

# NATIONAL Parks AND PRESERVES OF SOUTH FLORIDA

Visitors Guide to Everglades, Biscayne, and Dry Tortugas National Parks and Big Cypress National Preserve

Volume 6 No. 1

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## Everglades: Just Add Water

### Working Together To Restore a Marvel

by Peter Allen

Everglades National Park has never been fully in control of its destiny. Throughout its 46-year history, the park's liquid life-line has been managed, largely by others, for a multitude of purposes. Life in Everglades is dependent upon a tremendous supply of fresh water flowing from north of park boundaries. For more than a generation, that water has not come to Everglades National Park in any sort of natural flow. For more than a generation, Everglades has been a park in biological decline.

The natural functioning of Everglades National Park and Big Cypress National Preserve has never been more altered than at present. Yet the future for these great wild places is more hopeful than in recent decades. A large-scale cooperative effort is underway among more than a dozen state, federal, and county agencies to restore the Everglades region to biological health. But first, a look at how Everglades became as sick as it now is.

Just as blood flows through our bodies in pulses, so should water course through the Everglades. Historically, water flowed southward from Lake Okeechobee toward the south-

ern and southwestern coastline of Florida. A shallow sheet flow, up to fifty miles wide but only inches to a few feet deep, moved seaward at a quarter-mile or less per day. Dense marsh vegetation, especially sawgrass, grew in this enormous stream of water. Water flow decreased during dry

winter seasons and surged with greatest volume at the end of rainy summer seasons. Bird nesting and other life cycles were tied to the timing of fresh water depths; many wading birds, like wood storks, depended upon decreasing water depths during the winter to concentrate food

for feeding their young.

During wet summers, Lake Okeechobee would spill over toward the south, sending a pulse of water slowly toward what is now Everglades National Park. Downstream of Lake  
(Continued on page 2)

## The Battered Pines

by Alan Scott

Pinelands, dominated by Dade County slash pine, support the most diverse plant community in the Everglades region. Home to more than 200 plant species and several endangered animals (including the Florida panther and red-cockaded woodpecker) the



pinelands are an important Everglades habitat. Unfortunately, decades of development, drainage, and fire control have weakened pinelands. Hurricane Andrew was the final blow, allowing insects, particularly pine bark beetles, to kill the trees in most areas of Dade County.

Pinelands once formed an almost continuous forest along the higher, drier "rock ridge" from Fort Lauderdale to Long Pine Key. Today 97% of these forests have been lost to development and agriculture. Surviving fragmented stands are now one of the most threatened habitats

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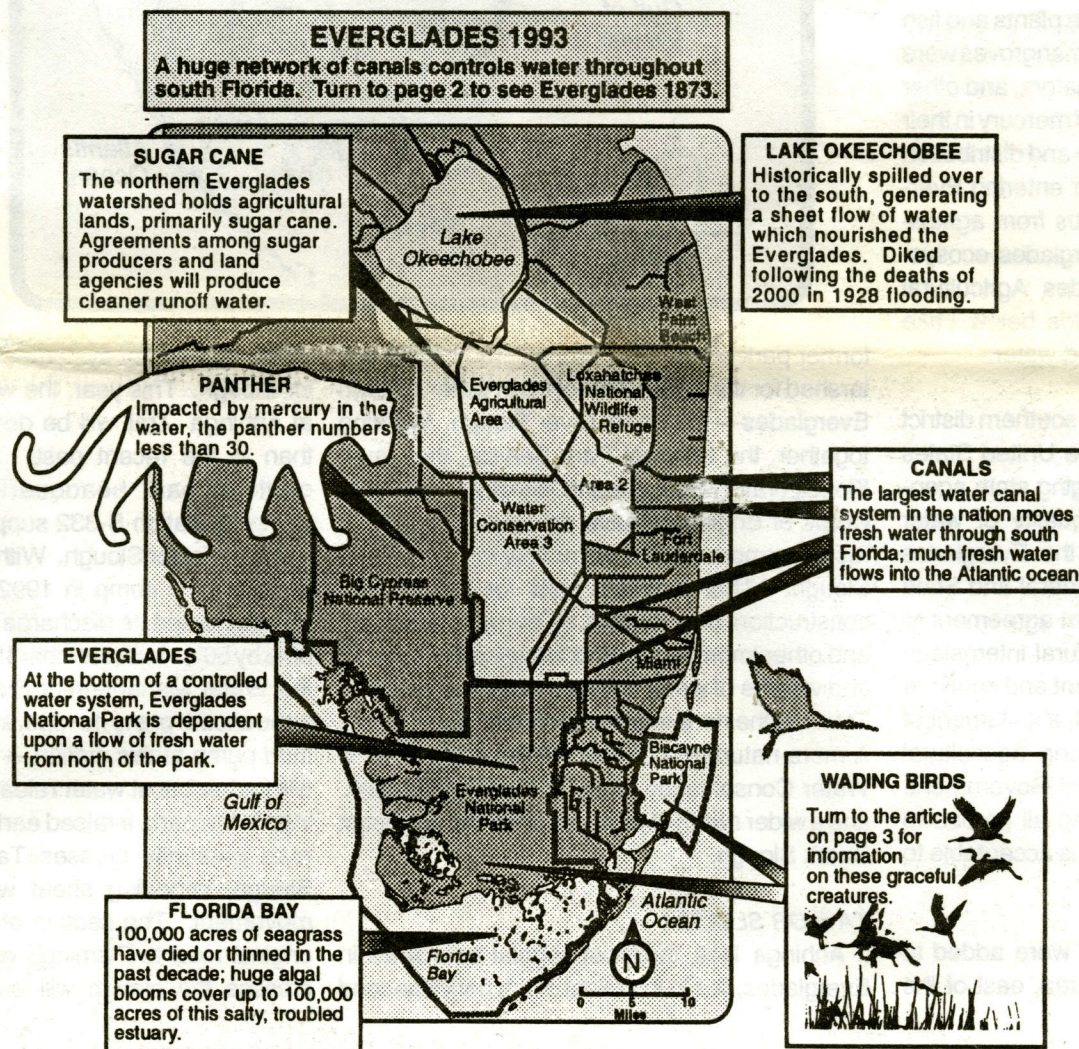
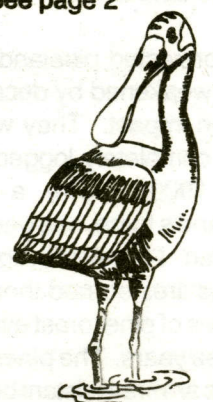
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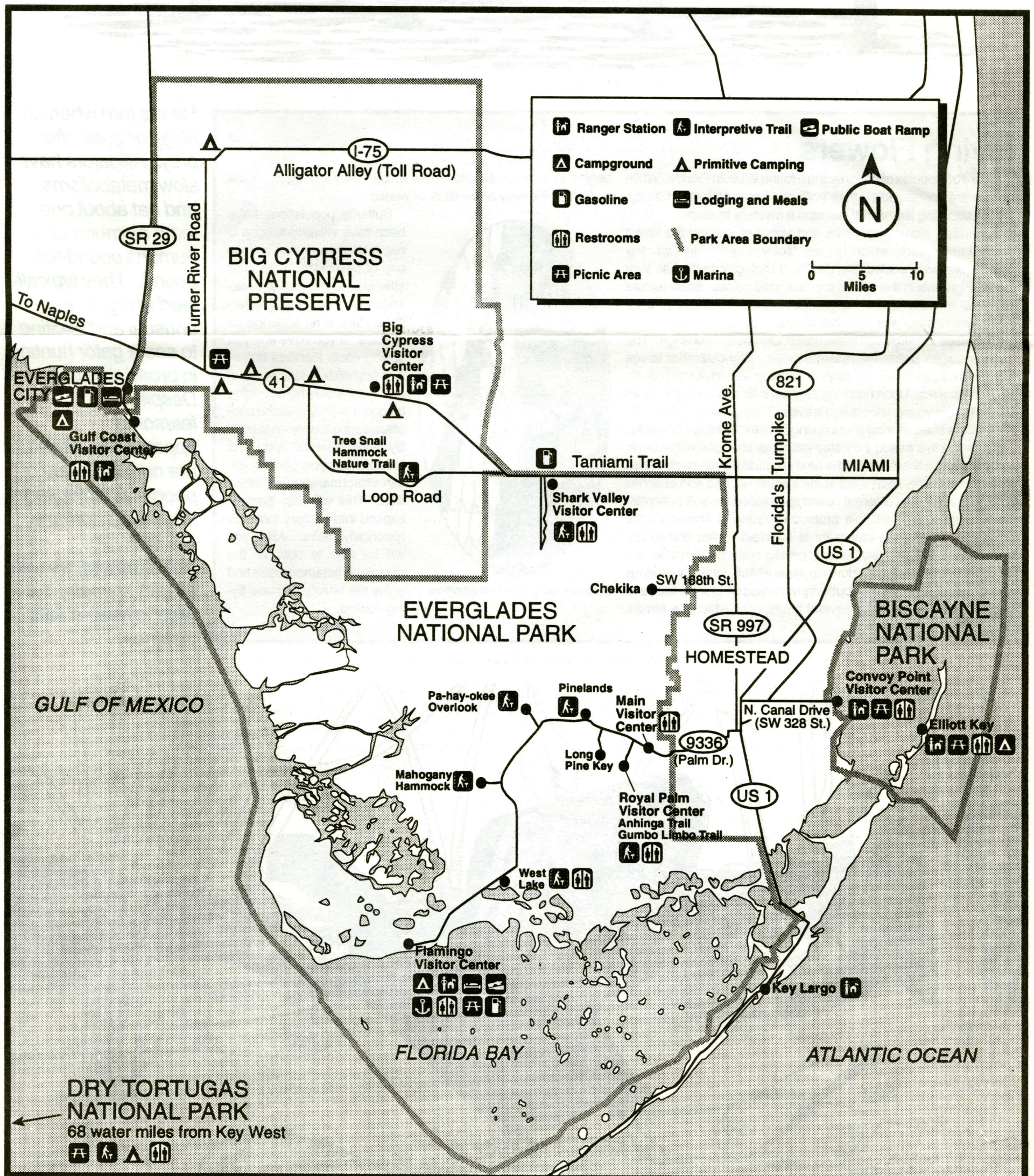


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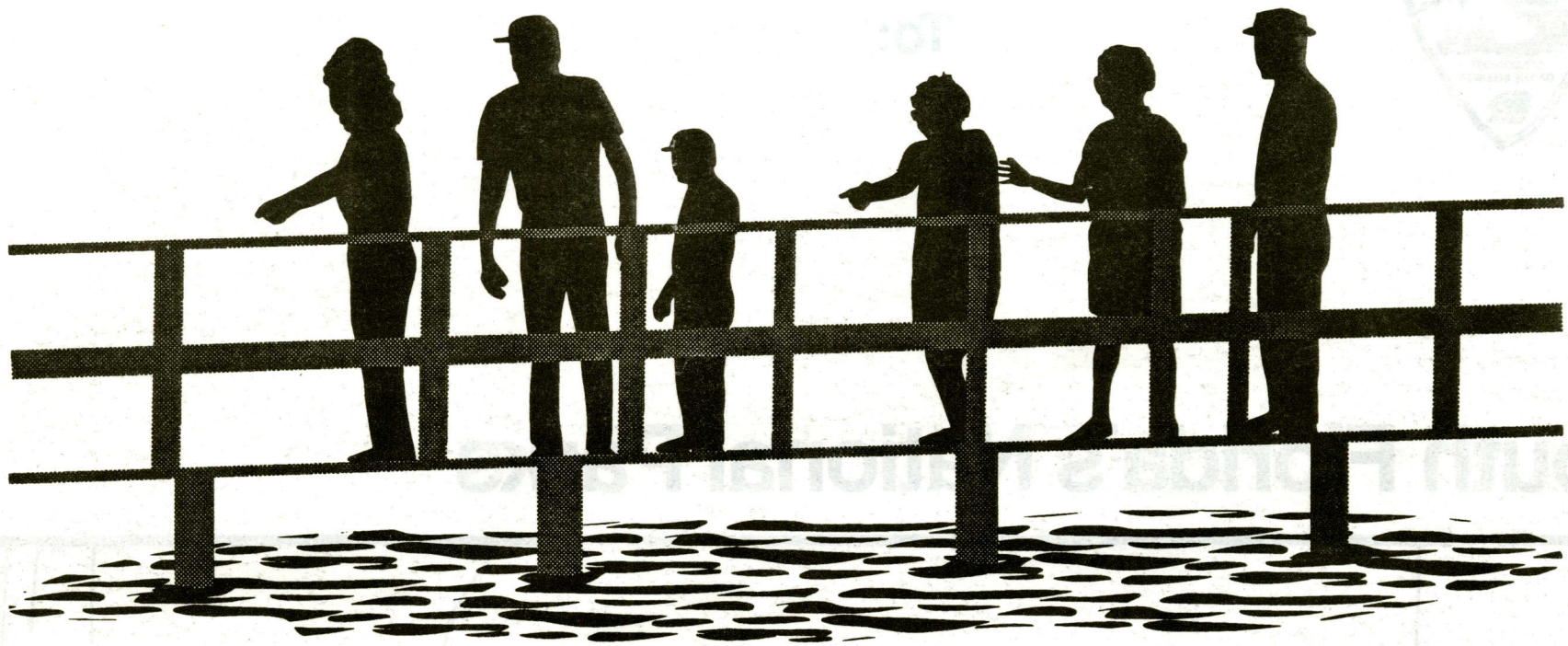
To:

