

## PART TWO: THE PARK

### SUMMARY OF SIGNIFICANT RESOURCE VALUES

#### Landscape

Acadia National Park protects a landscape of rare scenic beauty. Acadia's mountains are the highest rocky headlands on the Atlantic shore of the United States, and the vistas from these mountaintops encompass forested woodlands, shimmering lakes, quiet marshes, bold rocky shores, and coastal islands. On all sides, the ocean — which surrounds the park — bisects and strongly influences the park's character.

Besides being one of the most scenic places on the Atlantic coast, the landform of the park is also geologically interesting. Acadia's geologic history spans 500 million years during which mountain ranges have come and gone, seashores have risen and fallen repeatedly, and glaciers have carved the landscape 20 to 30 times. Evidence of continental glacial action, including glacial lakes and U-shaped valleys, abounds; Somes Sound, the inlet bisecting Mount Desert Island, is the only fjord on the east coast of the United States. The islands and mainland peninsula of the park are major coastal features of the Gulf of Maine.



A landscape of rare scenic beauty viewed from St. Sauveur Mountain, 1916.

Over the years the work of island residents has left a distinctive cultural polish on the Acadian landscape. Remnant vernacular landscapes reflect the lives of farm families and their

19th century neighbors. The surviving designed landscapes attest to the interests and commitment of wealthy summer residents. For instance, Beatrix Farrand, a prominent landscape architect, designed much of the landscape along the park's carriage road system, and Frederick Law Olmsted, Jr., was the principal designer of the Park Loop Road landscape. Both road systems were carefully laid out so visitors could glimpse some of the most spectacular vistas of mountains and shoreline in the eastern United States as well as intimate views of woodlands, lakes, meadows, and streams. Although dependent on the natural landscape of Acadia, these designed landscapes have themselves become significant owing to their history, quality, uniqueness, and the sensitivity with which they were designed and built.

### **Air Quality**

Acadia National Park is designated a mandatory Class I federal area under the U.S. Clean Air Act. This classification places stringent constraints on facilities emitting air pollutants that may affect park resources. The act also limits any park development or management activities that could affect air quality by requiring the Park Service to comply with all federal, state, and local air pollution control regulations.

Although spectacular vistas are still common in Acadia, pollutants from near and distant sources contaminate park air. The park has identified a number of vistas integral to the visitors' experience that the state of Maine has incorporated into its *State Air Quality Implementation Plan*.

The park has had an air quality monitoring program since 1979. Summer ozone levels occasionally exceed state and federal health standards. The highest ozone concentration ever recorded in Maine was measured at Acadia (Isle au Haut) on June 15, 1988. Ozone at levels below the state health standard can damage sensitive park vegetation. The park has conducted research since 1982 to determine the cause-and-effect relationships between air pollution and vegetation damage.

### **Island Habitats**

The ecologic importance of Maine's coastal islands, and particularly the Acadian archipelago, as a system is widely accepted. Coastal islands are of special interest because of the large number and diversity of bird species nesting there. The islands' importance as nesting sites for petrels, cormorants, sea ducks, eagles, ospreys, herons, gulls, terns, and auks is due to their seclusion and the productive marine environment that provides food for a great variety of wildlife. Maine is the only eastern state in which the eider duck breeds and is the most important wintering area in the western Atlantic for harlequin ducks.

Coastal islands, particularly the smaller ledges, also provide a critical habitat for seals. Hundreds of females and their young use the small islands of Acadia for whelping each year, and the islands offer haul-outs for the entire local population. A recent study estimates a stable population of 1,600 harbor seals and a seasonal population of 40 gray seals in the waters from Isle au Haut to Petit Manan Reef. All marine mammals are protected under the Marine Mammal Protection Act of 1972 (PL 92-522).



Ecologically important coastal islands, the Porcupines,  
viewed from Old Farm, c. 1920s.

In addition to owning a large portion of both Mount Desert Island and Isle au Haut, the National Park Service owns some or all of 14 larger coastal islands and several small freshwater islands. The Park Service is the holder of around 150 donated conservation easements on coastal islands in the Gulf of Maine. These easements protect island resources that have high conservation value to the park, such as cultural, scenic, and ecologic values — including island habitats.

