

# Everglades

National Park  
Florida

National Park Service  
U.S. Department of the Interior



## A Subtropical Wonder Struggles For Survival

Tropical life from Caribbean islands blends with temperate species in the Everglades and magic inhabits this rich mixture in its unique setting. Magic...the Everglades, never wholly known, invites you to explore its mystery. Give this park half a chance, take the time, and you will discover wonder itself. You can drive kilometers through its skinny pine trees and miss its forests, or drive through its sawgrass and not experience the glades. Many take such a hurried look at the Everglades. But try it another way. Talk and walk with a ranger or take a boat trip. Slow down. Open your mind and spirit. Be moved by the slow, sure movement of this river of grass.

River? Yes, fresh water 15 centimeters (6 inches) deep and 80 kilometers (50 miles) wide, the Everglades creeps seaward on a riverbed that slopes just centimeters per kilometer. The river's lazy progress toward salt water harbors vast natural treasures which await your enjoyment. During the wet season the water may seem still, but it flows, dropping gradually 4.6 meters (15 feet) along its course before emptying into Florida Bay. *Everglades...*, the word suggests a boundless refreshment. It means marshy land covered in places with tall grasses.

The park boundary only partly contains the watery expanse for which it is named. An area of this marshy land and open water larger than Delaware was set aside as a park in 1947. But its great size can neither protect the environment from the disruptive commercial agriculture and industry around it, nor assure that endangered species finding havens here will

survive. Human concern and prudent management must now play a strong environmental role.

Climate governs Everglades life. The nearly uniform climate makes the park a year-round attraction, but there are two distinct seasons: summer is wet and winter dry. Heavy rains fall during intense storms in late May through October. Warm, humid conditions bring abundant insects (carry repellent in summer months) important to food chains. Precipitation can exceed 127 centimeters (50 inches) a year.

Summer's high water levels enable animals to range throughout the park, so you will not then see the concentrations of wildlife so typical of winter months. Summer offers different attractions—mountainous clouds, lush vegetation, spectacular sunsets, calm waters. It means rebirth and replenishment for the Everglades... and natural change. Violent winds and torrential rains of hurricanes may sweep northward during June to November. The Everglades winter is mild, with inclement weather rare and insects less bothersome. With winter's dry season wildlife must congregate in and around the waterholes, many visible from the nature trails. Birds change their feeding habits as food grows scarce. Birds often seen at ponds along the road early in the season move northward with the developing winter.

The Everglades is best known for its abundance and variety of birdlife. At Flamingo you can watch roseate spoonbills, large pink birds often mistaken for flamingos. The flamingos no

longer regularly visit south Florida, if indeed they ever did. Reddish egrets and endangered great white herons live and breed in Florida Bay.

Some 50 pairs of endangered southern bald eagles nest along the coast. Look for the eagles from the breezeway of the Flamingo visitor center. Other rare and endangered species found here include the Florida panther, manatee, Everglades mink, green sea turtle, logger-head turtle, brown pelican, Florida sandhill crane, Everglades kite, short-tailed hawk, peregrine falcon, Cape Sable sparrow, and crocodile. Other species also require the special protection Everglades National Park provides for survival. These include the alligator, reddish egret, spoonbill, Florida mangrove cuckoo, osprey, and round-tailed muskrat. But for this protected habitat, many would soon be threatened with extirpation.

Large populations of Cape Sable sparrows once found at Cape Sable and Big Cypress are almost gone. Only widely scattered individuals remain. Taylor Slough's mucky grass prairie supports an active population, but non-native, exotic plants threaten to close in the open prairie this sparrow depends on for its survival. Short-tailed hawks prey on the sparrow, and ants can kill its nestlings. When abundant habitat fostered an abundance of Cape Sable sparrows this natural predation posed no great threat to the species.

The rare, shy, harmless manatee weighs close to a ton and measures more than 4.6 meters

(15 feet) in length. It is entirely herbivorous, a docile, plant eating being. Man's motorboats and propellers pose this easy-going sea cow's greatest threat. The Florida panther (cougar) is among North America's rarest mammals. The major threat to these big cats, seen but rarely in the pinelands and along the park road, is loss of the extensive habitat over which they stealthily stalk their prey.

The alligator is the best known Everglades citizen. Unfortunately, its hide has been greatly prized for high fashion shoes and handbags. The alligator once waged a losing battle against poachers and habitat loss, but it has now staged a comeback under nation-wide protection. Recently, 75 percent of the nation's alligators were removed from the endangered species list and reclassified as threatened.

