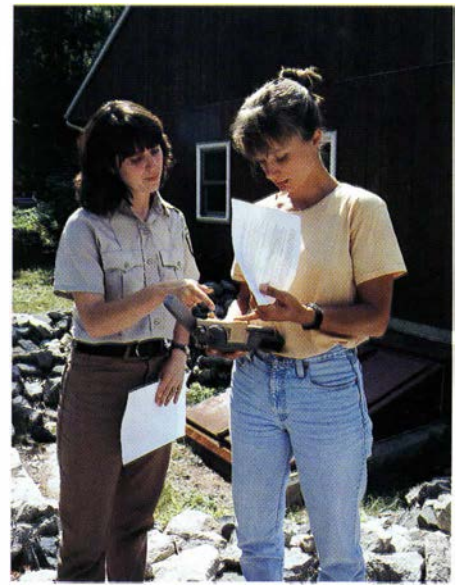
Refuge marshes, estuaries and adjacent forests promote abundant wildlife. Refuge and adjacent lands provide food and essential habitat for over 250 species of birds. Many migrating birds, for which the refuge was established, revitalize themselves here as they travel to and from northern breeding areas. Shorebirds are abundant during spring and fall migrations. Waterfowl are common year-round; black ducks, mallards, Canada geese, and common eiders are often found in marshes and waterways. Warblers, thrushes and other songbirds migrate through or stop to nest in the forests, fields and marshes of the refuge. Spring and fall provide excellent opportunities to see migrating birds of prey.

*Lesser yellowlegs can be found feeding on the shores of marshes and ponds. Photo by Bill Silliker, Jr.*



The refuge supports many species of mammals, reptiles and amphibians. Look for white-tailed deer, river otter, beaver, fox, coyote, moose, and harbor seals on or near the refuge. Painted and spotted turtles bask on logs on warm days; spring peepers, wood frogs and tree frogs sound their chorus in the spring's evening air.

*Refuge staff use global positioning system equipment to locate research points. USFWS photo.*



*Carefully set, controlled fires are used to improve wildlife habitat. USFWS photo.*



## Habitat Management

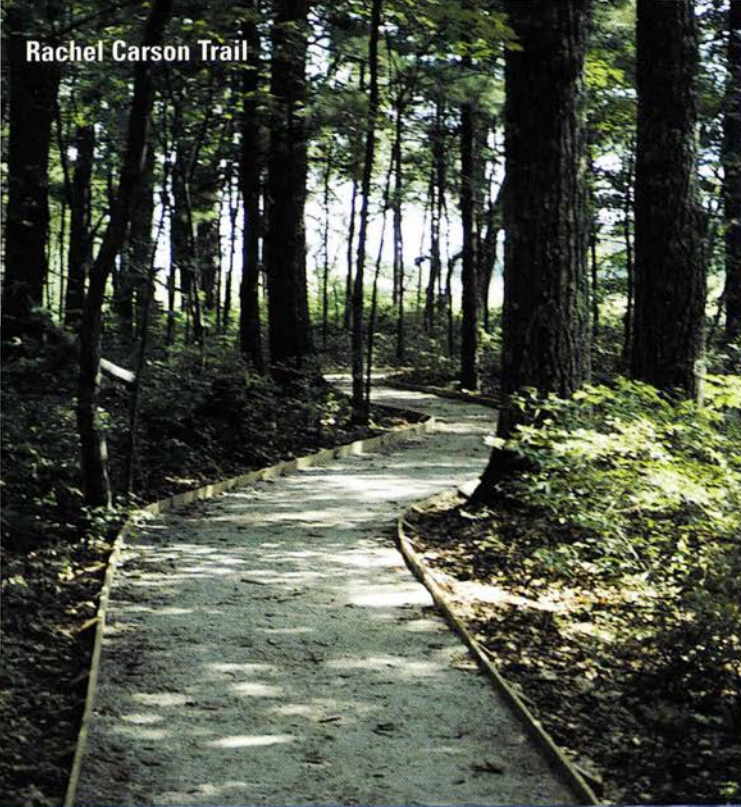
The primary objective of the refuge is managing land to provide waterfowl and other migratory birds with high quality feeding, nesting and resting habitat. A great diversity of wildlife benefit from the variety of habitats that are maintained and restored by refuge staff.

Tidal saltmarshes are the primary wetland type on the refuge. Saltmarshes, once drained, ditched and developed, are being restored to reestablish normal tidal flow and provide excellent habitat for waterfowl, shorebirds and fish.