# South Florida's National Parks





# ....of South Florida's National Parks



## Flying Flowers

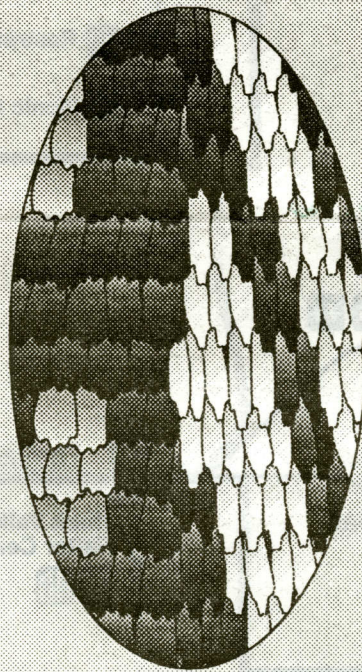
Over 100 species of butterflies are found in south Florida. While people are impressed by their brilliant colors and fragile beauty, their fascinating life history remains a mystery to most.

Butterflies, along with moths and skippers, occupy the insect group Lepidoptera, which means "scaly wings." In fact, tiny overlapping wing scales, like tiles on a roof, give butterflies their color. Pigments in the scales produce solid colors. Scale texture provides metallic colors—tiny ridges cause refraction of light, which catches our eye as some of nature's most brilliant colors.

Butterflies undergo complete metamorphosis, or change. The various stages share few resemblances. Tiny caterpillar larvae hatch from eggs about four days after being laid on plants specific to each species. Upon hatching they eat their egg shell, then start on the tender young shoots and leaves. They grow so quickly that their skin is shed several times during the next few days or weeks.

Following this period they stop eating as changes within begin to occur, preparing them for the next stage, the pupa or chrysalis. In a secure place, each larva spins a small silk pad and attaches its hind feet. A very different covering replaces the soft caterpillar skin. Hard and short, this protective casing is known as the chrysalis. Inside, the caterpillar is liquefied. After one to two weeks, the newly formed butterfly breaks open the chrysalis and emerges. It hangs upside down to allow its soft, folded, wet wings to expand and harden. The butterfly soon flies off to seek food and a mate. Mating may take several hours, after which the female

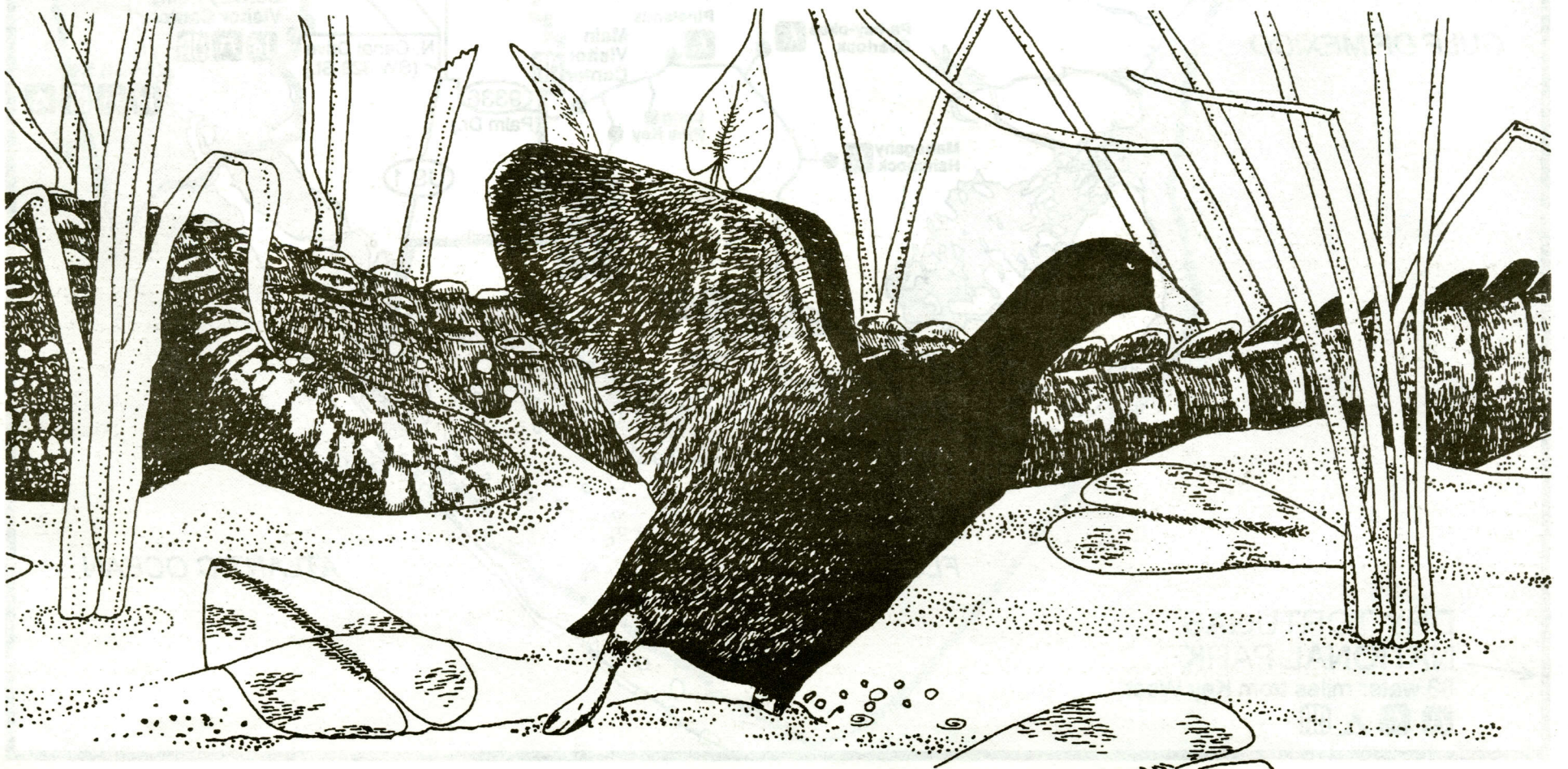
begins to look for the plants on which to lay her eggs. Most butterflies live only a few days or weeks.



Butterfly wing scales magnified.

Butterfly populations have been severely reduced due to habitat loss and indiscriminate use of pesticides. One local species, the Schaus Swallowtail found in Biscayne National Park, is an endangered species. If you have enjoyed seeing south Florida's butterflies and wish to take some of this experience home, using biocontrols and pesticide substitutes are good places to start. By planting nectar and larval food plants in your garden, you can attract many native butterflies. This will help them to expand into territory that was historically theirs. Also, you will be able to observe the miracle of metamorphosis and enjoy the beauty of these flying flowers.

*Heads turn when an alligator goes after prey. Alligators have slow metabolisms, and eat about one tenth as much as humans pound-for-pound. They typically feed at night. It is unusual and exciting to see a gator hunting in broad daylight. Despite their fearsome appearance, alligators are normally wary of people; unprovoked attacks on humans are rare. Nevertheless, as with all wild animals, it is wise to keep a safe distance.*





# Water

(Continued from page 1)

Okeechobee the soil was rich and deep, and these lands were settled by farmers by the 1920's. A great hurricane in 1928 brought massive flooding from the lake into these agricultural lands; 2,000 people died. To prevent such a tragedy from recurring, the southern portion of Lake Okeechobee was diked. Since 1934, no water has spilled directly out of Lake Okeechobee toward the Everglades.

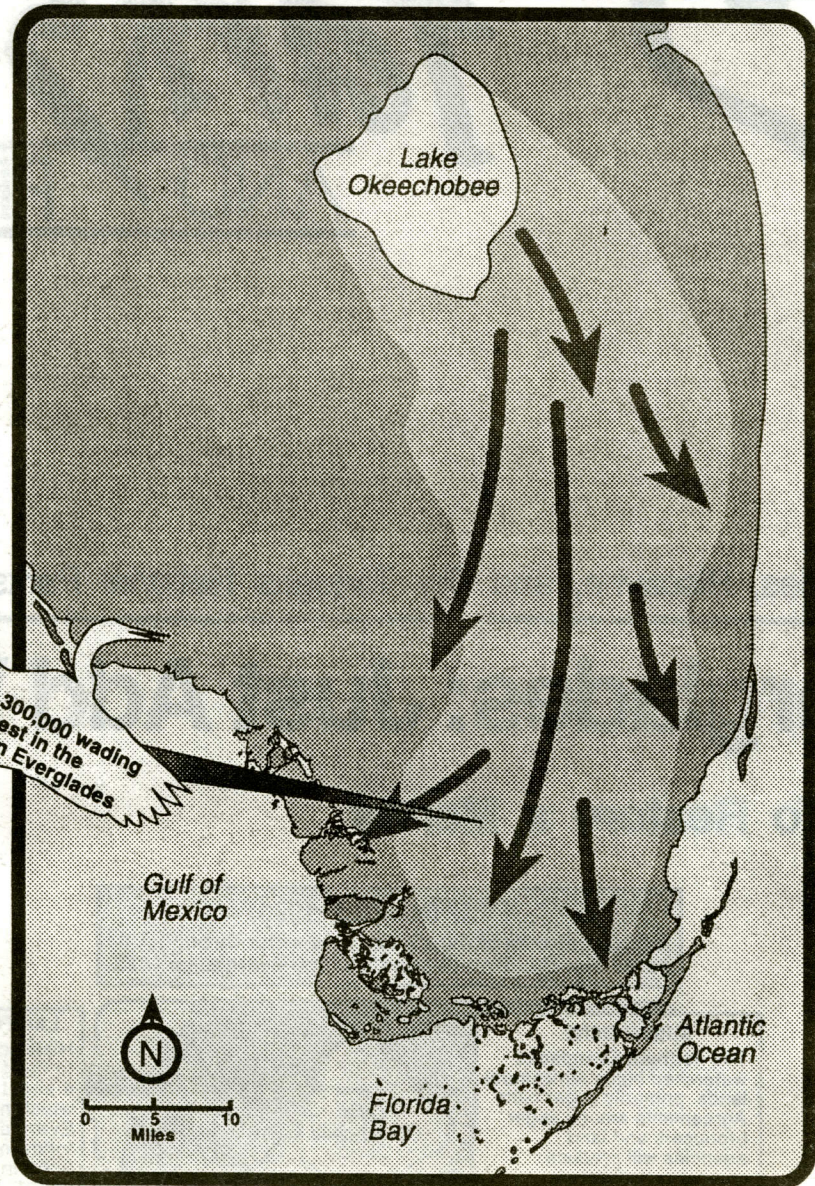
Following widespread flooding throughout south Florida in 1947 and 1948, the U.S. Army Corps of Engineers and the newly created Central and Southern Florida Flood Control District (now the South Florida Water Management District) constructed an extensive system of canals, levees, pumping stations, and water impoundments. By 1962 this water management system controlled fresh water movement throughout south Florida, preventing disastrous flooding to residents but also cutting off all sheet flow of water to Everglades National Park. Since that time wading birds have rarely nested successfully in Everglades. (Please see *Wading Birds and Water* on page three for more detail.)