The alligator has earned the title of "keeper of the Everglades." It cleans out the large holes dissolved in the Everglades' limestone bed and these function as oases in the dry winter season. Fish, turtles, snails, and other fresh-water animals seek refuge in these life-rich solution holes which become feeding grounds for alligators, birds, and mammals until the rains return. Survivors, both predators and prey, then quit the holes to repopulate the Everglades.

Crocodiles, less common than alligators, are distinguished by their narrower snouts and greenish-gray color. You would be lucky indeed to see one of these shy and secretive creatures mostly found in the Florida Bay area. The crocodile's survival hinges on the preservation of

its dwindling habitat, which somewhat overlaps the alligator's.

Life hangs by a thread here. The problem? Water, fresh water, the life-blood of the Everglades. It appears to be everywhere, but man has drastically blocked its free flow through south Florida. Conflicting demands compete for precious fresh water and the Everglades, at Florida's tip, struggles to survive. Species, forms of life, hang in the balance. Despite an apparent lush richness, water supplies are critical and porous limestone underlies the entire park. Rooting plants have only a thin mantle of marl and peat atop this limestone for their support. If not protected the Everglades' fragile richness would quickly vanish.

Problems abound. Agricultural development east of the park drains residual pesticides and chemical fertilizers into Taylor Slough. Irrigation and nearby canals deplete water supplies, increasing the threat of fire which destroys the thin soils, which invites invasion by exotic plant and animal species that upset habitat patterns. Native vegetation critical to Everglades ecology is depleted. The diversity and complexity protecting the fabric of life is diminished. The problems are linked and mutually reinforcing. Metropolitan Miami mushrooms, posing severe ecological problems. An aerial view of south Florida and its canals looks today like a plumber's schematic diagram. Once the benefactor of south Florida's naturally well-watered richness, the Everglades now competes at the end of a controlled supply line. To the north, flood prevention, irrigation, frost protection, pest

control, drinking water and sewage dilution systems siphon off shares. When rainfall is ample few problems arise. But in drought years arrangements for sharing have been required.

Nature in the Everglades now depends on careful, complementary management programs carried on by the National Park Service and other agencies. These programs often promote positive economic values. The National Park Service is now studying the depletion of shrimp, stone crab, and spiny lobster populations vital to south Florida's commercial fishery, one of the world's largest and finest. To protect these valuable marine organisms research is being conducted so that current regulations can be reassessed and modified as needed.

Human beings are as much a part of the Everglades as the alligator. But our conflicting actions as consumers and conservers have irrevocably changed south Florida, altering the Everglades ecosystem. Concern for protecting rookeries of herons, ibis, and other wading birds from commercial plume hunting and other human impacts motivated creation of the park. Ironically, millions of people now seek sanctuary here from similar problems in our synthetic world. Ultimately places like the Everglades may be the last refuge, not just of eagles, crocodiles and wood storks, but of people too.

## Everglades... Alive and Up Close



Spoonbills sometimes grace Flamingo. In fact, they probably gave the name Flamingo to the Everglades, a case of mistaken identity.

Roseate Spoonbill

Shark Valley's observation tower gives you a rare birds-eye view of the Everglades. The slough seen here pumps life—fresh water—into the park.



Otter

J.P. Lavallee



Green Tree Frog

G. Van Nimwegen

Shark Valley boasts the glades' shyest... otter and deer. The frog's not so much shy as extremely well camouflaged.



See the Everglades from your car? You can, but to experience this vibrant subtropical storehouse of nature, take to its many rewarding trails and waterways.

Winter finds garfish stacked up like cordwood in gator holes along Anhinga Trail. Gumbo Limbo Trail winds through woodlands, tree snail habitat.



Tree Snail

Anhinga

J.P. Lavallee

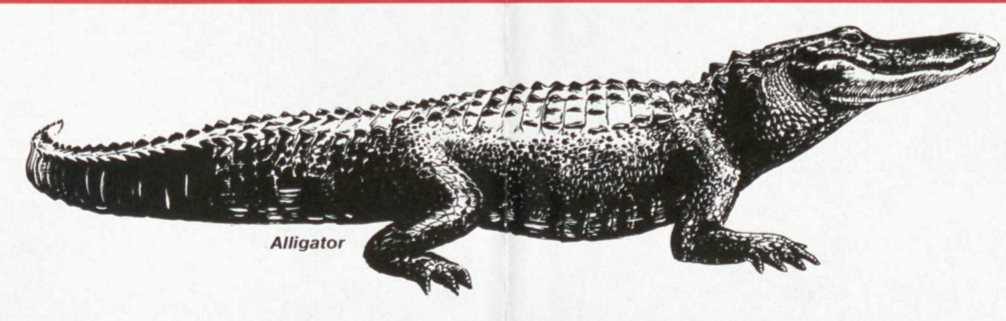


Zebra Butterfly

Golden Web Spinner

Hammocks sit like islands of jungle life. Insects and spiders sprinkle the forest cover with color.