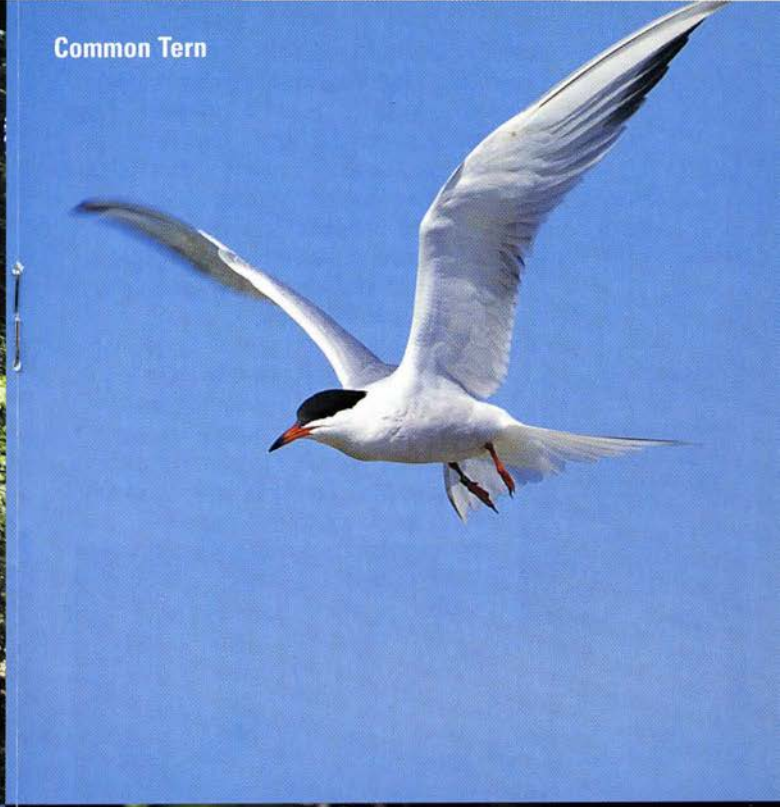
Managers burn or mow shrub lands to return them to productive fields for nesting upland songbirds and waterfowl. Manipulating water levels on some refuge waterways encourages emergent and submergent plant growth for waterfowl.



Rachel Carson Trail



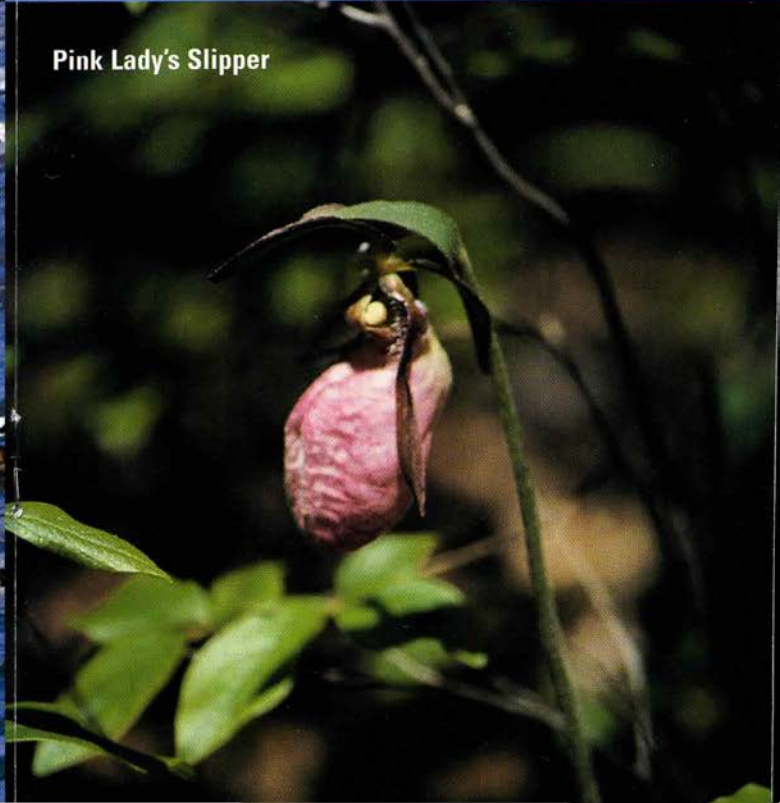
Common Tern



Common Eiders



Pink Lady's Slipper





### *Information*

#### **Visitor Opportunities**

The refuge headquarters is located in Wells, 0.7 miles (1.1 km) east of the intersection of Route 1 and Route 9. Hours: Monday-Friday, 8:00 a.m. to 4:30 p.m.; limited weekend hours in the summer. Printed materials on refuge and wildlife-related subjects may also be obtained by writing to the Refuge Manager.

### *Hiking*



The Carson Trail is a one-mile loop located at refuge headquarters. It meanders through pine woods and offers views of expansive, tidal saltmarshes. The trail is open every day from dawn to dusk and is universally accessible. A free guide is available at the refuge. There are excellent opportunities for wildflower and bird enthusiasts. Stay on the trail to help us protect vital, fragile vegetation.

### *Wildlife Observation/Photography*

The most rewarding times to view wildlife are at dawn and dusk. Stand at a safe distance; do not move suddenly, as this will alert the animal and cause it to flee.

