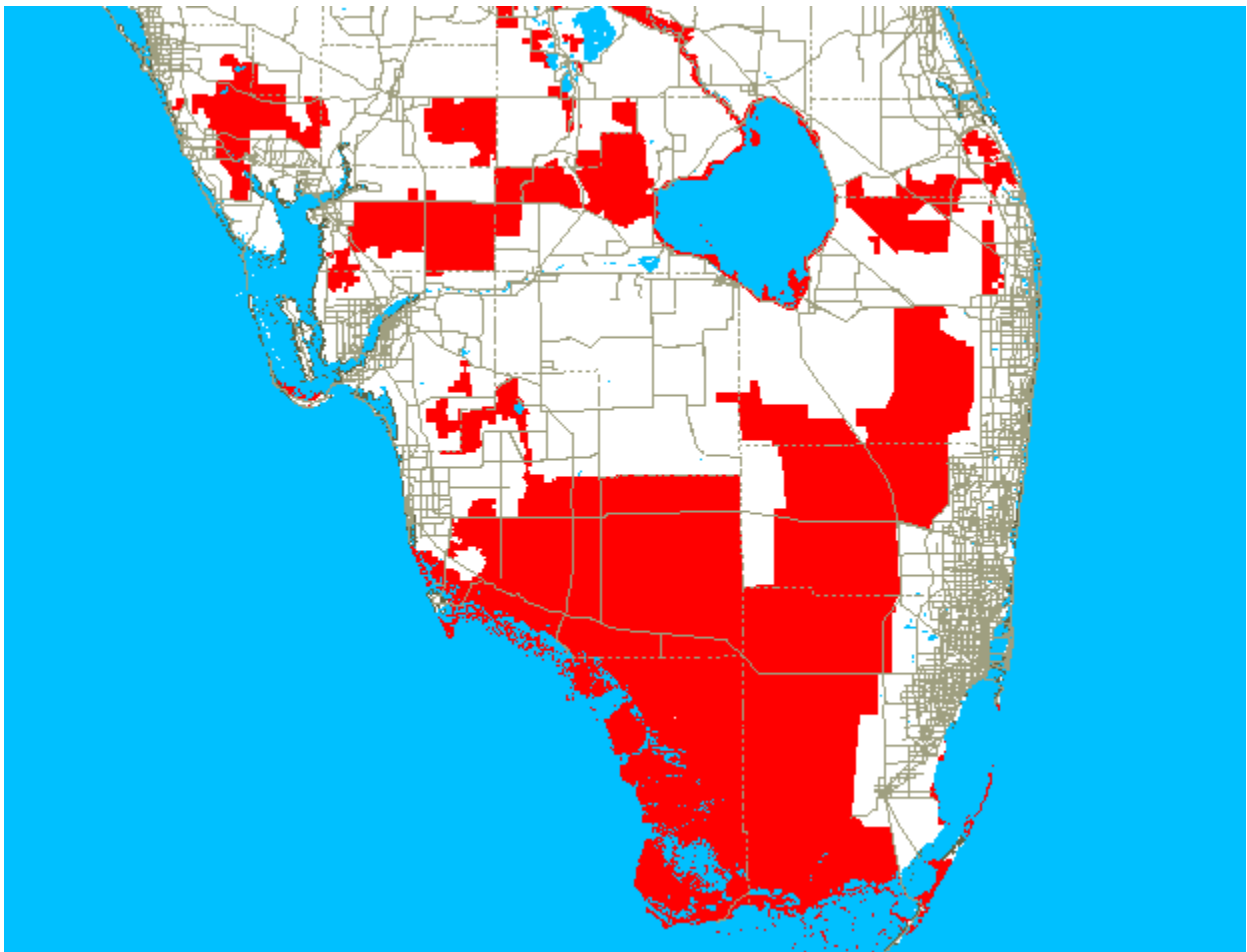


SOUTHERN PENINSULA



ABC ISLANDS

Collier County

5 acres (2 ha)

