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No additional restrictions — You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits. You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation . No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. Ecosystem Overviewadmin2021-12-16T09:43:48-05:00 11767 South Dixie Highway Suite 232 Known as the "river of grass," the Greater Everglades Ecosystem encompasses 18,000 square miles from the Kissimmee Prairie near Orlando to Florida Bay at the southern tip of Florida. This expansive area includes three national parks, more than a dozen national wildlife refuges and marine preserves, as well as a host of state, regional and local parks, forests and wildlife management areas. Everglades National Park in south Florida is recognized as an International Biosphere Reserve, a World Heritage Site and a Ramsar Wetland of International Importance. Extensive private land holdings in the region are also an integral component of valuable wildlife habitat ranging from vast ranch lands to thousands of small-acre lots. Biodiversity is among the highest in the nation, with many species found nowhere else in the U.S. Many of Defenders' key species are in the region, including Florida panthers, manatees, sea turtles, gopher tortoises and other listed species such as the Everglade kite, wood stork, Big Cypress fox squirrel, American crocodile and Key deer. One third of all Floridians rely on clean water from the Greater Everglades Ecosystem, and more than 120 federal and state endangered and threatened species depend on the region's varied wetland, upland and marine habitats. Years of draining its wetlands for development and agriculture and encroachment by an ever-increasing Florida population have taken a toll on the now endangered ecosystem. Water, the most fundamental resource in the Everglades, has been diverted and rerouted out to sea, away from the plants and animals that need it. With projected rises in sea level of three feet or more over the next century, much of the low-lying Everglades ecoregion is at risk of being submerged under water and climate change is also impacting water temperatures and increasing the severity and frequency of storms. Invasive animals and plants including the Burmese python, tegu lizards, Australian pine and Brazilian pepper are widespread in the Everglades requiring agencies to spend millions annually for eradication, containment and long-term management. Defenders is a consistent force pressing for landscape level conservation of connected wetland and upland systems. Our primary objectives in the region include working to create and expand national wildlife refuges and other public conservation lands, collaborating with large landowners to conserve habitat on private lands for panthers and many other species, advocating for land acquisition and conservation easements, funding to fight invasive species, and improving land-use and transportation policies and programs to protect wildlife habitat and travel linkages. For example, Defenders was a key player in a successful, sustained effort to stop the construction of a new interchange on Interstate 75 ("Alligator Alley") that crosses the Big Cypress/Everglades ecosystem. The proposed interchange would have led to the destruction of 10,000 acres of habitat for panthers and other wildlife, severed important wildlife corridors, compromised Everglades restoration in the Picayune Strand, encouraged urban sprawl and exacerbated vehicle collisions near the Florida Panther National Wildlife Refuge. Defenders is advocating for maximum protection for wildlife and habitat during a process to plan for new toll roads. In 2019, the Governor approved a process to plan for three new toll highways that would run through some of the last undeveloped lands in the western Everglades up to the Florida-Georgia border. These highway projects have the potential to undo decades of conservation gains and could dramatically affect habitat for Florida panthers. Last updated: April 29, 2025 Geography & Travel Physical Geography of Water Everglades, subtropical saw-grass marsh region, a "river of grass" up to 50 miles (80 km) wide but generally less than 1 foot (0.3 metre) deep, covering more than 4,300 square miles (11,100 square km) of southern Florida, U.S. Through it, water moves slowly southward to mangrove swamps bordering the Gulf of Mexico to the southwest and Florida Bay to the south. To the east the marsh reaches near the narrow, sandy belt that includes the Miami metropolitan area, and to the west it merges into Big Cypress Swamp. The name Everglades is a term unique to Florida. Glade has been used to refer to an open, grassy area in the forest or a moist, swampy area, ever may have referred to the marsh's seemingly interminable expanse. Everglades marsh freshwater marsh, dominated by sawgrass and dotted by palms and cypresses, in the Everglades, southern Florida, U.S. The Everglades occupies a shallow limestone-floored basin that slopes imperceptibly southward at about 2.4 inches per mile (about 4 cm per km). Much of it is covered with saw grass (a sedge, the edges of which are covered with minute sharp teeth), which grows to a height of 4 to 10 feet (1.2 to 3 metres). Open water is sometimes found. Slight changes in the elevation of the land and