### *Hunting*

Hunting is available on certain refuge divisions. Permits are required. Contact refuge staff for annually updated regulations and maps. Trapping is prohibited.

### *Boating*

Several rivers that cross the refuge provide limited boating opportunities. Please use good judgement to prevent wildlife disturbance and erosion. Contact refuge staff for more information.

*Above: Cedar Waxing. Photo by Tony King. Previous two pages: Eiders, Common Tern. Photos by Bill Silliker, Jr. Trail, Pink Lady Slipper. USFWS photos.*

### *Collecting*

#### **Restricted Activities**

Do not disturb or remove any wildlife, plants, artifacts, or government property.

### *Pets*

Pets are allowed on the Carson Trail only. They must be leashed at all times to minimize disturbance to wildlife.

### *Fishing*

Consult refuge staff for current regulations.

### *Camping*

Camping is not allowed on the refuge. Private campgrounds are available locally.



*Children learn about the environment in one of the refuge's educational activities. USFWS photo.*

## Wildlife Calendar

Wildlife keep their own marvelous schedules; their movements and activities depend upon the season and weather conditions. The following is a general guide to what you may see during your visit:

### January



Common eiders, red-breasted mergansers, common loons, and common goldeneyes feeding in the mouths of rivers. Snow buntings flocking on beaches. Bald eagles hunting along the coast. On warm days, millions of tiny, harmless snow fleas appear on snow at the base of trees.

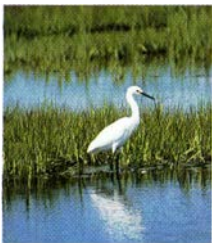
### February

Wintering waterfowl beginning to exhibit courting behavior. Owls sitting on nests; listen for great horned owls calling at night. Mating season for striped skunks; look for them in fields and open woods.

### March

Wood duck, ring-necked duck, green-winged teal beginning to move into the area. Late in the month some songbirds return. American toads, spring peepers, and leopard frogs heard on warm evenings.

### April



Shorebirds return on their northern migration. Piping plovers setting up territories on beaches and beginning to nest. Waterfowl and geese nesting. Swallows and flycatchers can be seen feeding on insects over fields, marshes and rivers. Great blue herons and snowy egrets return. Ruffed grouse may be heard "drumming."

*A snowy egret enjoys the refuge's rivers and marshes. Photo by Bill Silliker, Jr. Above: Bald eagle. USFWS photo.*

### May

Waterfowl broods feeding in marshes and rivers. Look for the occasional glossy ibis on mudflats. Terns arrive early in the month; warbler migration peaks; raptors migrating north.

### June

White-tailed deer seen at dawn and dusk. At low tides, watch for seals resting on rocks. Tanagers and grosbeaks return. Baby birds appear in fields and marshes.

### July

Shorebirds begin their journey to wintering grounds in South America. Sandpipers feeding on mudflats and beaches. Tern chicks begin fledging from nests.

### August

Terns leave nesting colonies and begin southern migration. Blue-winged teal and seabirds migrating south along the coast.

### September

Broad-winged hawks start south. Merlins and sharp-shinned hawks hunting over marshes. Songbird migration underway in earnest.

### October

Common eider, buffleheads and red-breasted mergansers increasing. Ospreys, northern harriers, American kestrels, merlins and peregrine falcons migrating through. Monarch butterflies migrating along the coast.

### November

Waterfowl move closer to shores and rivers. Snow buntings and other winter songbirds returning to the refuge from the Arctic.

### December

Black ducks frequent refuge marshes until they ice over. Coastal birdwatching yields common eiders, black scoters, buffleheads, red-breasted mergansers, and common loons. Listen for barred owls calling in the woods.



*White-tailed deer. Photo by Bill Silliker, Jr.*

### **Wildlife Safety**

Always observe wildlife from a safe distance. Animals have various defense mechanisms that they'll use if they sense danger. Marine mammals, particularly seals, can be very dangerous and should not be approached. Young animals should be left alone; parents are usually not far off and can take better care of their offspring than we can. If you think an animal may be sick or injured, contact refuge staff.

**The National Wildlife Refuge System**  
Rachel Carson National Wildlife Refuge is one of over 500 refuges in the National Wildlife Refuge System administered by the U.S. Fish & Wildlife Service. The National Wildlife Refuge System is a network of lands and waters managed specifically to protect wildlife and wildlife habitat. It represents the most comprehensive wildlife management program in the world. 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 each refuge is as diverse as the nation itself.

The Service also manages National Fish Hatcheries, and provides federal leadership in habitat protection, fish and wildlife research, technical assistance, and the conservation and protection of migratory birds, certain marine mammals, and threatened and endangered species.



# Rachel Carson National Wildlife Refuge

Maine

0 5 miles  
0 5 10 kilometers