LOCATION: near Marco Island in southwestern Collier County [need more information]**DESCRIPTION:** three small mangrove islands in the Gulf of Mexico. The islands are designated by the Florida Fish and Wildlife Conservation Commission as a Critical Wildlife Area. [any public visitation?]**OWNERSHIP:** State of Florida**HABITAT:** *mangrove forest**LAND USE:** *conservation, recreation**IBA CATEGORIES:** significant populations of Special Concern, FCREPA, and IBA species; significant numbers of wading birds; and long-term research**AVIAN DATA:** The ABC Islands support significant breeding populations of Brown Pelicans and wading birds, and also contain a regular roost for Magnificent Frigatebirds and wading birds. Between 1974 and 1997, Ted Below conducted 705 dusk roost counts of the islands, and continues to monitor the rookery. [Is a bird list available?].

SPECIES	DATES	NUMBERS	COMMENTS
Brown Pelican	1983–1998	Mean of 344 nests (<u>range?</u>)	4% (B)
Magnificent Frigatebird	1979–1998	Mean of 245 birds (range of 1–1447)	5% (N)
Great Egret	3 Jun 1999	225 nests	1% (B)
Snowy Egret	1983–1998	Mean of 218 nests (<u>range?</u>)	(B)
	3 Jun 1999	224 nests	(B)
Tricolored Heron	1979–1998	Mean of 853 birds (<u>range?</u>)	(N)
	3 Jun 1999	342 nests	(B)
White Ibis	1979–1998	Mean of 6202 birds (range of 144–17,562 birds)	(N)
Glossy Ibis	1979–1998	Mean of 183 birds (range of 0–995 birds)	(N)
Wading birds	1979–1998	Mean of 8710 birds (<u>range?</u>)	(N)
	1983–1998	Mean of 1081 nests (<u>range?</u>)	(B)
	3 Jun 1999	1174 nests	(B)
Long-term research	1974–1997		705 censuses by Ted Below

1979–1998 data provided by Ted Below (Audubon of Florida), 1999 data from +Below (1999)

OTHER RESOURCES: none known.**THREATS:** *human disturbance, *monofilament fishing line**CONSERVATION ISSUES:** The islands are designated as a Critical Wildlife Area to protect the rookery, but there is no known management plan and disturbance from boaters and fishermen is severe. Operators of tour boats, including 30-passenger airboats, disturb the birds in order to give a “good show;” airboats have actually blown into the rookery to cause the birds to take flight. • Fishermen anchor near shore and often leave fishing line in the mangroves.**NOMINATED BY:** Ted Below (Audubon of Florida)**REFERENCE:** +Below, T.H. 1999. Regional nesting report: Southwest coast. Pages 12–13 *in* South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL.

BABCOCK–WEBB ECOSYSTEM

Fred C. Babcock–Cecil M. Webb Wildlife Management Area (69,727 acres; 27,890 ha), **Babcock Ranch FF Project** (90,000 acres; 36,000 ha, unacquired), **Charlotte Harbor Flatwoods CARL–FF Project** (8020 acres; 3208 ha remaining), **Hall Ranch CARL–FF Project** (6484 acres; 2593 ha, unacquired)

Charlotte and Lee counties

174,231 acres (69,692 ha), with 69,727 acres (27,890 ha) acquired

LOCATION: primarily east of Punta Gorda in central and eastern Charlotte County south of State Road 74 and east to the Charlotte/Glades county line. Recent acquisition efforts are purchasing contiguous habitat west to State Road 765 and south to Gator Slough Canal in northwestern Lee County—essentially all undeveloped lands between Tropical Gulf Acres and Cape Coral. A recent acquisition project includes a huge private ranch east of the Wildlife Management Area.