### **Biological Diversity**

A great variety of plants overlie the Acadian landscape. The park is located in the midst of a broad transition zone from southern deciduous to northern coniferous forests. Local habitats range from seashore to mountaintop. Acadia offers habitats for many plant communities, including old growth spruce forests, wetlands, and jack pine stands growing at the southern limit of the jack pine range. More than 150 plant species are locally rare and of potential importance as indicators of rare habitats worthy of protection within the park.

Acadia's animal diversity parallels its plant diversity. A variety of freshwater fish, hundreds of species of invertebrates, 45 species of terrestrial mammals, 12 species of marine mammals, 17 species of amphibians, 5 species of reptiles, and 338 species of birds have been recorded in Acadia. The islands of the region mark the southern breeding limit for several bird species. Continuous, well-documented observation by professional park staff and qualified amateurs has confirmed the gradual extension of southern and temperate bird species to the islands. With 21 species of breeding warblers, with northern and southern birds intermingled, and with seabirds alongside land birds, Acadia is considered one of the premier bird-watching areas in the country.



Typical mixed conifer forest near Aunt Betty Pond, 1935.

Forty miles of rocky shoreline along with the abundant nutrients of the sea are responsible for a tremendously rich intertidal flora and fauna, well exposed by the 10- to 12-foot tidal range. This range, coupled with the rich terrestrial environment, results in an extremely varied assemblage of plant and animal life within the park.

#### **Habitat of Plant and Animal Species of Special Concern**

Federally listed endangered and threatened species are determined by the U.S. Fish and Wildlife Service under authority of the Endangered Species Act of 1973 and are listed in the *Federal Register*. Endangered and threatened animal species listed by the state of Maine are determined by the Maine Department of Inland Fisheries and Wildlife, and state-listed plant species are determined by the Maine State Planning Office pursuant to the Maine Endangered

Species Acts of 1975 and 1986, respectively. Maine critical areas are those areas designated by the Maine State Planning Office, pursuant to the 1974 Maine Act Establishing a State Register of critical areas, as worthy of special planning and management because of their natural, scientific, scenic, and historical values.

In keeping with the Endangered Species Act, the U.S. Fish and Wildlife Service was informally consulted concerning endangered or threatened species or critical habitats that potentially could be in the area affected by the *General Management Plan*. The service advised that two endangered species, the peregrine falcon (*Falco peregrinus*) and the bald eagle (*Haliaeetus leucocephalus*), and one candidate species, the harlequin duck (*Histrionicus histrionicus*), are known in the park.

Peregrine falcons: Probably never more than two pairs of these falcons have inhabited Mount Desert Island. Only two former aeries are known — one on the steep slope of Champlain Mountain near Bar Harbor, the other on the Eagle Cliffs of Saint Sauveur Mountain bordering Somes Sound. During the late 1950s this species was extirpated as a breeding bird on Mount Desert Island. Due to a cooperative reintroduction program, falcons nested successfully on Champlain Mountain in 1991 and 1992.

Bald eagles: These birds have traditionally inhabited the state of Maine, including habitats found in Acadia National Park. The Maine Department of Inland Fisheries and Wildlife formulated a bald eagle management plan that is being implemented in cooperation with wildlife personnel from the University of Maine and the U.S. Fish and



Bald eagles on the nest, 1919.

Wildlife Service. As part of the management plan, an annual census is conducted to determine nesting activity, breeding success, population changes, and perturbation. Surveys indicate that eagles actively use areas within the park.

Harlequin ducks: The population of western Atlantic harlequin ducks has decreased dramatically in the last 100 years so that there are now only about 1,000 individuals. The largest wintering group of the western Atlantic sub-population is in the vicinity of Isle au Haut.

The park also supports 38 plant and 59 animal species officially listed for special status by the state of Maine. Sixteen animal and seven plant species are of concern to park management and are listed in the *Resource Management Plan*. These species include natives that were possibly extirpated, species at the edge of their range, those representing genetic variability, and those whose numbers are so low as to be near the minimum viable population. A dozen registered Maine critical areas are on parkland.

### Wetlands

Many wetland communities occupy the park's coastal and interior lowlands, widely scattered kettle holes, and other small glacial pockets. Wetland types include salt marshes and freshwater marshes, sphagnum-sedge and scrub bogs, alder scrub, and black spruce-tamarack swamps. In addition, red maple stands and northern white cedar forests sometimes occupy sites with saturated soils. Wetlands provide habitats for many of the park's plant species of concern and provide habitats for native wildlife. The marshes along the Maine coast lie in the path of the Atlantic flyway and thus provide important areas for nesting, migrating, and overwintering birds. Wetlands of note in the park include Northeast Creek, Great Meadow, Marshall Brook/Bass Harbor Marsh, and Bliss Field.