Flamingo promises myriad sights and points of departure into Everglades life. Even the gator sometimes ventures down here where fresh and salt waters meet.



Alligator

American alligator Length: 1.8-3.7 meters (6-12 feet); record over 5.8 meters (19 feet); on hatching, 23 centimeters (9 inches). Color: generally black; bold yellowish crossband coloration

of young may persist into adulthood. Voice: bellowing roar (male); moaning grunt (young); grunt like pig (female); all sizes hiss.

## Facilities

Ask about park facilities at the visitor center. **Flamingo**, a former fishing village, provides interpretive activities, museum, and many concession facilities (see map). **Key Largo**, at the park's southeastern edge, provides information and field activities. Inquire at the main park visitor center or at the ranger station there. **John Pennakamp State Park** is about 5 kilometers (3 miles) from the Key Largo Ranger Station. **Gulf Coast** offers Ten Thousand Islands/Chokoloskee Bay area access, the Sandfly Island National Environmental Study Area, and the Wilderness Waterway's northern portal. Regularly scheduled concession boat trips explore Ten Thousand Islands and the Mangrove Wilderness. The National Park Service provides

no camping facilities here, but trailer and other overnight accommodations are nearby. **Long Pine Key** offers a campground, picnic area, and Environmental Study Area.

Reservations for places to stay and information about things to do at the Flamingo area can be obtained from the concessioner, Everglades Park Catering, Flamingo Lodge, Flamingo, FL 33030, operates the marina, store, cafeteria, gift shop, sight-seeing boats, service station, and motor lodge. Make reservations well in advance by calling (813) 695-3101, 24 hours a day. Reduced rates are available from May 1 to December 1.

The four most sought-after fish in the Everglades are snapper, snook, trout, and redfish. These good eat-

## Things to Do

Obtain park information, pamphlets and books, and see an orientation film at the visitor center just outside the main park entrance station. An entrance fee is charged at the main park entrance station only. There is a special use fee for each person taking the Shark Valley tram tour. Golden Eagle and Golden Age Passports do not cover this use fee.

**Fishing** is permitted in the park under Florida laws, but spearfishing is prohibited. Freshwater rod-and-reel fishing requires a Florida license, but saltwater fishing does not. Inquire or watch for signs about the few no-fishing areas.

A marked 160-kilometer (99-mile) Wilderness Waterway offers inland boating from Everglades City to Flamingo. Whether by boat or by canoe,

ing fish are caught all year round. Purchase shrimp for bait at the Flamingo marina. Bait you can catch yourself are finger mullet and pin fish.

**Boating.** Flamingo Marina accommodates boats up to 18.3 meters (60 feet) long, with ample boat trailer parking and free launch ramp access. Slip fees are based on boat length. Rent small powered skiffs, houseboats and canoes at the marina and ask about the many services offered. Purchase navigation charts in Homestead, Miami, Everglades City, or at the marinas and visitor center.

Sightseeing boats in the Ten Thousand Islands and mangrove swamp are operated by Everglades National Park Boat

this waterway provides an ideal way to experience the Everglades for those who have the time. (See map to trace its route.)

The Flamingo area offers four marked canoe trails: Bear Lake, West Lake, Hells Bay and Noble Hammock. Ask a park ranger for specific information.

Florida Bay lies largely within Everglades National Park. Most of its islands are closed to boat landings to protect nesting birds. Please check at the Key Largo or Flamingo Ranger Stations or the visitor center to see which islands are open.

Sightseeing boats in the Ten Thousand Islands and mangrove swamp are operated by Everglades National Park Boat

Tours, P. O. Box 119, Everglades City, FL 33929. Trips originate at the Gulf Coast Ranger Station in Everglades City on Fla. 29. Sandwiches and drinks can be obtained here also.

**Birdwatching**, perhaps some of America's finest, lures many people back to the Everglades time after time. This area is unique because some species that are rare or endangered throughout the United States or the world are relatively common in the park's protected habitat.