By the late 1980's, Everglades was clearly an ecosystem in rapid decline. Wading bird populations were less than 10% of historic numbers; non-native plants and fish were proliferating; seagrasses and mangroves were dying in Florida Bay; panthers, alligators, and other animals were showing high levels of mercury in their bodies. Not only was water quantity and distribution a problem, but the quality of water entering Everglades was also poor. Phosphorus from agricultural lands was fertilizing the Everglades ecosystem. The 700,000 acre Everglades Agricultural Area (E.A.A.), primarily sugar fields below Lake Okeechobee, was releasing tainted water.

In 1988, the U.S. Attorney for the southern district of Florida filed suit on behalf of the United States against the State of Florida, charging state agencies with failure to protect the quality of water entering into Federal lands from the Everglades Agricultural Area. In 1991, the Federal and State Governments reached a settlement agreement to resolve the suit; however, agricultural interests in the E.A.A. objected to the settlement and continue to legally challenge it. In July 1993, a statement of principles was finally signed among agricultural interests, the state and the Federal Government. Negotiations are continuing among all parties to develop a detailed agreement that is acceptable to all.

In 1989, 107,000 acres of land were added to Everglades National Park. This area, east of the

**EVERGLADES 1873**  
A shallow sheet of water flows slowly southward from Lake Okeechobee, nourishing the vast wetlands of the Everglades. Most of south Florida is flooded at some point during the year.



former park boundary, is considered critical watershed for the central flow of fresh water through Everglades—the Shark River Slough. Working together, the National Park Service, the South Florida Water Management District, and the Army Corps of Engineers have developed a plan for restoring more natural water flow through Shark Slough. This proposal calls for design and construction of a system of pumps, spillways, and other improvements to increase the breadth and volume of water delivery under the Tamiami Trail into the northeastern section of Everglades. A more natural water flow will be established in Water Conservation Area 3B north of the park, and a wider swath of water will enter the northeast Shark Slough.

### TAYLOR SLOUGH

Anhinga Trail, the most popular boardwalk in Everglades, lies in the midst of the park's second

major fresh water system—Taylor Slough. This year, the water at Anhinga Trail will be deeper than in the recent past. Just north of park headquarters, pumping station S-332 supplies water to Taylor Slough. With the addition of a pump in 1992, S-332 increased its discharge volume by 50%. In September 1993, the Water Management District announced plans to operate a third pump at this station, which will further boost water releases. Within the park, a raised earthen road presently crosses Taylor Slough, impeding sheet water movement. The section of this original road to Flamingo which crosses the slough will be re-

moved this year. These measures will improve water flow somewhat through Taylor Slough. Full restoration of water flow to Taylor Slough will not occur without the complete redesign and reconfiguration of the C-111 canal. As Taylor Slough drains into Florida Bay, increased fresh water deliveries to eastern Everglades may help reduce salinities in Florida Bay.

### FLORIDA BAY

Florida Bay, at the southern tip of Everglades National Park, has been a productive nursery for gamefish, lobster, shrimp, and other marine creatures. In the past five years, marine grasses which once covered much of the bay's bottom have died; 100,000 acres of seagrass have been affected to some degree. At the same time, blooms of algae have also spread throughout the bay; these dynamic algal blooms have extended over an area as large as 100,000 acres. Salinities in parts of northeastern Florida Bay have frequently been 50% higher than seawater. More than a dozen federal, state, and county organizations are working together, developing a program for reversing the ecological decline of this critical body of water. Improvements in fresh water delivery into northeastern Florida Bay have already occurred, and more efforts in this region are planned by the South Florida Water Management District and the Army Corps of Engineers.

Perhaps the Everglades of the year 2000 will be more robust and healthier than the Everglades of 1993. The labors of many right now may provide a gift of life at which the whole planet can marvel.

# Pines

(Continued from page 1)

in Florida. The largest stand -- Long Pine Key in Everglades National Park -- covers only 11,000 acres.

Unprotected pinelands have been weakened by decades of human impact. They were almost completely logged in the early 1900s. Fire, a natural pineland's force, has been suppressed. Historically, lightning-started fires burned thousands of acres of pine forest every two to three years. The pines themselves are fire resistant but other plants are pruned, allowing more sunlight to reach pine seedlings. These days, even during the

wettest months, pines have difficulty getting enough water because canals designed for flood control keep groundwater artificially low.

### INSECTS KILL TREES

Between Homestead and Everglades National Park entire forests consist of dead, standing pines. Within the park, pines appear healthy. What has caused this dramatic difference? All the stresses mentioned above, plus Hurricane Andrew, have left the pines of south Florida vulnerable to insects.

Insects are a natural part of pine forest ecology. Pine bark beetles and pine weevils feed on the inner bark of damaged or old trees (25 to 40% of pines in south Florida were broken or blown down by Hurricane Andrew). Budworms consume new growth. Healthy trees withstand insect attacks by taking up more water to produce sap. Sap prevents insects from entering the trees.

The pinelands in Everglades National Park and Big Cypress National Preserve are surrounded by wetlands. Their roots tap into groundwater, al-

lowing most trees to produce enough sap to resist the beetles. Outside park land, the lowered water table reduces water intake for sap production. Unable to fight the beetles, acre after acre of pines have died. Currently, healthier pines on National Park Service lands provide a seed source for replantings in areas where pines have succumbed. Post-hurricane, the protected pines of the south Florida National Parks have become even more valuable, as so few healthy pine groves remain elsewhere.

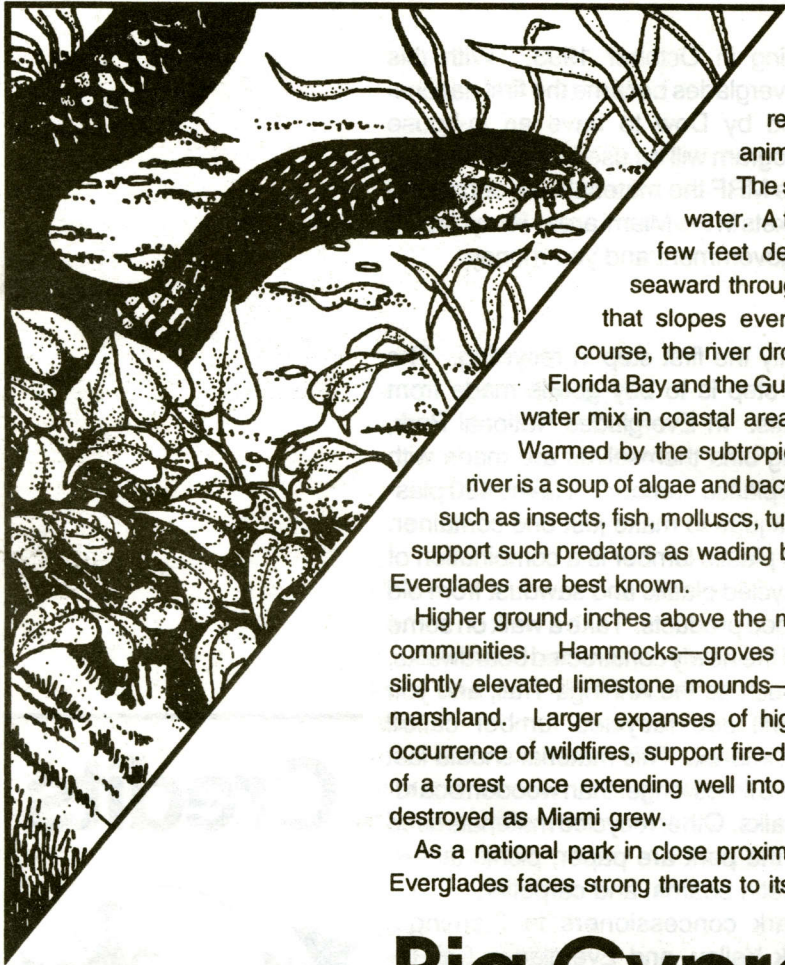
# Kids.....

See if you can name the animals pictured in this newspaper. Answers below.

- Front Page: Roseate Spoonbill
- Page 3: Wood Stork
- Page 4: Indigo Snake and Bald Eagle
- Page 5: Manatee and Wood Stork
- Page 7: Mangrove Cuckoo, Roseate Spoonbills, and Great Egrets
- Page 8: Great Blue Heron and Alligators
- Page 9: Loggerhead Turtle
- Page 10: Corn Snake, Green Anolis Lizard, Alligator, and Leopard Frogs
- Page 11: American Coot



# Everglades National Park



Tropical life from Caribbean islands blends with temperate species in the Everglades. The result is a rich mixture of plants and animals in a unique setting.

The setting is in many ways defined by water. A freshwater river a few inches to a few feet deep and 50 miles wide creeps seaward through the Everglades on a riverbed that slopes ever so gradually. Along its long course, the river drops 15 feet, finally emptying into Florida Bay and the Gulf of Mexico. Where fresh and salt water mix in coastal areas, mangrove forest dominates. Warmed by the subtropical climate of south Florida, the river is a soup of algae and bacteria that sustains larger life forms such as insects, fish, molluscs, turtles, and snakes. These, in turn, support such predators as wading birds and alligators, for which the Everglades are best known.

Higher ground, inches above the moving water, holds unique plant communities. Hammocks—groves of hardwood trees growing on slightly elevated limestone mounds—are islands amidst surrounding marshland. Larger expanses of high ground, more subject to the occurrence of wildfires, support fire-dependent pine forest, a remnant of a forest once extending well into Dade County. Most of it was destroyed as Miami grew.

As a national park in close proximity to a large metropolitan area, Everglades faces strong threats to its survival. The same water that

supports all life in the Everglades also supports human life in urban areas.

Everglades National Park was established in 1947. The park encompasses 1.5 million acres.

*Everglades National Park  
40001 State Road 9336  
Homestead, FL 33034-6733  
(305) 242-7700*

**For Things To Do in Everglades National Park, please see page 6**

# Big Cypress National Preserve

In Big Cypress Swamp, "big" refers not to the size of the trees, but to the vastness of the swamp, more than 1,100 square miles within the preserve alone! In addition to cypress swamp, the preserve contains marsh, wet and dry prairie, mixed hardwood hammocks, sandy islands of slash pine, and estuarine mangrove forests.

This large tract of land is an important link in the hydrological system of south Florida. The cycle begins as most of the preserve's 60 inches of annual precipitation fall (between May and October), flooding cypress strands and prairies with a shallow sheet of life-giving fresh water. Plants and animals in Big Cypress and the Everglades depend on this water for survival. Humans drink this same water in several Florida cities. Big Cypress National Preserve differs from many other National Park Service areas. Hunting, trapping, off-road vehicle use, oil and gas

exploration, and other pre-existing uses are allowed to continue. These activities require licenses and/or permits, and are regulated by the National Park Service and other agencies to insure minimal impact on the environment.

Big Cypress National Preserve was authorized in 1974 and comprises 728,000 acres—about 45% of the total acreage of Big Cypress Swamp.

*Big Cypress National Preserve  
HCR 61, Box 110  
Ochopee, FL 33943  
(813) 695-4111*

**For Things To Do in Big Cypress National Preserve, please see page 7**

## Welcome Foreign Visitors!

The National Park Service distributes brochures in many languages. Ask at visitor centers for information in your language.

# Are There Any .....

## Are there entrance fees?

For cars, vans, and motorhomes, Everglades National Park charges a \$5.00 fee at the entrance station before the Main Visitor Center and a \$4.00 fee at Shark Valley. Bus passengers pay \$3.00 at the Main Entrance and \$2.00 at Shark Valley. Bicyclists and people on foot pay \$2.00 per person. Entrance fees are valid for 7 days. Golden Eagle, Age, and Access Passes are honored at entrance stations. No entrance fees are charged at the Gulf Coast, Big Cypress, Biscayne, or Dry Tortugas.