the water's salt content create different habitats. The Florida Bay estuary is covered with sea grass and serves as a nursery for fish. Mangroves also serve as nurseries and as feeding grounds for wading birds in tidal areas where fresh and salt water combine. Coastal prairie regions support salt-tolerant succulents and cordgrass. Hardwood hammocks consist of thick stands of tropical (mahogany, cocoplum, and strangler fig) and temperate (saw palmetto, live oak, and red maple) trees growing on slight hills, creating islands in the saw-grass marsh and sloughs; domes of cypress or willow can also be found. Pinelands, dominated by slash pine, occupy dry ridges. The organic soils, formed from the decay of lush vegetation, range from discontinuous shallow patches to accumulations of peat and muck 8 to 10 feet (2.4 to 3 metres) thick near Lake Okeechobee. The best soils are deep mucks found in a narrow zone along the lakeshore, where a dense tangle of custard apple, or pond apple, once grew. The climate of the Everglades is tropical to subtropical and is influenced strongly by the southeast trade winds. Monthly mean temperatures range from 63 °F (17 °C) to 82 °F (28 °C), though winter frosts occur on rare occasions. Rainfall averages 40 to 65 inches (1,000 to 1,650 mm) annually, with most coming between May and October. During that period the land is nearly covered with a sheet of water. In the dry season (December–April), however, water levels drop and leave it dotted with small pools. The marsh provides habitat for more than 350 bird species. There are wading birds such as egrets, herons, roseate spoonbills, and ibis; shore and water birds such as terns, plovers, rails, and sandpipers; birds of prey including owls, hawks, and osprey; and a wide variety of songbirds. Several game fish species make their homes there. The Everglades is known for its population of alligators, bobcats, white-tailed deer, river otters, gray foxes, and many types of snakes, lizards, and turtles also live there. The area provides habitat for endangered species such as the manatee, Florida panther, wood stork, American crocodile, and several species of sea turtle, as well as the Burmese python, an invasive species. The population of wading birds in the Everglades has fallen drastically since the mid-20th century. United States of America Quiz To the Native Americans of the region, the Everglades was known as Pa-Hay-Okee ("Grassy Water"). Its vast areas of open saw grass were used as passage for dugout canoes and as hunting and fishing territory. Although there was little settlement within the Everglades, mounds remain to indicate occupancy. The nearby coastal regions were inhabited by Calusa and Tequesta Indians when European explorers first arrived in the 16th century. Contact with Europeans was marked by warfare, disease, and other depredations, and both these groups were largely gone from the region by the late 1700s. Creek peoples then began to move into the area and became known as Seminoles. The Seminoles found sanctuary in the swamps and marshes because the white settlers did not covet the glades at the time. They developed the "chickee," a dwelling without walls, made of a log framework with a thatched roof over a raised platform, that assured maximum ventilation. They planted corn (maize), beans, melons, and squash on patches of higher ground and gathered nuts, roots, and palmetto berries. The bulbous roots of the coontie plant were the source of a starchy flour, and hunting and fishing provided much of their sustenance. Most were forced out during the Second Seminole War (1835–42). The Miccosukee tribe (formerly part of the Seminole tribe) continued to make their home in the Everglades into the 21st century. The Florida Everglades are a massive subtropical wetland ecosystem in central and south Florida. The greater Everglades ecosystem covers more than two million acres, although much of the Everglades have been altered, destroyed or lost to development. Various parts of the Everglades are protected, including Everglades National Park, Big Cypress National Preserve, and National Park, and then into Florida Bay and the Gulf of Mexico. Because of this massive sheet of water, the Everglades are often called "The River of Grass", a phrase made popular by famed Everglades conservationist Marjory Stoneman Douglas. The greater Florida Everglades ecosystem was once much larger and more healthy than it is today. Since settlers began developing south and central Florida in the 1800s, massive areas of the Everglades have been altered, drained, diverted and built upon. Urban development and agriculture are responsible for many of the problems, which have created a cascade of down-stream problems and unintended consequences. America's Everglades is a subtropical wetland ecosystem spanning 1.5 million acres across south Florida. Known as a biodiversity hotspot, the Everglades is filled with an abundance of wildlife and is surrounded by numerous human communities, including the cities of Miami and Fort Lauderdale. The Everglades is a unique landscape, unlike any other in the world. Only the Everglades combines a subtropical climate, numerous distinct habitat types and an extraordinary array of species in such a diverse, yet vulnerable ecosystem. This national treasure faces an array of