**Camping.** Park campgrounds, at Long Pine Key and Flamingo, provide drinking fountains, tables, charcoal burners, tent/trailer pads, and restrooms. Flamingo has cold water showers. House-trailers are permitted but the

campgrounds have no water, electrical, or sewage hookups. Flamingo has two sewage disposal units, Long Pine Key one.

Campground stays are limited to 14 days from December 1 through March 31. A park entrance fee is charged. Group sites can be reserved in advance from December 1 through April 30. Write or call park headquarters for details.

Long Pine Key Picnic Area and Campground is 6.5 kilometers (4 miles) from the park entrance. You must bring all supplies except water. Purchase supplies in Homestead, Florida City, or nearby towns. Flamingo Campground offers picnic tables and camping facilities. Limited staple groceries are available at Flamingo Marina.

You may also camp, without charge, at designated sites on the beaches or in the backcountry. Access is by boat or on foot. **You must first obtain a backcountry use permit at park headquarters or a ranger station.**

**Hiking trails** are provided in the Flamingo area. Round trip distances range from 6.5 kilometers (4 miles) on the Bear Lake, Christian Point, and Snake Bight Trails to 22.5 kilometers (14 miles) on the Alligator Creek Trail. Many also serve as bike trails. Inquire at the Flamingo visitor center for more details.

**Shark Valley.** A tram ride and other naturalist-conducted activities are provided in this biologically rich and diverse area. Abundant wildlife can be seen most of the

year, especially in winter.

**Long Pine Key Nature Trail** offers hiking and biking in the pines. It returns to the main road just east of the Pashay-okee Trail. Its length is 11.2 kilometers (7 miles).

**Coot Bay** provides access for canoe travel into White-water Bay. **Mrzek Pond** features large numbers of migratory and resident birds during several mid-winter weeks.

The nonprofit Everglades Natural History Association makes books and pamphlets available at the visitor center or by mail. Write the association before you visit. Address: P. O. Box 279, Homestead, FL 33030.

## Park Regulations

Please help us protect the Everglades. Practice good outdoor manners. Put litter in trash receptacles and observe safety and courtesy rules. Enjoy your visit in a way that lets others enjoy theirs.

**Plants and Animals.** After many years of protection some animals can lose their fear of people. You can view them at close range, but this does not mean they are tame. They are still wild. Do not feed or otherwise disturb animals, or damage, remove, or disturb plants. All plants are protected under park regulations.

Watch for poisonous plants (poison ivy, poisonwood, and manchineel) and poisonous snakes (coral, water moccasin, and diamondback and pigmy rattlers). When

hiking in areas without trails, watch for mucky soil, sharp-edged pinnacle rock, and holes.

**Fire.** Be careful with fires. Do not smoke on nature trails. Build campfires in designated camping areas only.

**Maximum driving speed** is 88 kilometers (55 miles) per hour. Reduced speed limits are posted. Drive slowly; the road is designed for your enjoyment of the scenery.

**Pets** must be under physical restrictive control. They are not allowed on trails or in amphitheaters.

**Airboats and glades buggies** are not permitted in the park. **Hunting**, or using firearms or other hunting apparatus which could injure

wildlife is prohibited.

Park rangers are here to help you enjoy your visit. Do not hesitate to ask their assistance or guidance. Please report any fire, accident, violation, or other unusual incident to them.

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## Mapping a River of Grass in Delicate Balance

How do you go about mapping the intricate Everglades to make its natural workings understandable? You might begin by flying over the entire park at only 25 meters (80 feet) above the glades with a park interpreter as your pilot. Leaning out the small plane's open window to take photographs you hope your seat belt prevents you from joining the alligators sunning below! Our cartographer did just this, supplementing his reconnoitering with aerial orthophotomaps, ocean survey charts of shorelines, and high-altitude infrared photographs.

The map shows the many things to see and do in the Everglades. And its diverse ecosystems are represented in separate colors to illustrate the park's natural complexity, for this is not just a big swamp, but a dynamic fabric of terrestrial and aquatic plant and animal communities. With the map and pictures you can locate yourself in environments you encounter along the roads, foot trails, canoe trails, and wilderness waterway. Facilities and services provided by the National Park Service and its concessioners are also shown.