## How do I get to various park areas?

Use the map on the back page to help you orient.

### •Everglades National Park:

**Main Visitor Center:** If coming from Miami, take the Florida Turnpike south to the last exit, then follow the signs to Everglades National Park. **Royal Palm** is 4 miles further down the road, and **Flamingo** is 38 miles further down. **Shark Valley** is on the Tamiami Trail, 25 miles west of the Florida Turnpike exit for S.W. 8th Street. **Gulf Coast** is 3 miles south of the Tamiami Trail on Highway 29, south of Everglades City.

**•Big Cypress National Preserve:** The **Big Cypress Visitor Center** is midway between Miami and Naples on the Tamiami Trail (U.S. 41).

**•Biscayne National Park:** The **Convoy Point Visitor Center** is 6 miles east of Florida Turnpike Exit #6, or 9 miles east of U.S. 1 on S.W. 328th St. (North Canal Drive).

**•Dry Tortugas National Park:** The park is accessible only by boat or seaplane—contact the park for a list of private carriers.

## What are the hours of operation?

In Everglades National Park, the road leading from the Main Visitor Center to Flamingo is open 24 hours and the entrance into Shark Valley is open from 8:30 a.m. to 6:00 p.m. For visitor center hours, see pages 6 and 7.

## Where can I take an airboat ride?

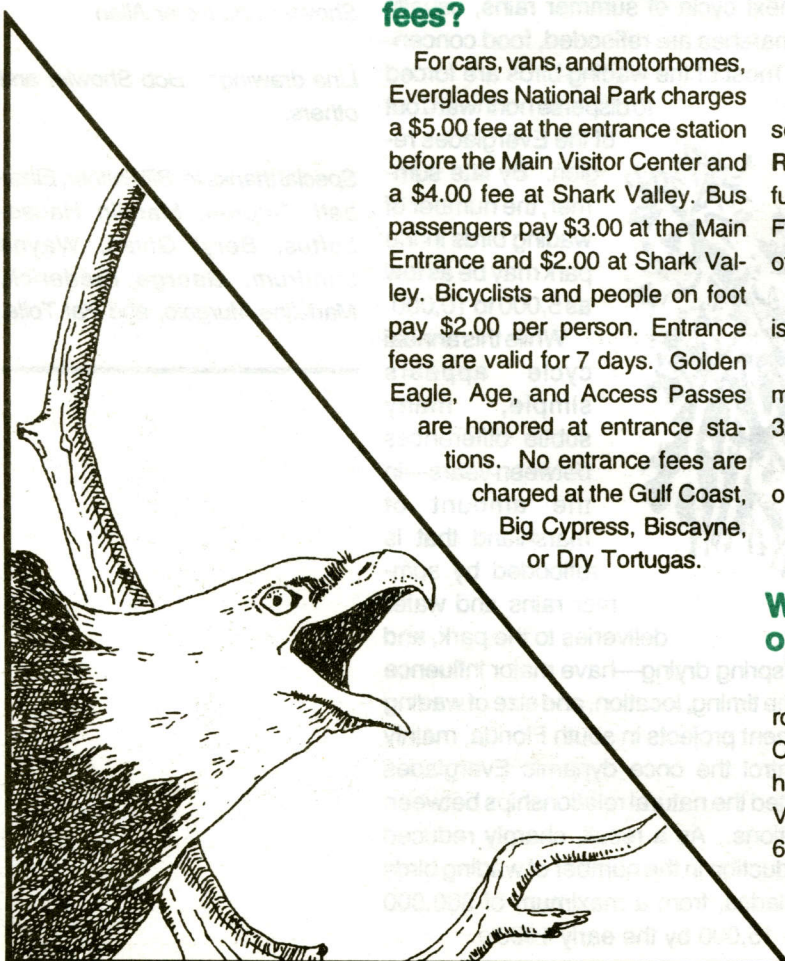
Airboats are not permitted in Everglades National Park, but you may take an airboat ride outside park boundaries along the Tamiami Trail and between Homestead and the Main Park Visitor Center off of route 9336. For information on other types of tours, see pages 4 and 5.

## Should I be concerned about venomous snakes?

Four species of venomous snakes—the Eastern Diamond-back Rattlesnake, Dusky Pygmy Rattlesnake, Cottonmouth, and Coral Snake—live in south Florida. No snakes are found at the Dry Tortugas. Scientists believe that snake venom evolved to immobilize prey, not to terrorize humans. In fact, snakes usually shy away from contact with people. If you see a snake, and you are unsure what kind it is, give it a wide berth and it will not bother you.

## What about dangerous plants?

Certain local plants, some found nowhere else in the U.S., contain toxins which can cause skin reactions if contacted. It is wise to learn how to identify poison ivy, poisonwood, manchineel, and other poisonous plants if you plan to leave the trails.





# Introducing the Backcountry

While paddling into Florida Bay, the canoeists' efforts are reinforced by an east wind. They decide to put their paddles down for a while and let the wind do the work. As the boat drifts, the only sound is the lapping of water against its hull. The canoeists are lulled by this peaceful, yet strange, tropical setting.

Something appears nearby, above the surface. It is a head—with an ugly, but appealing face. The paddlers wonder what fish would emerge to look them straight in the eye. The head is covered with brown scales and is large—about the size of a human's. They stare at its peculiar face momentarily. Its round black eyes blink. Then the head plops below the water. Just then, the canoeists realize they were not exchanging glances with a fish at all, but with a sea turtle!

The backcountry of south Florida's national parks is full of surprises. From the thrill of spotting unusual wildlife, to the mystery of paddling a mangrove-lined creek, to the pleasure of watching the sunset from a remote beach or backcountry chickee, backcountry experiences are usually rewarding.

## Selected Trails

The following is a sampler of the many trails available for backcountry exploration. Contact park visitor centers for more complete listings of backcountry opportunities.

1. Big Cypress National Preserve—The Florida National Scenic Trail runs north-south through the preserve for 31 miles. The trail passes through a variety of freshwater environments. Occasionally flooded in winter.

2. The Wilderness Waterway—a 99-mile canoe and powerboat route between Everglades City and Flamingo in Everglades National Park. The trail passes through America's most extensive mangrove forest.

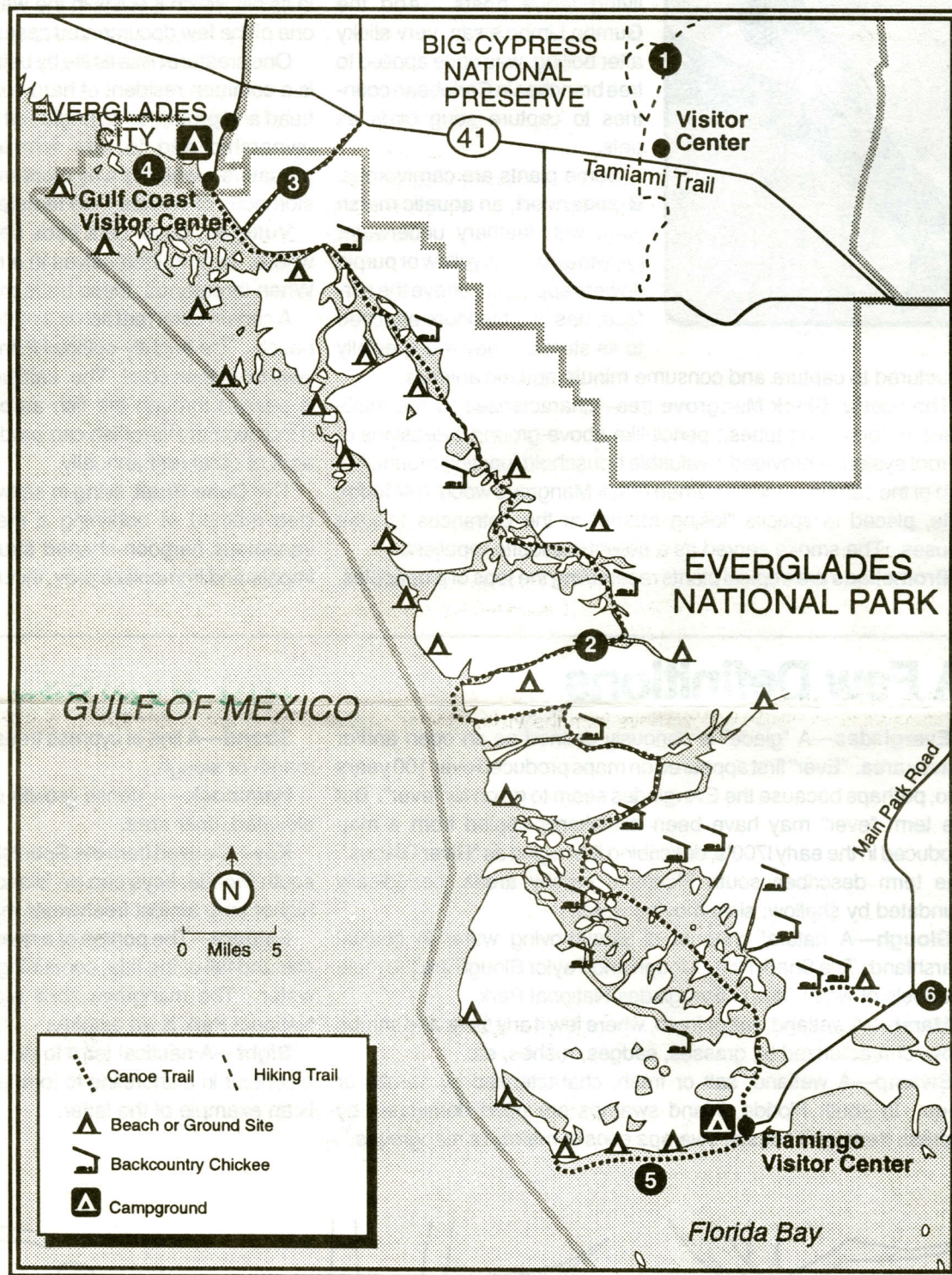
3. The Turner River Canoe Trail (8 miles)—begins along the Tamiami Trail and ends in Chokoloskee Bay near Everglades City. The scenery changes from pine and freshwater cypress forests to tropical salt-water mangrove swamp.

4. Chokoloskee Bay—from the Gulf Coast Visitor Center, canoeists can paddle the Bay for an hour or all day. The miniature world of an oyster bar may be explored at low tide; dolphins and manatees may be viewed.

5. Cape Sable—a ten-mile, one-way, overnight trip by water from Flamingo to miles of pristine shell beach and stunning sunsets. Day trips into Florida Bay (Snake Bight) may provide good birding opportunities.

6. Nine Mile Pond Canoe Trail—a five-mile loop to experience the freshwater marsh and to view such wildlife as alligators and wading birds.

## Selected Backcountry Trails and Campsites



**Backcountry permits are required for overnight backcountry camping in Everglades and Biscayne National Parks. In Everglades, permits are obtained in person at the Flamingo and Gulf Coast Visitor Centers.**

**To protect unspoiled, wild areas, special regulations are enforced.**

**For information contact the park area you wish to visit. Phone numbers and addresses are listed on pages 4 and 5.**

## Striking Diversity

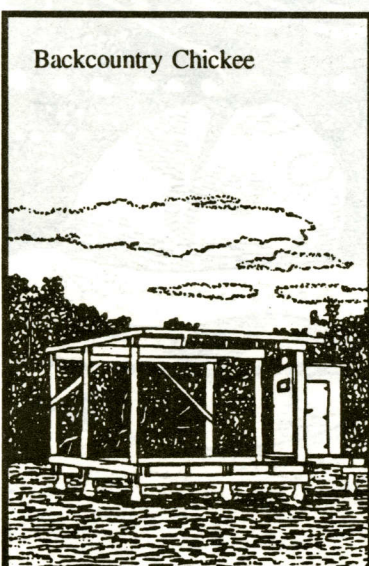
The types of backcountry campsites illustrate the diversity of natural and human history which can be experienced in the south Florida wilderness.