threats, including invasive species, climate change and reduced water flows, that must be addressed if we are serious about preserving one of the most biodiverse areas in the world. The IUCN listed the Everglades National Park's conservation outlook as critical in 2017, stating that unless key restoration projects are completed in the park, especially efforts that allow for natural flow of clean water through the area, the essential qualities and habitat of the park will continue to be lost. Below are eight facts about America's Everglades that not only illustrate its uniqueness, but also highlight why we should want to protect it. Only 200 years ago, this "river of grass" slowly flowed across nearly one third of Florida. The Everglades historically covered approximately three million acres, stretching from headwaters in the Kissimmee River into Lake Okeechobee, through what is now Everglades National Park, and emptying into Florida Bay. Today, however, less than half of the historic Everglades ecosystem remains, due to decades of draining wetlands and reclaiming land for agriculture and urban development. The remaining 50 percent, including Everglades National Park and Florida Bay, has been cut off from Lake Okeechobee and is no longer receiving enough clean, fresh water. Key restoration projects aim to reconnect the flow of water through South Florida to ensure that the remaining Everglades ecosystem can get enough clean water to sustain Florida's wildlife, drinking water and economy. The now 1,500,000-acre Everglades National Park — with only 500,000 acres of the original wetland left — was designated a UNESCO World Heritage Site in 1979 and is an International Biosphere Reserve and a Ramsar Wetland of International Importance. Credit: Kaila Drayton. The Everglades is situated between temperate North America and the tropical Caribbean. This subtropical environment is home to flora and fauna from both climate types and is the ideal location for a diverse array of habitats. Nine distinct types of ecosystems have been identified within the Everglades National Park, including cypress, freshwater marl prairie, freshwater slough, coastal lowlands, mangrove, pinelands, hardwood hammock, marine and estuarine. A Tricolored Heron, which can inhabit fresh and saltwater marshes, estuaries, mangrove swamps, lagoons and river deltas, found in the subtropical Everglades. Credit: NWF Photo Contest, Lee Ellsworth. The Everglades National Park contains the largest intact stand of protected mangrove forest in the hemisphere. Mangrove forests are found in the coastal channels and rivers within South Florida. Red mangroves, with stilt-like roots, as well as black and white mangroves, thrive in the tidal waters of the park where freshwater from the Everglades mixes with saltwater. These mangroves are protected within the boundaries of the park. The mangroves in the Everglades National Park are a vital habitat and nursery for a wide array of important marine species, such as wading birds and fish like the red drum and spotted seatrout, as well as for endangered and threatened species. Mangroves help maintain water quality, as well, by filtering pollutants and trapping sediment. These mangroves are also essential to humans as they protect the surrounding communities against the powerful winds and storm surge of hurricanes. Mangroves also help prevent erosion by stabilizing sediment with their complex root systems. Red mangroves found in the Everglades. The Everglades contains one of the highest concentrations of species vulnerable to extinction in the United States. Thirty-nine native Florida species found in the Everglades National Park are federally listed as threatened or endangered, or are candidates for listing under the Endangered Species Act (ESA) of 1973. Some of the unique listed species found in the Everglades include the Florida panther, American crocodile, West Indian manatee, wood stork and snail kite. Seven of the listed species in the Everglades National Park are currently considered to be extirpated, meaning they are no longer present in the park, and two of the species, the Cape Sable seaside sparrow and the Florida leafwing butterfly, are only found in the park and its adjacent lands. Nearly 300 species of fish, countless insects, 17 species of amphibians and more than 360 species of birds, 40 species of mammals and 50 distinct kinds of reptiles can be found in the Everglades National Park. One species in particular, the elusive Florida panther, is a rare and unique sight in the Everglades. The Florida panther is the last subspecies of Puma still found in the eastern United States. It was once almost extinct, with only a dozen adults estimated in the wild, and the Everglades National Park is one of the few places you can see the now recovering population of approximately 120 to 230 adult Florida panthers. A Florida panther that was rescued in the Everglades when it was only a week old. Credit: Diana Berkofsky. Crocodiles typically live in saltwater habitats, and alligators are mainly found in freshwater marshes and lakes. These species typically inhabit different ecosystems, but in the Everglades, crocodiles and alligators can be found living together in the wild. In the United States, there are more than 3 million alligators, but fewer than 2,000 crocodiles. The