Wetlands at the Tarn, c. 1930s.

Executive Order 11990 recognizes the importance of wetland values and directs all federal agencies to protect those values and to avoid the occupation or modification of wetlands. The U.S. Fish and Wildlife Service has mapped wetlands in the region as part of the National Wetlands Inventory.

### **Water Quality**

Lakes and ponds protect important natural resources and provide swimming, fishing, and boating opportunities. Some of the larger lakes in Acadia serve as public water reservoirs. Most of the park's lakes and ponds are thought to have excellent water quality; however, many are sensitive to acidification. After limited study the effect of acid precipitation on Acadia's lakes is unclear.



Eagle Lake, one of many natural lakes and ponds, 1939.

Marshall Brook, which empties into Bass Harbor Marsh, was polluted by leachate from a landfill that operated adjacent to the park from the 1930s through the early 1980s. Because of the environmental impact, the landfill was closed by the Environmental Protection Agency in the mid-1980s. Annual follow-up studies indicate improving water quality in Marshall Brook, but continued monitoring is important.

### **Cultural Heritage**

The history of Acadia is significant. Although much of the story has been lost to time, deep shell heaps testify to the presence of Native American encampments dating back 6,000 years. Many of these archeological sites are within the park. When European exploration began, diseases of European origin swept through many Native American communities. With mortality rates reaching 50 percent to 100 percent, the social fabric of Indian society was

devastated. Artifacts of Maine's Native American culture are exhibited at the Robert Abbe Museum of Stone Age Antiquities, a private museum operated on parkland.

**Early Settlement.** Samuel de Champlain made the first contribution to the area's recorded history when he landed on Mount Desert Island in 1604. His explorations destined this land to be known as French Acadia before it became New England. An early battle in the Anglo-French colonial rivalry occurred at the second Acadian settlement in North America — now within the park boundary — near the entrance to Somes Sound. After 150 years of conflict for control of North America, British troops triumphed and British settlers began to arrive in the region. These early settlers, and others who joined them throughout the following century, forged a life-style that changed little for several generations. Dependent on both the land and sea, they harvested the forests; built schooners and brigs in nearly every local cove; shipped cargoes of cobblestones, dried and salted fish, ice, granite, and lumber on coastal schooners; and pastured or tilled the more fertile soils. Their story is highlighted at the park's Islesford Historical Museum.

**Summer Colonies.** In the mid-1800s artists from the Hudson River School came to paint the dramatic scenery. Their canvases advertised the beauties of Mount Desert Island to the outside world, inspiring "rusticators" who came to savor the scenery, hike the mountains, and study nature in a relaxed and peaceful atmosphere. The hiking trails used by park visitors today were started by the rusticators and village improvement societies and therefore represent one of the earliest recreational trail systems developed in the United States. Acadia's trail system is not only one of the oldest but also one of the most diverse in the United States, offering people the opportunity to walk and hike along the seashore, within the interior forest, and through mountaintop settings. As word of the island's appeal spread, Mount Desert evolved into a favorite summer retreat for socially and politically prominent people. Wealthy Americans transformed the landscape with elegant estates and extravagant life-styles.