**Chickees** are elevated, covered, wooden platforms, usually constructed on open water, well away from mangrove trees. Miccosukee Indians describe a chickee as an open-air structure which allows wind to blow through for comfort on hot days and to keep insects away. Everglades backcountry chickees serve a similar purpose.

**Beach sites** exist along the Gulf Coast mainland and islands of Everglades National Park. Most of south Florida's natural beach is built up from the shells of multitudes of marine organisms. While some shells are fragmented, many can be discovered completely intact. Some beaches, such as Highland Beach and Cape Sable, serve as essential loggerhead sea turtle nesting sites.

**Ground Sites** are cleared areas in a variety of backcountry settings. Some, such as Willy Willy, Camp Lonesome, and Canepatch along the Wilderness Waterway, are old Indian mounds. Coastal aboriginals, who lived here well before the Seminoles, constructed mounds of shell or soil as dry dwelling sites amidst the mangroves. Others, such as the Lopez River campsite and the Watson Place, both south of Everglades City, were cleared by early settlers. The Watson Place (formerly an Indian mound) is of particular interest.

Ed Watson homesteaded the site in 1890 and raised crops there for twenty years. In 1910, amidst a controversy over the murders of some of his associates, Watson was killed by the gunfire of an angry mob. While Watson's two-story house was destroyed by Hurricane Donna in 1960, one lone giant Royal Poinciana tree, blooming crimson in summer, still stands on the Watson Place as a reminder of that violent time.





# The Distinctive Natural History...

## You Don't Say!

### Little-Known Facts About Local Plants and Animals

The tropical **Gumbo Limbo** tree, with red peeling bark, is native to hardwood hammocks. It has been used in some peculiar ways.

At one time, its soft wood was commonly used in the ornate carvings of carousel horses. In Latin America, the easily-transplanted branches are removed to make durable and attractive living fence posts. And the Gumbo Limbo's sap, very sticky after boiling, was once applied to tree branches in Caribbean countries to capture song birds as pets.

Some plants are carnivorous. **Bladderwort**, an aquatic marsh plant with feathery underwater growth and small yellow or purple flowers appearing above the surface, has tiny bladders attached to its stems. They are specially

structured to capture and consume minute aquatic animals. The coastal **Black Mangrove** tree—characterized by the multitudes of "breathing tubes," pencil-like above-ground extensions of its root system—provided a valuable household function around the turn of the century. Locals burned Black Mangrove wood in smudge pots, placed in special "losing rooms" at the entrances to their houses. The smoke served as a potent mosquito repellent.

**Bromeliads** are tropical plants resembling the tops of pineapples.

They grow on tree branches in a variety of habitats, and serve as miniature freshwater reservoirs during dry spells. Larger individuals can hold over one pint of water in the cavity formed by their leaf bases. The stored water may be home to insects, frogs, and other life. Two species of Everglades mosquitoes breed only in these pools!

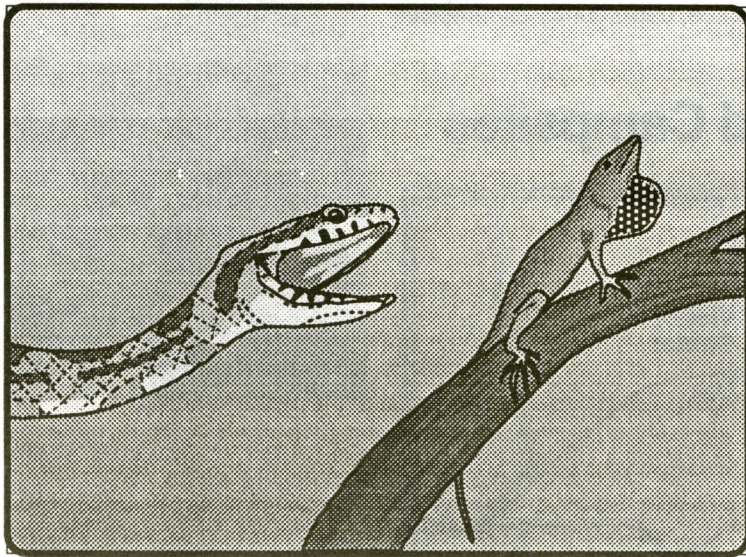
At least one resident bird is known to fish using a lure. The small, stocky **Green-backed Heron** has been observed holding feathers in its bill, which it swirls in the water to attract its scaly prey. This is one of the few documented cases of tool-usage in the animal world.

One creature risks its life by being sexy! The **Green Anolis Lizard** is a common resident of hardwood hammocks. The male bobs its head and protrudes its bright red throat pouch to advertise territorial ownership and to lure females. This activity also attracts predators—which is why more male Green Anoles are found in the stomachs of snakes than females.

**Vultures**, large, dark birds seen soaring overhead almost anywhere, defend themselves in a repulsive, yet highly effective way. When threatened, these birds may vomit on their intruders.

A certain coral reef fish is a major player in the formation of tropical beach. The brightly-colored **Parrotfish** uses its powerful beak-like jaws to feed on coral. The calcium carbonate "skeleton" of the coral is passed through the fish as potential beach sand particles. A population of Parrotfish can produce up to two tons of particles per acre of coral reef annually.

The **Cone Snail**, living in saltwater environments, has a specialized method of obtaining a meal. Its mouthparts consist of a venomous harpoon-shaped structure, which can be propelled to impale and immobilize prey, including marine worms and small fish.



**Displaying to mates is risky business for male Green Anolis lizards. To learn more about south Florida's natural history, attend ranger-conducted activities. Ask at a visitor center for schedules.**

## A Few Definitions

**Everglades**—A "glade" is variously defined as an open and/or grassy area. "Ever" first appeared on maps produced over 100 years ago, perhaps because the Everglades seem to go on for "ever". But the term "ever" may have been mistakenly copied from a map produced in the early 1700's, describing the region as "River Glades". The term describes south Florida's marshy areas, periodically inundated by shallow, slow-moving water.

**Slough**—A natural channel of slow-moving water in coastal marshland. The Shark River Slough and Taylor Slough are the main channels of water flow in Everglades National Park.

**Marsh**—A wetland, salt or fresh, where few if any trees and shrubs grow, characterized by grasses, sedges, rushes, etc.

**Swamp**—A wetland, salt or fresh, characterized by shrubs or trees. In south Florida, inland swamps are often dominated by cypress trees and coastal swamps consist mainly of mangroves.

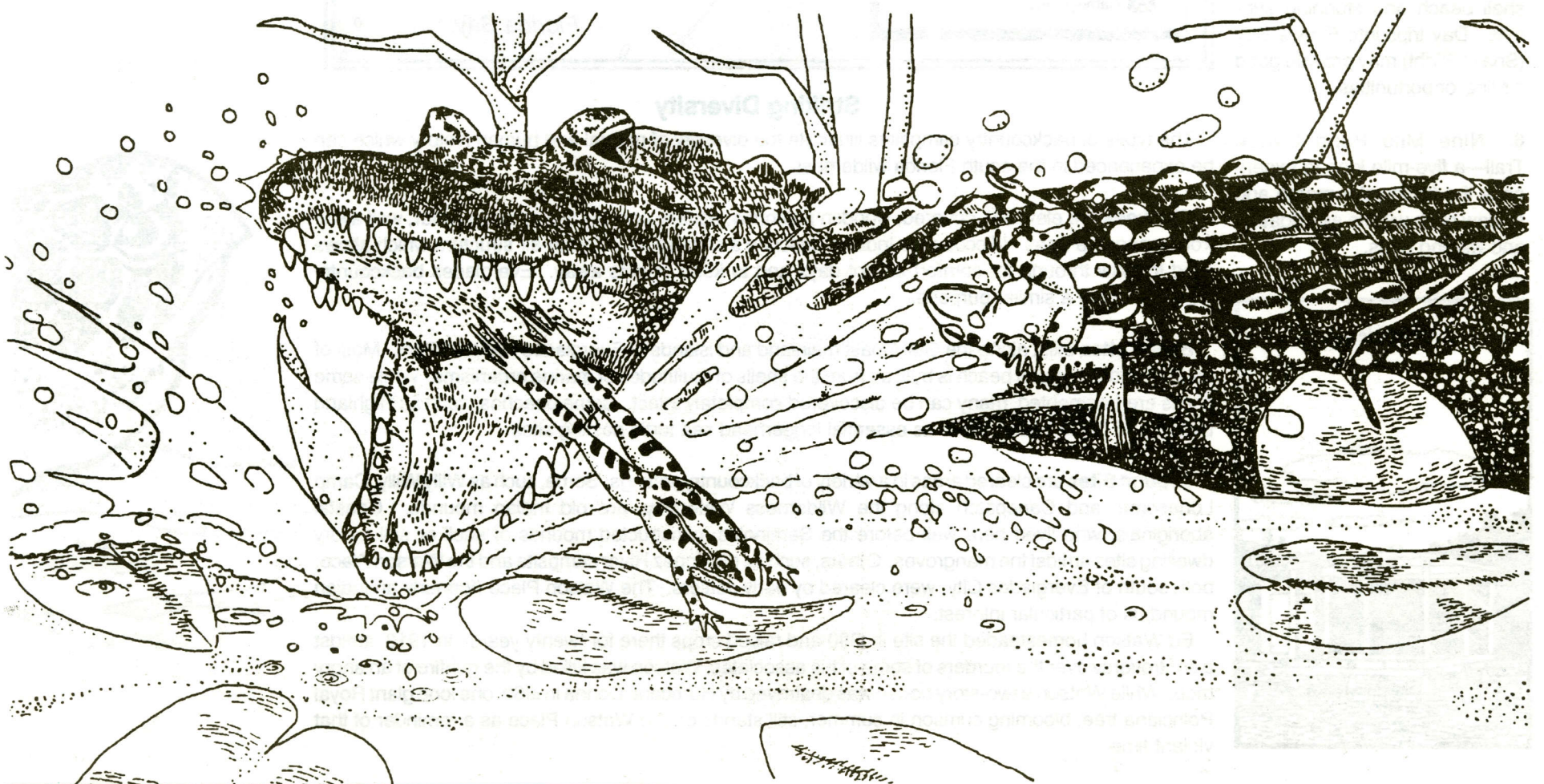
**Strand**—A line of cypress trees growing in natural channels in the marsh or slough.

**Hammock**—A dense growth of broad-leaved trees on a slightly elevated, drier area.

**Key**—Derived from the Spanish word "cayo," meaning "island." In south Florida, keys can be islands in oceans or bays, or islands of higher land amidst freshwater marsh.

**Estuary**—The portion of a river or coastal wetland affected by the rise and fall of the tide, containing a graded mixture of fresh and salt water. The mangrove zone along the gulf coast of Everglades National Park is an estuary.

**Bight**—A nautical term to describe a bend in a length of rope or a contour in a shoreline to form a bay. Snake Bight on Florida Bay is an example of the latter.





# Recycling in Your National Parks

by Scott Vay

As more and more people seek the treasures of our national parks, the garbage that is left behind is astounding. Solid waste management is increasingly becoming a challenge in many of our national parks. People find it hard to believe that behind the tropical vegetation, sparkling water, and teeming wildlife, south Florida's National park areas face many of the same environmental challenges affecting communities nationwide. Most national parks do not have their own landfills, and those nearby are quickly filling. By the end of this decade, only 2,000 of the current 6,000 landfills will still be operating. Recycling has become an effective solution.

Recycling is not a new concept for most of us. You may already recycle in your community and now, in cooperation with Dow Chemical Company, the National Park Service has made it easy to recycle in your national parks. It's easy. Just look for the green recycling bins placed throughout Everglades National Park and Biscayne National Park, and throw in your aluminum, glass, plastic, and steel.

## History

In 1990 the National Park Service signed a contract with the Dow Chemical Company to establish recycling programs in seven national parks. Recycling programs have been in operation in the Great Smoky Mountains, Grand Canyon, Acadia, Yosemite, Mount Rainier, and the National Mall. In February 1992, Everglades National Park joined in this recycling effort. In the first six months 11 tons of recyclables were collected. The goal is to recycle 30% of the waste, a goal which can be easily obtained with your help.