American crocodile was listed as an endangered species in Florida in 1975, as its population plummeted due to hunting and loss of habitat, and the American alligator is federally protected by the ESA as a threatened species. The American crocodile can only be found in the southernmost tip of Florida; whereas American alligators are found across Florida and Louisiana, as well as Georgia, Alabama, Mississippi, North and South Carolina, Texas, Oklahoma and Arkansas. Although these two species are close relatives, alligators have a broader U-shaped snout, while crocodiles have a more pointed, slender V-shaped snout. Alligators are also darker in appearance with black coloring, and crocodiles are typically a lighter, grayish brown. Two adult American alligators in the Everglades National Park with offspring. Credit: Lee Ellsworth The Burmese python is a nonvenomous snake native to the jungles and marshes of Southeast Asia. Pythons can also be found in Africa and Australia — and now Florida. Non-native Burmese pythons have established a breeding population in South Florida and are one of the most concerning invasive species in the Everglades National Park. Pythons were imported from Southeast Asia by the tens of thousands for the exotic pet trade, and escaped pets established a breeding population in Florida by the mid-1990s. It is illegal to import or purchase Burmese pythons in Florida now, but this species has already wreaked havoc on the state. Today, tens of thousands of pythons cover parts of South Florida, including Everglades National Park and Big Cypress National Preserve — and they're spreading. In their native habitat, pythons play an important role in controlling the populations of prey species. In Florida, however, pythons are killing important native species, such as songbirds, deer and alligators, at alarming rates. Scientists stated that pythons caused a recent 90 to 99 percent drop in the small mammal population in the Everglades National Park. Since 2017, Florida has implemented a python action team and a python elimination program to trap and remove pythons from the state. Combined efforts from the Florida Fish and Wildlife Conservation Commission and the South Florida Water Management District have removed more than 3,600 invasive pythons from the Everglades since the programs began. A Burmese python in the Everglades. Credit: NPS. In August, researchers in Big Cypress National Preserve captured a 17-foot female python weighing 140 pounds and carrying 73 eggs. It was the biggest snake ever recorded at the preserve. Credit: NPS. There are an estimated 3,500 mosquito species worldwide, and 200 of those species are in the United States. Of those 200, about 80 of the species have been found in Florida — 33 of which are hazardous to humans and animals. At least 43 different species of mosquitoes are found just in the Everglades National Park, and 13 of these bite people. A 2017 study by the University of Florida collected mosquitoes in the Everglades and analyzed what species they had bitten. Their research found that humans — and small mammals like raccoons, opossums and deer — were not the main targets of the sampled mosquitoes. Rather, they determined that the collected mosquitoes took 77 percent of their blood meals from the hispid cotton rat; whereas a 1979 study found that sampled mosquitoes only took 15 percent of their blood meals from the hispid cotton rat. Researchers have attributed this change in diet to the Burmese python, as this snake is eating the small mammals that mosquitos typically feed on. This change in diet to the hispid cotton rat raises concerns because that rat is the only known host of the Everglades Virus, which if spread to humans, can cause inflammation of the brain. A female Aedes aegypti mosquito, which is common in Southern Florida, feeding on a human host. Credit: Prof. Frank Hadley Collins/CDC, courtesy of Public Health Image Library. One out of every three Floridians relies on the Everglades for their drinking water supply. Water from the Everglades National Park drains into the Biscayne Aquifer, which supplies drinking water for Dade, Broward and Palm Beach County communities. Without the Everglades to "recharge" this aquifer, it could run dry or become contaminated by salt water, leaving millions of people without water. A wetland in the Everglades that helps provide water to more than 8 million people living in Southern Florida. Credit: B. Call/NPS. A variety of restoration projects, as well as sustained investment and work, are needed to restore this habitat that is vital to humans and wildlife alike. Numerous conservation projects are currently in the works, including the Comprehensive Everglades Restoration Plan. This year, we have a major opportunity to secure historic funding to restore America's Everglades and safeguard habitat for countless species, including the threatened wood stork and West Indian manatee. The House of Representatives recently passed a bill that invests \$200 million for Everglades restoration. Now, it's up to the Senate to pass a bill that makes the same historic investment in the Everglades. Tell your Senator to support investing in America's Everglades today.TAKE ACTION To learn more about what is being done to protect this fragile ecosystem, as well as how you can help, visit .