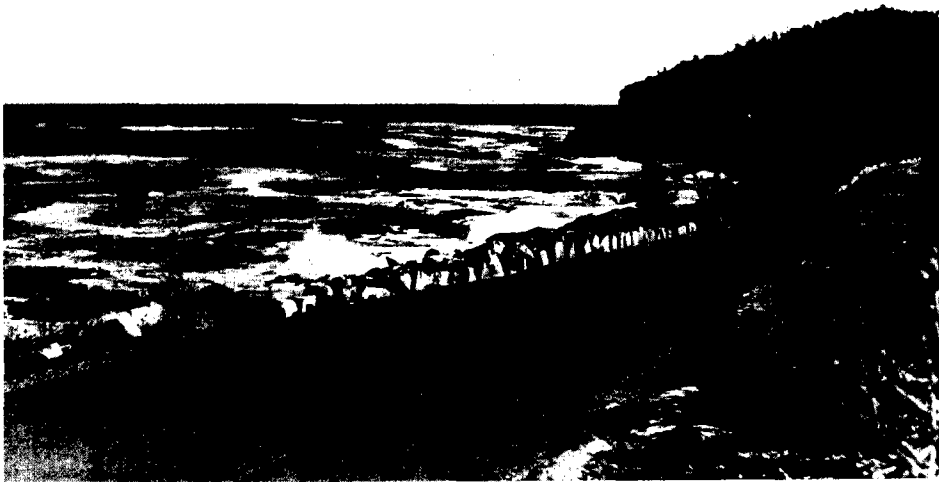


Trails offering woodland walks and rugged climbs; right, Stephen T. Mather on the Precipice, 1922.



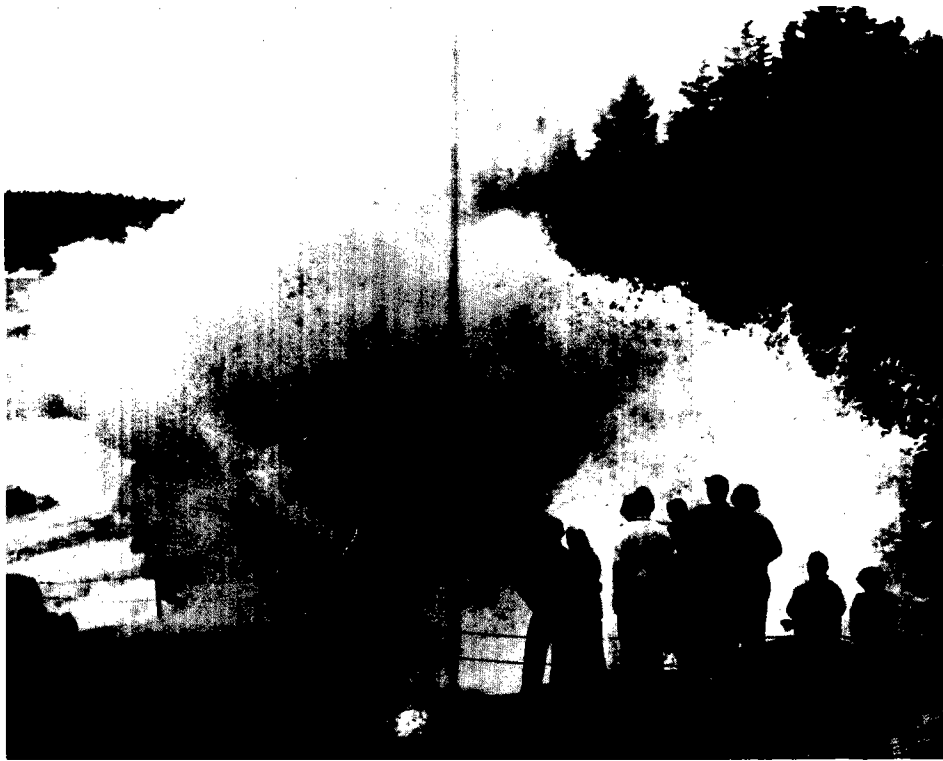
**Hancock County Trustees of Public Reservations.** From the ranks of those wealthy summer residents came a strong commitment to conservation. Disturbed by the development pressures on the island, George Dorr, Charles Eliot, and 10 other concerned residents began Hancock County Trustees of Public Reservations and worked to protect the land and ensure public access. They sought donations of private land; their efforts culminated in the establishment of the first national park east of the Mississippi River.

**Development of Acadia National Park.** Once the park was established, support was enlisted from John D. Rockefeller, Jr. Through his fortune and talents, the park grew in size and was made accessible by a network of carriage roads and the scenic Park Loop Road, both of which are unique cultural resources unmatched in scope and scale anywhere in the United States. The carriage roads, designed to make the park accessible for nonmotorized recreation, represent "the finest example of broken stone roads designed for horse-drawn vehicles still extant in America" (Rieley and Brouse 1989).



Scenic ocean view from the Park Loop Road, 1936.

The architectural style for gate lodges chosen by Rockefeller and his architects links Acadia's cultural and natural landscapes. Characterized by steeply pitched slate roofs and a rustic integration of wood, granite, and brick, the design is reminiscent of the French Country Renaissance style of Rochelle, France. Early structures built by the National Park Service, such as the Thunder Hole and original Cadillac Mountain ranger stations, harmonized with Rockefeller's structures. They were designed in a rustic architectural style characteristic of early Park Service buildings. Several of these rustic park structures survive.