## What happens to the material you recycle?

In Everglades National Park the material is picked up by maintenance workers and taken to a Material Recovery Facility

(MRF) which started operating in October 1993. With this advanced recycling system, Everglades became the first national park of the seven sponsored by Dow to have an in-house operation. The Everglades program will be used as a case study for other national parks. At the MRF the materials are separated and eventually shipped to markets in the Miami area. Recyclables are actually sold, saving the government and you money.

## Recycled Products

Collecting recyclables is only the first step in recycling. The second—and critical—step is to buy goods made from recycled materials. In Everglades National Park,

the recycling bins themselves are made with recycled plastic "lumber". It takes 430 plastic milk jugs to make just one container.

This plastic lumber is a combination of recycled plastic and sawdust from old wood products. Take a walk on some of the newly constructed boardwalks, such as the Anhinga Trail, and you will see recycled lumber called Timbrex. This material should last 4-5 times longer than wooden boardwalks. Other recycled materials used in the park are paper, picnic tables, bulletin boards, and carpeting.

Park concessioners in Flamingo, Shark Valley, and Everglades City recycle. TW Services in Flamingo not only recycles in the rooms and lodge, they also buy many recycled products. They have considerably

cut down their water bills by installing one gallon flush toilets and low flow aerator shower heads.

All these changes are good for the environment which is good for the Everglades, south Florida, and you. Complete the recycling loop at home by buying products made from post-consumer material. Then you can really say you recycle. You can recycle at home, and now you can recycle in south Florida's parks—all you need to do is look for a green recycling bin. Help out and pitch in.



## Credits



Florida National Parks & Monuments Association, Inc.

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Project Manager: Bill Laitner

Editors: Bob Showler and Peter Allen

Layout: Bill Hayden, Bob Showler and Peter Allen

Written contributions by: Peter Allen, Bob Showler, Scott Vay, John Ogden, Glenn Fried, Roger Kilhefner, Alan Scott, and Sue Bennett.

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# Wading Birds and Water:

## The Annual Cycle

by John Ogden, Wildlife Biologist

One of the more spectacular and, at the same time, predictable avian events in Everglades National Park is the tremendous increase in numbers of wading birds (herons, egrets, ibis, storks, etc.) that congregate each year during the dry season, November through May. Between 50,000 and 100,000 wading birds collect in the expansive freshwater and estuarine wetlands of the park, attracted by the excellent feeding conditions created by the drying marshes. Beginning with the shallowest areas—those that dry first once the summer rains have ended—the flocks of waders follow the retreating water line in search of trapped and concentrated fishes, crayfish, prawns, and other aquatic organisms. By late in the dry season, usually March-April, these feeding flocks have moved into the deeper central marshes of the Shark River Slough. In these core refugia of the Everglades, park scientists have recorded densities as high as 600 fish per square meter.

As the marshes dry, and food supplies become increasingly abundant and concentrated, the wading birds form nesting colonies. For the larger, long-ranging species like Common Egrets and Wood Storks, colonies may form as early as December or January. The

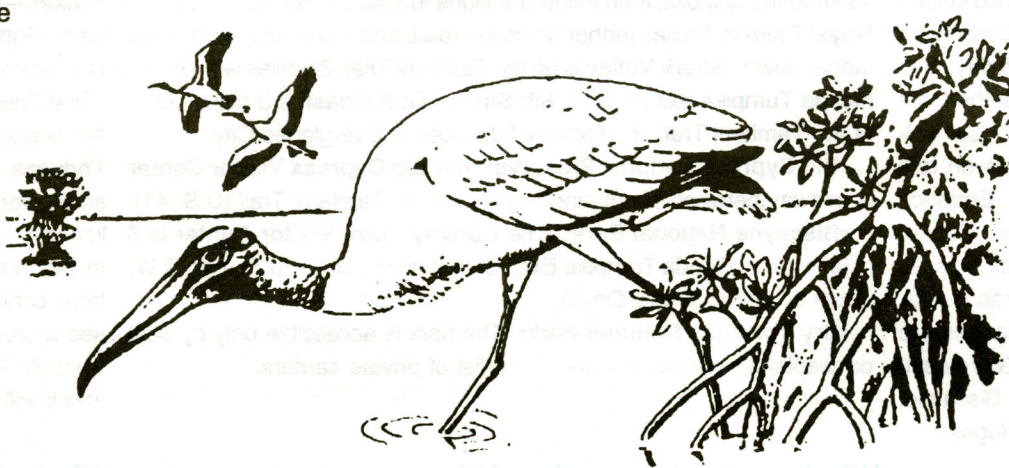
smaller waders with shorter foraging ranges wait until March to form colonies, at sites close to the better feeding areas. All species must complete nesting before the next cycle of summer rains, usually beginning in June. Once the marshes are reflooded, food concentrations are rapidly diluted and most of the wading birds are forced

to disperse northward out

of the Everglades region. By late summer, the number of wading birds in the park may be as low as 5,000 to 10,000.

While this annual cycle appears simple, many subtle differences between years—in the amount of marshland that is reflooded by summer rains and water deliveries to the park, and

in the timing and rate of winter/spring drying—have major influence on both the food resource and the timing, location, and size of wading bird colonies. Water management projects in south Florida, mainly designed to stabilize and control the once dynamic Everglades wetlands, have severely disrupted the natural relationships between wading birds and water conditions. As a result, sharply reduced nesting success has led to a reduction in the number of wading birds nesting in the southern Everglades, from a maximum of 300,000 birds in the 1930's, to 10,000 - 15,000 by the early 1990's.





# Experiencing Big Cypress, Biscayne, and Dry Tortugas

## Big Cypress National Preserve

HCR 61, Box 110, Ochopee, FL 33943 (813) 695-4111

### Visitor Center

Midway between Miami and Naples on the Tamiami Trail (U.S. 41). Information, wildlife exhibits, and a 15-minute film. Open daily from 8:30 a.m. to 4:30 p.m. Publications sales.

### Wildlife Viewing

Motorists and bicyclists can explore the Turner River Road and the Loop Road for wildlife, including alligators, birds, and deer. Check at the Visitor Center for the condition of the Loop Road.

### Canoeing

The Turner River Canoe Trail starts on U.S. 41 and ends in Chokoloskee Bay. Contact the Visitor Center for details.

### Fishing

Anglers can pursue freshwater fish in the canals along the Tamiami Trail, the Turner River Road, and elsewhere in the preserve. High mercury content in fish; observe posted signs for recommended consumption amounts. Licenses and regulations are available in Everglades City.

### O.R.V.'s (including airboats)

Big Cypress is the only south Florida national park area where O.R.V.'s, including airboats, are allowed. Contact the preserve for regulations and permitting information.

### Camping

Eight small, primitive, free, public campgrounds are located in the preserve along the Tamiami Trail and the Loop Road. Loop Road campgrounds are not suitable for large R.V.'s. There is a privately-owned campground in Ochopee.

### Bicycling

Trails suitable for mountain bicycles can be found in the northern portion of the preserve. Check at the Visitor Center for details.

## Biscayne National Park

P.O. Box 1369 Homestead, FL 33090-1369 (305) 247-PARK

### Convoy Point Visitor Center

See exhibits of the park's history and Hurricane Andrew displays. View the park slide show and hurricane video. Publication sales. Open daily, 8:30 a.m. to 4:30 p.m. and 8:30 a.m. to 5:00 p.m. on weekends.

### Canoeing/Kayaking

Canoeists can explore the mangrove shoreline along the mainland. Canoes are rented by the park concessioner next to the Visitor Center. Ranger-guided canoe tours are offered Sundays at 9:00 a.m. starting January 9.

### Fishing/boating

Anglers and boaters can launch their own boats at the Homestead Bayfront Park boat ramp next to Convoy Point to venture into Biscayne Bay and to explore offshore coral reef. Stop at the Visitor Center for regulations and to purchase nautical charts. Fishing licenses are sold in Homestead.

### Boat Excursions

The park concessioner provides snorkeling/diving and glass bottom boat tours of the park. Reservations are required. Call (305) 247-2400 for schedule and reservations.

### Camping

A campground accessible only by concession or private boat is located on Elliott Key. Private campgrounds are in Homestead. Call the Tourism Center at (305) 245-9180 or 1-800-388-9669 for a list.

To Convoy Point:  
Express way to  
Ext #6 - Tallahassee Rd  
Tallahassee Rd to N. Canal Dr  
SW 328 St.  
N. Canal Dr. to Convoy Pt.

## Dry Tortugas National Park

P.O. Box 6208, Key West, FL 33041 (305) 242-7700

**Accessible only by boat or seaplane—contact the park for a list of private carriers. No water, food, fuel, supplies, or accommodations are available at the park.**

### Visitor Center

Information, exhibits, an orientation slide show, and publications sales available. The Visitor Center is open daily from 8:00 a.m. to 5:00 p.m.

### Touring Fort Jefferson

Take a self-guiding walking tour of America's largest 19th century coastal fort. Follow the signs with a civil war soldier on them.

### Ranger-conducted activities

Check the dock's announcement board or the Visitor Center for dates and times of ranger-guided programs.

### Camping

Camping is available, but all supplies, including fresh water, must be brought in. Parties of more than ten must make reservations by writing to the park.

### Fishing

The dock on Garden Key is a good place to catch saltwater fish. Sportsmen can fish from their own boats offshore. Check with a ranger for specifics. Lobstering is prohibited in the park. Fishing licenses are available in Key West.

### Boating

Private boaters can visit the park. Nautical charts are sold in Key West. Information is obtainable from the Key West U.S. Coast Guard Station, the Chamber of Commerce, and the Charter Boat Association. Boaters should be aware of the possibility of extremely rough seas. Check with a ranger for rules on docking and mooring.

### Snorkeling

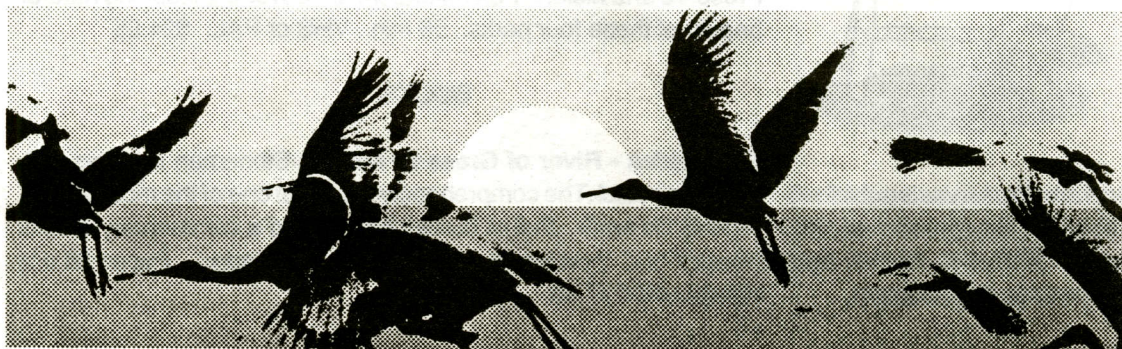
Patches of healthy coral reef, some easily accessible from shore and in shallow water, are snorkeling havens. Ask a ranger about the best snorkeling opportunities. Snorkeling equipment may be borrowed at the Visitor Center.

### Bird Watching

The Dry Tortugas are renowned for spring bird migrations and tropical bird specialties. Contact the park for a bird checklist and information.



*The secretive Mangrove Cuckoo is one of many birds found nowhere else in the U.S. but south Florida. Birders flock here from all over to identify new species and to enjoy other feathered wonders such as spectacular flights of wading birds.*





# Enjoying Everglades National Park

40001 State Road 9336, Homestead, FL 33034-6733 (305) 242-7700

## In General

### Ranger-conducted Activities

Everglades National Park offers evening programs, talks, walks, hikes, "slough slogs", canoe trips, and other ranger-led activities. **Royal Palm, Flamingo, Shark Valley, and Gulf Coast** provide programs during winter. Schedules are distributed at visitor centers.