The Everglades' natural wealth occurs in eight life zones, ecosystems dependent on the balance between flood and fire, fresh and salt water, rainy seasons and drought. **Fresh Water Sloughs** such as the Shark River and Taylor Sloughs are the main channels bringing glades water into the park. Acting as reservoirs, sloughs help plant life and animals such as deer, opossum, raccoon, and other survive the dry season. The **Anhinga Trail** offers good views of Taylor Slough wildlife. Alligators, fish, water snakes, and many birds, including anhingas, American coots and purple gallinules, congregate here in winter.

The **Shark Valley observation tower**, just off the Tamiami Trail in the northern portion of the park, looks out over expanses of slough and **Fresh Water Marl Prairie**. The tower provides an opportunity to get more of a birds-eye view—and a better understanding—of the Everglades landscape.

**Long Pine Key Nature Trail**, providing hiking and biking off the road east of the Pa-hay-

okee Trail, winds for 11.2 kilometers (7 miles) through typical **Pinelands** ecosystem. These pinewoods are found only in elevated areas of bare limestone outcrops. Along the trail at **Pinelands** slash pine appears to grow right out of the limestone. The trees root in soil-containing "solution holes," dissolved potholes in the underlying limestone. The pines would not reproduce and survive without fire, which destroys competing vegetation and exposes mineral soil for the seedlings. Understory plants here include saw palmetto, rough-leaf velvetseed, and short-leaf fig.

Driving over the glades toward Florida Bay you encounter a sign reading "Rock Reef Pass—Elevation 3 feet." The road then traverses **Cypress** ecosystem, an open area of scattered, stunted pond cypresses, a variety of bald cypress. This dwarf cypress forest develops where marl or lime muds build up in solution holes. Pond cypresses may be more than 100 years old; tall bald cypresses less than 50. Soil depth, water fluctuations, and effects of fire make the difference.

The **Pa-hay-okee Trail** boardwalk leads to an elevated platform overlooking typical glades which give the park its name. Many of the more than 100 species of grass in the park are seen from this trail: muhly grass, Everglades beardgrass, coinwort, marsh fleabane, creeping Charlie, three-awn grass, love-vine, ludwigia, and arrowhead. Sawgrass, not a true grass, but a sedge, is prominent too. This area seems to lack wildlife, but reveals Cape Sable sparrows, red-winged blackbirds, common yellowthroats, the pigmy rattlesnake, eastern indigo, king snake, and various water snakes. **Gumbo Limbo Trail** introduces you to cooler and damper areas harboring airplants and ferns. This jungle-like **Hardwood Hammock** usually sits about a meter (3 feet) above its surroundings and requires protection from fire, flood, and saline waters. Hardwood hammocks do not need extensive roots because a fungus recycles nutrients from the shallow soil to the trees. The roots are either visible or lie just centimeters below the surface. **Mahogany Hammock Trail** features paurotis palms and some of the largest mahogany trees in the continental United States.

The **Mangrove** ecosystem occurs where southward-creeping glades waters meet salty water. Conditions in this transition zone, seen from the **West Lake/Mangrove Trail** and the **Hells Bay Canoe Trail**, aid the mangrove trees' growth. Mangroves act as nurseries for smaller marine animals and their leaves are the foundation for many food chains. Their debris-catching root systems make mangroves, which homeowners now encourage as storm and hurricane windbreaks, unique land builders. Buttonwood mangroves are least tolerant of salt water. The white, black, and red mangroves grow progressively closer to shore.

A surprising number of salt-tolerant plants usually associated with desert environments grows in the **Coastal Prairie**. Prevalent marsh rabbits show that this is no desert, however. High levels of salt create conditions encouraging cactus, yucca, and agave. See these plants along a trail south of Flamingo campground and along the **West Lake** and **Bear Lake Canoe Trails**. Hardwood hammocks have developed in the prairies on old Indian shell mounds, but the

salty soils stunt their growth.

The **Wilderness Waterway** displays nearly every kind of marine life found in the Caribbean as you wind your way through vast **Marine** and **Estuarine** areas of the park. Such areas serve as spawning grounds and nurseries for microscopic and larger animals which sustain game and commercial fish, water birds, sea turtles, sea shells, corals, blue crab, stone crab, and lobster.

Now...stare at the map a minute. Imagine yourself an astronaut quickly leaving the tip of Florida behind you. Light green sweeps down the mainland's midsection, the Shark River Slough flowing through the Everglades. It delivers water...life to the landscape receding beneath your space craft. Dark green fingers of land-building mangrove communities poke inland to meet the fresh water marl prairies. You sense both life's great fragility here...and its immense determination to endure. This is the earth itself.