Thunder Hole, 1950.



Eagle Lake carriage road, c. 1930s.



Park architectural style illustrated by Jordan Pond gate lodge (left), 1937, and Thunder Hole ranger station (right), c. 1930s.

Archeological sites; surviving vernacular structures and their environs; the early works of the rusticators, wealthy summer residents, and village improvement societies; and the first park structures, the carriage road system, and the Park Loop Road combine with the natural resources of the park to create an important legacy for the American people.

### Historic Properties

In accordance with section 110 of the National Historic Preservation Act of 1966, as amended, the National Park Service conducted a 1984 inventory of buildings at Acadia National Park. The inventory identified 169 structures. Of these, 27 are currently listed on the National Register of Historic Places (including bridges) and more than 40 may be eligible for inclusion (Arbogast 1984). The following properties are among those currently listed on the national register: Carriage road system and bridges (11/14/79), Islesford Historical Museum (09/20/80), Blue Duck Ship Store (09/20/80), Baker Island lighthouse (03/14/88), Bear Island lighthouse (03/14/88), and Fernald Point (Saint Sauveur) archeological site (07/21/78). Overall, key historic properties in the park include the following:

- Abbe Museum site<sup>1</sup>
- Archeological sites (mostly shell heaps commonly found near the shoreline)
- Baker Island light station
- Bear Island light station
- Blue Duck Ship Store
- Carriage road system
- Carroll homestead and landscape
- Elisha Gilley house and landscape
- Fernald Point archeological site
- Hiking trail system
- Islesford Historical Museum
- Old Farm site
- The Park Loop Road
- Sargent Drive
- Sieur de Monts springhouse
- Storm Beach house
- Early park structures such as Thunder Hole and Seawall ranger stations

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<sup>1</sup>The National Park Service does not own the national register museum building but does own its environs and the land upon which it sits.



Baker Island light station, 1937.

## **Collections**

Acadia holds more than 68,000 artifacts housed in three separate groupings. One group, located on Mount Desert Island, contains the Carroll homestead collection of furnishings and tools, the carriages and carriage parts collection, archives and photographs relating to the park's early history, archeological artifacts, and an herbarium. Another group, housed on Little Cranberry Island, contains the Islesford Historical Museum collection of books, maritime and farming implements, furnishings, documents, and photographs. A third group, stored at colleges and universities nationwide, consists of natural science and archeological collections.

## **Outdoor Educational and Recreational Opportunities**

Acadia National Park provides resource-based, nonconsumptive recreation and education for an increasingly urban population. A recreation resource of national and international significance, the park is within a 12-hour drive of 25 percent of the North American population. In a recent study visitors represented 45 of the 50 United States and six foreign countries. Acadia is also regionally important, because public recreation land is scarce. Recreational opportunities are available inland at the White Mountain National Forest, Baxter State Park, the Allagash Wilderness Waterway, the Appalachian Trail, and the Moosehead Lake region. However, with only 6 percent of the Maine coast accessible to the public, and one-quarter of that acreage in Acadia National Park, the park is one of the most intensively used leisure destinations in the northeastern United States.



Visitors on Sand Beach, 1935.

Unlike many parks carved out of the public domain, Acadia consists almost entirely of lands donated by persons interested in preserving the natural integrity of Mount Desert Island, Schoodic Peninsula, and other islands that now comprise the park. Acadia National Park serves as a model of the preservation ethic — demonstrated by the partnership between private citizens and government — and offers excellent opportunities for educating visitors about a significant and diverse environment. Access to the array of scenery and areas of scientific, natural, and historic interest is provided by Acadia's compact network of carefully designed hiking trails, carriage roads, and scenic drives. A broad range of people are attracted to a spectrum of interpretive activities such as guided walks, amphitheater programs, environmental education activities, and outreach programs.

The day Sieur de Monts National Monument was dedicated, Bishop Lawrence, one of the honored speakers, noted the intent of both preserving the area's resource values and providing resource-based, outdoor recreation for an urban population. He congratulated those gathered, stating that the area would remain forever beautiful, and ended by saying, "Here we have hills which those accustomed to city life may mount, and walks they may use to gain strength. Here we have a park naturally formed...to help city-dwelling men to gain new energy for heavy work in winter" (Wild Gardens of Acadia, 1916, p. 13).