### Fishing/Boating

The mangrove estuary, Gulf of Mexico, and Florida Bay provide opportunities to explore by boat and to fish. Obtain fishing/boating regulations at the Flamingo Visitor Center, Flamingo Marina, and Gulf Coast Visitor Center. Fishing licenses and nautical charts may be obtained at the Flamingo Marina, Homestead, the Florida Keys, and Everglades City. Boat ramps are located at Flamingo, the Florida Keys, and Everglades City/Chokoloskee.

### Camping

National Park Service campgrounds (fees charged, first come, first served) are located at **Long Pine Key, and Flamingo**. Private campgrounds are in Everglades City. Contact the Welcome Center at (813) 695-3941 for a campground list. See page 9 for backcountry camping.

### Concession Services

Please see page 8 for information on lodging, supplies, gifts, tours, and other concession services.

## Main Visitor Center

Open daily from 8:00 a.m. to 5:00 p.m. Information and publications sales.

## Royal Palm

### Royal Palm Visitor Center

Open daily from 8:00 a.m. to 4:15 p.m. Information and publications sales. The well-known Charles Harper exhibit building is next door.

### Anhinga Trail

½-mile loop. This very popular boardwalk trail offers one of the best opportunities to view and photograph wildlife, including alligators and birds, up close.

### Gumbo Limbo Trail

½-mile loop. The trail winds through a once-dense tropical hardwood hammock. Hurricane Andrew has reshaped the trail, so watch your step.

### Hiking Trails

Several miles of nearby hiking trails pass through marsh, hammock, and pineland communities. Inquire at the Main Visitor Center and Royal Palm Visitor Center.

## Along the Main Park Road

### Walking Trails

Experience the diversity of Everglades environments by walking several short, easy boardwalk and paved trails along the Main Park Road.

**Pinelands Trail**—½-mile loop. Explore a subtropical pine forest maintained by fire. The pine rocklands are the most diverse habitat in south Florida.

**Pa-hay-okee Overlook**—a ¼-mile boardwalk leads to an observation tower offering a view of the vast Everglades from horizon to horizon.

**Mahogany Hammock**—½-mile loop. A boardwalk crosses the 'glades and enters a beautiful subtropical tree island with massive mahogany trees.

**West Lake Trail**—½-mile loop. This boardwalk takes you deep into mangrove forest. These salt-tolerant trees rise from the shallow water on prop roots.

## Flamingo

### Flamingo Visitor Center

The information desk is staffed from 7:30 a.m. to 5:00 p.m. daily. Florida Bay Museum open daily from 8:00 a.m. to 5:00 p.m.

### Wildlife viewing

Nearby Eco Pond provides good bird watching (Note: to conform to State water quality requirements for an evaporation pond, some trees have been removed and the pond has been re-dredged). At certain times, Mrazek Pond is a birding hotspot. Snake Bight (accessible by foot, bicycle, or canoe) provides good birdwatching opportunities.

### Canoeing/Hiking

Information and a map of local canoe and hiking trails can be obtained at the Flamingo Visitor Center. Canoe rentals are available at West Lake (canoe shuttle service also provided) and the Flamingo Marina.

### Boat and Tram Tours

Narrated boat tours into the mangrove swamp and Florida Bay depart daily from the Flamingo Marina. Tram Tours on the Snake Bight Trail leave from the Gift Shop. Schedules, tickets, and additional information are available at the Marina and Gift Shop or by calling (305) 253-2241.

## Shark Valley

### Shark Valley Visitor Center

The Shark Valley Visitor Center is staffed by park personnel daily between 8:30 a.m. and 5:00 p.m. Publications sales.

### Walking Trails

**Bobcat Boardwalk**—a ¼-mile round trip walk starting at the Visitor Center. Passes through sawgrass marsh and a bayhead.

**Otter Cave**—1-mile round trip from the Visitor Center. Enters a tropical hardwood hammock.

### Bicycling

The 15-mile loop road is great for bicycling. A variety of marsh and slough animals can be seen. Bicycle rentals are available at Shark Valley. Permits are required for groups of 10 or more.

### Tram Tour

The Shark Valley Tram Tour provides an introduction to the freshwater Everglades and wildlife-viewing opportunities. Reservations can be made by calling (305) 221-8455.

## Gulf Coast

### Gulf Coast Visitor Center

Due to remodeling, the Visitor Center will occasionally be closed. Call ahead (813-695-3311) for updates.

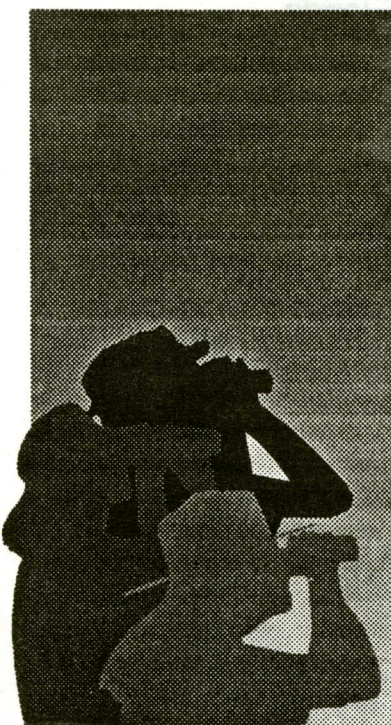
### Boat Tours

Daily boat tours into the mangrove estuary and Ten Thousand Islands offer views of a unique ecosystem and its wildlife. Schedules, tickets, and information available downstairs from the Visitor Center or by calling (813) 695-2591 or 1-800-445-7724 (Florida only).

### Canoeing

From the Visitor Center, paddlers can explore the mangrove environment and look for local wildlife. Canoe rentals are available downstairs from the Visitor Center.

*Opportunities abound for anyone wishing to visit south Florida's national parks and preserves. For assistance in orienting, see the map on the back page of this paper.*





# Biscayne National Park

*Biscayne National Park*  
P.O. Box 1369  
Homestead, FL 33090-1369  
(305) 247-PARK

Biscayne National Park is celebrating its Silver Anniversary this year. Known locally as a fantastic place for recreation, the park protects and preserves mangrove shorelines, a shallow bay, undeveloped islands, and living coral reefs. Biscayne National Park has protected these unique resources for 25 years.

The shoreline of Biscayne Bay is lined with a deep green forest of mangroves. These trees, with their complex system of prop roots, help stabilize the shoreline and provide shelter for animals, birds, and marine life. Their leaves become a vital part of the food chain when they fall into the waters.

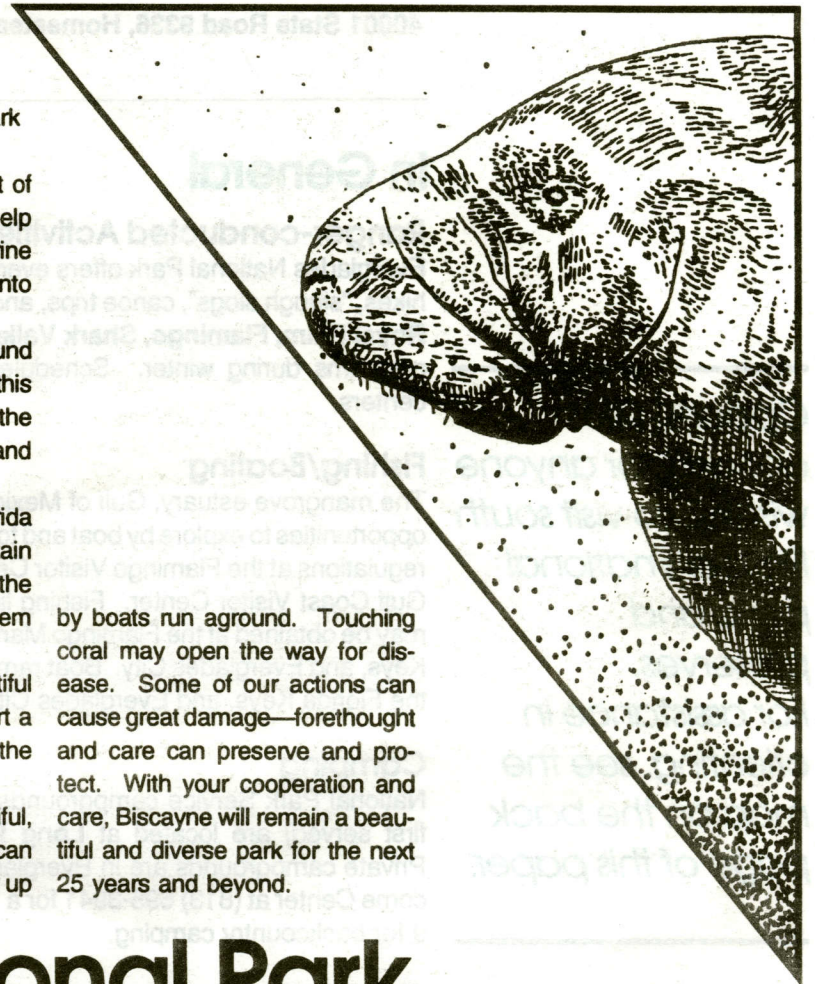
Another major part of the food chain is the lush seagrass beds found throughout Biscayne Bay. The Florida spiny lobster depends on this rich food chain and the bay has been designated a sanctuary where the lobsters are protected year-round. Shrimp, fish, sea turtles, and manatees also utilize these productive underwater pastures.

On the eastern edge of Biscayne Bay are the northernmost Florida Keys. These stunning emerald islands fringed with mangroves contain tropical hardwood forests in their interiors. The establishment of the park protected these islands from planned development, allowing them to remain a reminder of the area's past.

On the Atlantic side of the islands lie the most diverse and beautiful of the underwater communities: the coral reefs. The reefs support a kaleidoscope of life. Fish, plants, and other animals abound in all the colors of the rainbow.

The resources protected within Biscayne National Park are beautiful, diverse, and very productive; they are also fragile. Fish and animals can be injured and killed by trash in the water. Sea grasses can be torn up

by boats run aground. Touching coral may open the way for disease. Some of our actions can cause great damage—forethought and care can preserve and protect. With your cooperation and care, Biscayne will remain a beautiful and diverse park for the next 25 years and beyond.



**For Things To Do in Biscayne National Park, please see page 7**

# Dry Tortugas National Park

*Dry Tortugas National Park*  
P.O. Box 6208  
Key West, FL 33041  
(305) 242-7700

*Dry Tortugas National Park, formerly Fort Jefferson National Monument, was created on October 25, 1992. This new designation will increase the protection of the marine resource of the 60 square mile park.*

Lying at the extreme western end of the Florida Keys, 68 miles west of Key West, are seven sand isles called the Dry Tortugas, dominated by the massive brick fortress of Fort Jefferson.

The Tortugas were first discovered by Ponce de Leon in 1513. Abundant sea turtles or "tortugas" provisioned his ships with fresh meat, but there was no fresh water—the Tortugas were dry.

U.S. military attention was drawn to the keys in the early 1800's due to their strategic location. Plans were made for a massive fortress and construction began in 1847, but the fort was never completed. The

invention of the rifled cannon made it obsolete.

As the military value of Fort Jefferson waned, its pristine reefs, abundant sea life, and impressive numbers of birds grew in value. In 1935 President Franklin Roosevelt set aside Fort Jefferson and the surrounding waters as a national monument.

Dry Tortugas is only accessible by boat or seaplane. Contact the park for a list of private carriers.

*South Florida's national park areas protect over a dozen threatened and endangered species as well as hundreds of subtropical plants and animals found nowhere in the United States but south Florida.*

**For Things To Do in Dry Tortugas National Park, please see page 7**

## .....Questions?

### Were the parks affected by Hurricane Andrew?

Some areas were badly damaged by the storm, which struck on August 24, 1992. In Everglades, extensive damage to forests and facilities occurred near the Main Visitor Center. Virtually all facilities have been repaired or replaced, except at Chekika. Contact the park for updates.

Biscayne National Park was heavily damaged by Hurricane Andrew. A temporary visitor center is open at Convoy Point, and the park concessioner is running boat excursions (see page 7 for details). For the boating public, Elliott Key Campground and Harbor Complex is open. The rest of Elliott Key and all other park islands remain closed until further notice. While many facilities are reopened, Boca Chita and Adams Key remain closed.

Most of Big Cypress National Preserve received only minor damage, and Dry Tortugas National Park was not in the hurricane's path.

### What areas are good for wildlife viewing?

In Everglades National Park, Shark Valley, the Anhinga Trail (at Royal Palm), and Eco Pond (½ mile past the Flamingo Visitor Center), are consistently good for viewing alligators, wading birds, and other freshwater wildlife. Canoeists can paddle into Snake Bight (near Flamingo) and Chokoloskee Bay (Gulf Coast) before low tide to witness large numbers of water birds feeding in the shallows and on mud flats. A productive freshwater canoeing area is Nine Mile Pond and adjacent borrow pits (12 miles up the road from Flamingo).

In Big Cypress National Preserve, the Loop Road (check with a ranger for current conditions) and Turner River Road afford good opportunities to view alligators, birds and other wildlife of the swamp.

Biscayne National Park protects a pristine coral reef tract. Glass bottom boat and snorkeling trips depart from the Convoy Point Visitor Center. Good birdwatching at Convoy Point and Elliott Key.

Dry Tortugas National Park is renowned for its coral reef and tropical and migratory birdlife.

### Should I be especially aware of certain regulations?

- When observing animals, especially on major highways, pull completely off the road. Rangers use radar to clock speeders. Obey speed limits. It is dangerous and illegal to feed or harass any wildlife.

- Weapons are not permitted in Everglades, Biscayne, and Dry Tortugas National Parks. In Big Cypress National Preserve, special hunting regulations apply.

- Skateboards and rollerskates are prohibited in Everglades National Park.

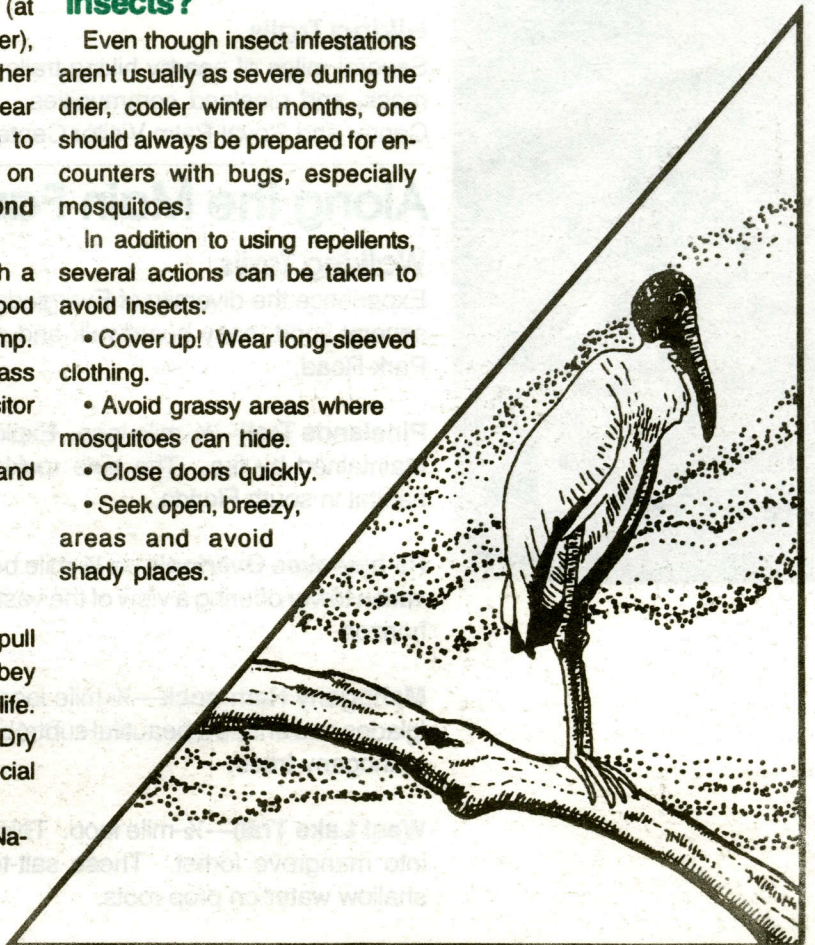
- Pets are allowed in some areas. Ask a ranger for regulations regarding pets.

### What should I do about insects?

Even though insect infestations aren't usually as severe during the drier, cooler winter months, one should always be prepared for encounters with bugs, especially mosquitoes.

In addition to using repellents, several actions can be taken to avoid insects:

- Cover up! Wear long-sleeved clothing.
- Avoid grassy areas where mosquitoes can hide.
- Close doors quickly.
- Seek open, breezy, areas and avoid shady places.





# Concession Services in the Parks

## Everglades Flamingo

38 Miles southwest of Main Visitor Center. Authorized concessioner: TW Services, Flamingo Lodge, Marina & Outpost Resort, Flamingo, FL 33030. Phone: (305) 253-2241 or (813) 695-3101.

### Lodging, Restaurants, and Lounges

The Flamingo Lodge rents motel rooms and housekeeping cottages. Call for reservations. Breakfast, lunch and dinner served in the Flamingo Restaurant. Drinks and light fare available in the Buttonwood Lounge.

### Food, Fuel, Supplies, and Gifts

Gasoline, propane, limited selection of groceries, and camping and marine supplies available at the Marina Store. Gifts and souvenirs in the Gift Shop downstairs from the restaurant.

### Boat/Tram Tours, Boat/Canoe/Bicycle Rentals

Daily boat tours into Florida Bay and the mangrove estuary and tram tours on the Snake Bight Trail. Call ahead for reservations. Houseboats, skiffs, and canoes rented, charter fishing and sight-seeing boat trips available at the Marina. Canoes also rented at West Lake during the busy season. Reservations recommended.

## Gulf Coast

40 miles southeast of Naples, south of Everglades City. Authorized concessioner: Everglades National Park Boat Tours, P.O. Box 119, Everglades City, FL 33929. Phone: 1-800-445-7724 (Florida only) and (813) 695-2591.

### Boat Tours/Canoe Rentals

Daily boat tours to the Ten Thousand Islands region, operated by Everglades National Park Boat Tours, Inc. For reservations, call 1-800-445-7724 (Florida only) or (813) 695-2591. Canoe rentals available on the lower level of the Visitor Center.

### Food and Gifts

Gifts and snacks available downstairs from the Visitor Center.

## Shark Valley

40 miles west of Miami. Authorized concessioner: Shark Valley Tram Tours, P.O. Box 1729, Tamiami Station, Miami, FL 33144-1729. Phone: (305) 221-8455

### Tram Tours and Bicycle Rentals

Offered by Shark Valley Tram Tours, Inc. Two-hour guided tram tours run throughout the day. Call (305) 221-8455 for information and reservations. Bicycle rentals also available at the tram tour ticket booth.

## Biscayne Convoy Point

Nine miles east of Homestead. Authorized concessioner: Biscayne National Underwater Park Company, Inc. P.O. Box 1270, Homestead, FL 33030. Phone: (305) 247-2400

### Glass Bottom Boat Tours

For glass bottom boat tours of the park, call for schedule, information, and reservations: (305)247-2400.

### Snorkeling/SCUBA Trips

For reef trips, call for schedule and reservations: (305) 247-2400.

### Canoe Rentals

Canoes rented for trips to explore the mangrove shoreline.

## Dry Tortugas

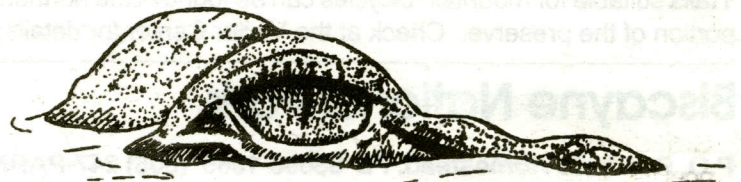
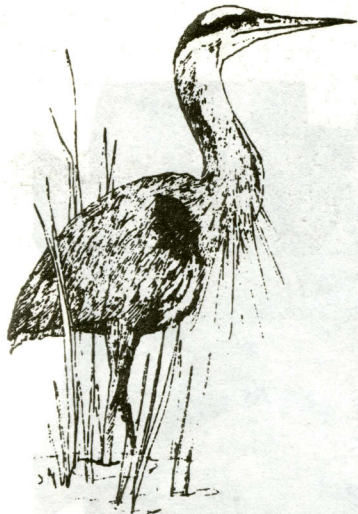
68 miles west of Key West

### Charter Boat/Air Taxi

The National Park Service authorizes charter boats and air taxis to the park from Miami and Key West. A list of authorized carriers is available upon request. Call (305) 242-7700.

## Big Cypress

There are a number of tour/rental businesses licensed in the preserve. Contact the Visitor Center for details.



# Florida National Parks and Monuments Association

## Try the South Florida Sampler

With these books and videos offered by Florida National Parks and Monuments Association

Below is a sample of the many books and videos available at park visitor center bookstores from Florida National Parks & Monuments Association. Be sure to stop in and browse! Mail order catalog is available at visitor centers or by writing 10 Parachute Key #51, Homestead, FL 33034-6735 or by calling (305) 247-1216. Phone orders accepted with Visa or MasterCard.

### VIDEOS

**Everglades Rich Kern's Nature Series**.....Years in the making! Gives a comprehensive look at the Everglades: their prairies, ponds, and hammocks, their seasonal waterflow and amazing wildlife. 40 min., VHS, English PAL, & German PAL. \$24.95

**South Florida's National Parks** by Finley-Holiday Films.....Tour Everglades and Biscayne National Parks, Big Cypress National Preserve and historic Fort Jefferson. Discover the inspiring natural beauty of these four parks. 56 min., VHS or PAL. \$24.95

### BOOKS

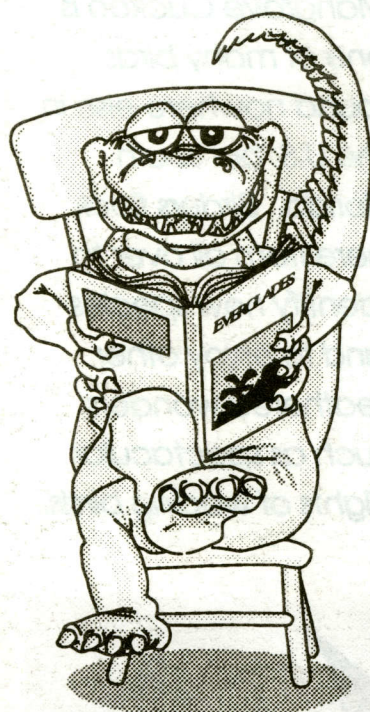
**Everglades - River of Grass** by Marjory Stoneman Douglas.....A Florida classic! The comprehensive study of one of the most unique regions on earth. Full of human history and a commentary on the present and threatened future of the Everglades. Paper \$5.95; Hardbound \$17.95

**Everglades - The Park Story** by William B. Robertson, Jr.....Let a long-time Everglades wildlife biologist introduce you to the flora, fauna, and history of Everglades National Park in this marvelous, reader-friendly narrative that is keystone to understanding the park. Color photographs, 1989 Revised Edition. 64 pp., paper. \$8.95

**Everglades - The Story Behind the Scenery** by Jack de Golia.....A pictorial review of the Everglades. Illustrated in full color, over 100 photographs of Everglades scenes and wildlife. 64 pp., paper. \$6.95

**Everglades Wildguide** by Jean Craighead George.....Official National Park Service handbook detailing the plants and animals of the Everglades. Checklists and glossaries buttress this knowledgeable account. 103 pp., paper. \$5.95

**Biscayne - The Story Behind the Scenery** by L. Wayne Landrum.....Explore the mainland, shoreline, and underwater worlds of the national park containing the northernmost coral reefs in the continental U.S. Full-color illustrations, 64 pp., \$6.95



Parks and Preserves is published as a service to park visitors by the Florida National Parks and Monuments Association.