Hikers on Beech Cliffs, c. 1918.



Interpreting tidepool life, c. 1950s.

## **FACILITIES**

There are 136 buildings in the park, including the visitor center and two other information centers, the headquarters complex, 46 housing units, restrooms, concession facilities, and historic structures. The park provides visitors with two campgrounds (over 500 campsites), six large picnic areas, 21 miles of gravel road, 68 miles of paved road, 51 miles of carriage road, numerous bridges, 130 miles of hiking trails, 1,500 signs, and various utilities. Many facilities throughout the park are in need of improvement or replacement.

## **REGIONAL CONTEXT**

Acadia is located on the coast of Maine, where the highest mountains on the eastern seaboard touch the rocky coast of the Atlantic Ocean. The scenic beauty is enhanced by the rugged and dramatic bare mountain peaks, woodlands, lakes, and diverse marshlands. Small coastal villages and elegant resort cottages contribute to the character of the islands.

The area within the permanent park boundary, as established in 1986, is mostly on Mount Desert Island but extends onto surrounding islands and the Schoodic Peninsula. The approximately 34,000 acres within the boundary fall in the towns of Bar Harbor, Mount Desert, Southwest Harbor, Tremont, Gouldsboro, Winter Harbor, Trenton, Cranberry Isles, Swan Island, and Frenchboro. (An additional 3,000 acres of parkland are located in the town of Isle au Haut.) The 1990 population of these 10 towns totaled 14,397.

Park holdings on Mount Desert Island include approximately 32,000 acres. Sound divides the island's east and west sides. The most spectacular and well-known features are found on the east side. The west side has a quieter and more natural character and includes the coastal settlements and extensive marshlands.

### **Park Location and Access**

Located approximately 45 miles southeast of Bangor, Maine, the park is within a day's drive of major metropolitan centers on the east coast. Mount Desert Island and Schoodic Peninsula are accessible from US Route 1, which follows the coast, as well as from other state highways. The park is approximately five hours by car from Boston.

A ferry service to and from Nova Scotia operates from Bar Harbor daily during the peak season and three times a week during the off-season. Other ferries operated by the state of Maine and private operators provide access to islands in the area, including the Cranberry Isles and Baker Island where the park has land holdings. Some of the ferries accommodate vehicles as well as pedestrians. The vast majority of visitors arrive and tour Mount Desert Island's scenic roads by automobile.

### **Economic and Social Context**

The economies of the communities surrounding the park are based on professional services, fishing, boat building, construction, tourist services and sales, educational research, and

military institutions. The 1990 year-round population of Mount Desert Island was 9,613. Visitors to the park have a significant fiscal impact on the surrounding communities. During the summer there is a noticeable shift in emphasis to visitor-service industries. Also, the influx of seasonal residents increases the population significantly, changing the social environment of the island.

The effect of the park on its socioeconomic environment is difficult to ascertain because it is difficult to separate all visitors and seasonal residents on Mount Desert Island from those who just visit the park. Different economic studies of the park's impact on the island communities have reported different conclusions.

Residents of the island communities have observed that the park has both positive and negative effects. It offers recreational and cultural opportunities and provides jobs, for example. However, some see the park as the cause of higher land and housing prices, higher taxes, and increasing traffic. Traffic has become a serious concern: roads are congested and parking is restricted in town and village centers.

### **Surrounding Land Use**

Both seasonal and year-round populations in the region are also increasing. Between 1970 and 1980 the year-round population on Mount Desert Island increased by 15 percent. This increase triggered the construction of new homes throughout the island. Between 1983 and 1986 the number of overnight units in Bar Harbor increased by 50 percent — from 1,500 to 2,256.

The demand for new residences and visitor services has placed increasing pressures on the natural resources of the island. The demand for summer homes is making housing less affordable for year-round residents.

Woodlands, wetlands, and farmlands once provided a buffer to the park's natural systems, but residential and some commercial development is now encroaching on park boundaries. Formerly, many towns did not have zoning or long-range strategies for guiding development and resource protection. Now towns are beginning to undertake a comprehensive planning process in response to state growth-management legislation.

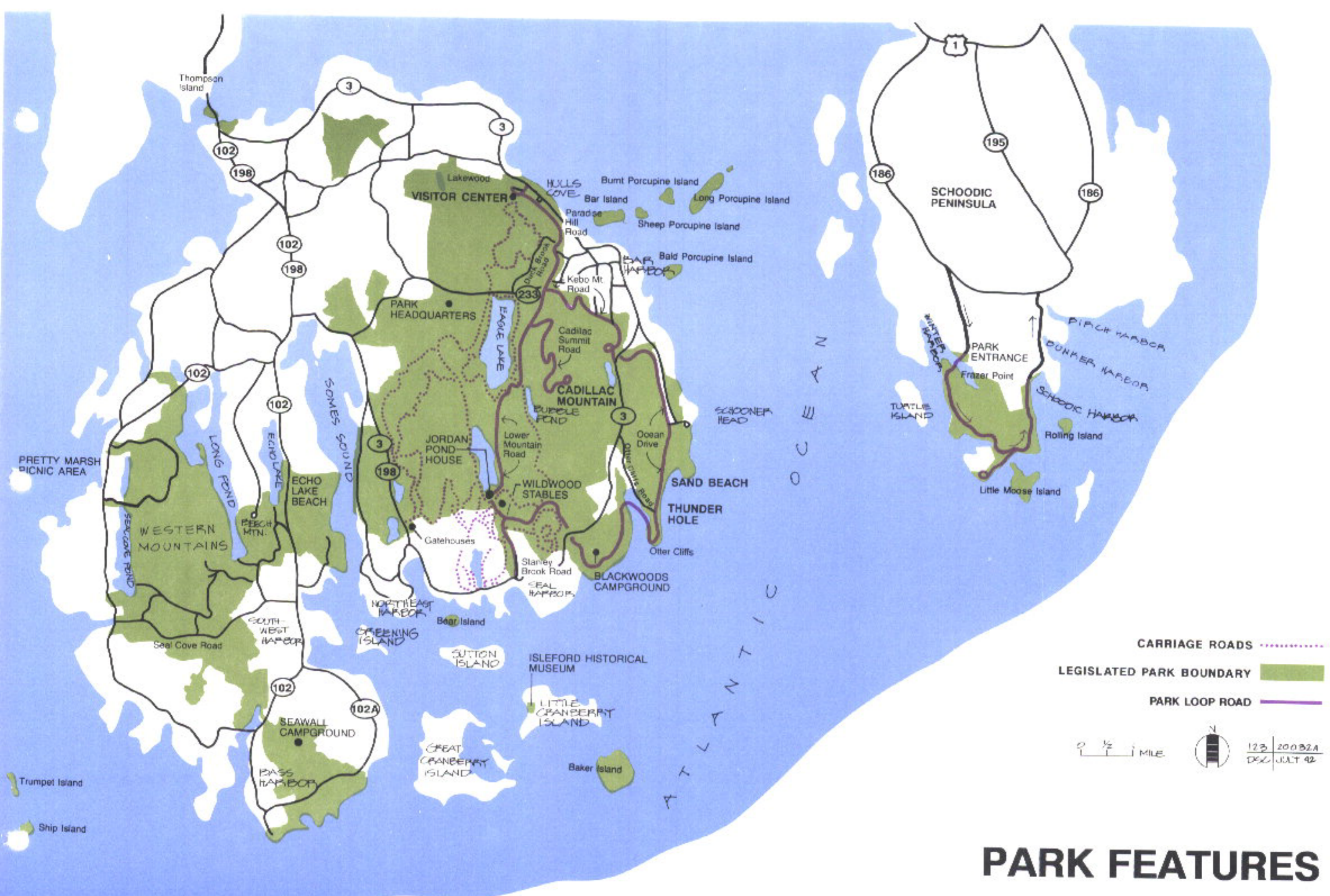
### **Weather**

Acadia's weather is moderate compared to the rest of northern New England. The average annual precipitation of 47 inches is evenly distributed throughout the year. Frequent thawing periods prevent large, long-term snow accumulations. Ice storms are common in winter and early spring, and rain occurs in every month. Fog is also a frequent phenomenon at the park and tends to peak in June, tapering off in winter. Northeastern storms, occurring mainly in late fall and winter, are generally severe windstorms, although hurricanes occasionally pass through.





Winter scene at Duck Brook carriage road bridge.



# PARK FEATURES

ON MICROFILM

ACADIA NATIONAL PARK