DESCRIPTION: the largest contiguous area of flatwoods, prairies, and wetlands remaining in southwestern Florida, the second fastest-growing region in the United States. The core area is State-owned land, but vast areas of rangeland are proposed for perpetual conservation easements. During World War II, 8720 acres (3488 ha) of the Wildlife Management Area and 5000 acres (2000 ha) of private lands were leased to the War Department to establish the Fort Myers (a.k.a. Bermont) Bombing and Gunnery Range. The bombing range was discontinued in 1946 and the lands were returned to their former owners +(U.S. Army website). The Wildlife Management Area receives ___ recreationists and ___ hunters annually. Avian data for this IBA are restricted to the Wildlife Management Area.

OWNERSHIP: Florida Division of Wildlife (Fred C. Babcock–Cecil M. Webb Wildlife Management Area) and private owners (remaining acreage of the Babcock Ranch FF Project, Charlotte Harbor Flatwoods CARL–FF Project, and the Hall Ranch CARL–FF Project)

HABITATS: *slash pine flatwoods, temperate hammock, dry prairie, fields, freshwater marsh, cattail marsh, lacustrine

LAND USE: *conservation, *hunting, *grazing, ecotourism, recreation

IBA CATEGORIES: significant populations of Endangered, Threatened, and Watch List species; complete diversity of slash pine flatwoods species; and significant natural habitats

AVIAN DATA: Fred C. Babcock–Cecil M. Webb Wildlife Management Area supports significant populations of Red-cockaded Woodpeckers, Brown-headed Nuthatches, Bachman's Sparrows, and other flatwoods species. The Babcock Ranch FF Project site supports populations of Swallow-tailed Kites, Short-tailed Hawks, Crested Caracaras, “Florida” Sandhill Cranes, Red-cockaded Woodpeckers, Florida Scrub-Jays +(DEP 2002). [Is a bird list available for the WMA?; I have a list of (only) 100 native species].

Fred C. Babcock–Cecil M. Webb Wildlife Management Area only:

SPECIES	DATES	NUMBERS	COMMENTS
Wood Stork	winter 1999–2000	125 birds	1% (N)
“Florida” Sandhill Crane	2000	40 pairs	2% (B)
Red-cockaded Woodpecker	1999	27 clusters	2% (R)
Brown-headed Nuthatch	1999	2000 birds estimated	(R)
Bachman's Sparrow	1999	500 singing males estimated	(R)

Red-cockaded Woodpecker data from +USFWS (2000), all other data provided by Mike Webber (Florida Fish and Wildlife Conservation Commission)

OTHER RESOURCES: Fred C. Babcock–Cecil M. Webb Wildlife Management Area protects one of the largest contiguous slash pine flatwoods remaining in South Florida. The Charlotte Harbor Flatwoods

CARL–FF Project, which began in 1992, has acquired much (11,341 of 19,361 acres; 4536 of 9558 ha) of the old-growth flatwoods lying just southwest of Fred C. Babcock–Cecil M. Webb Management Area. This acreage, now called the Yucca Pens Unit of the Wildlife Management Area, contains a population of the globally-imperiled ♦pretty false pawpaw (*Deeringothamnus rugelli* var. *pulchellus*). • Florida panthers are known to use the Wildlife Management Area, and panthers and black bears occur on the Babcock Ranch FF Project site.

THREATS: *development

CONSERVATION ISSUES: A vast (91,361 acres; 36,544 ha) cattle ranch just east of the Wildlife Management Area was selected as a potential State acquisition project in December 2001 +(DEP 2002). The ranch owners wish to retain 27,801 acres (11,120 ha), and are considering developing 19,890 acres (7956 ha). Nonetheless, the FF Project boundary includes the entire ranch, with about half of the site listed as “essential parcels” +(DEP 2002). • The Wildlife Management Area is managed for populations of Northern Bobwhites and other game species. • Water levels are controlled and exotic vegetation is removed. • Prescribed fires are used to maintain pine flatwoods in open condition to support Red-cockaded Woodpeckers and other fire-dependant species. • The area used as a bombing range during World War II still contains “several hundred” bomb craters, and may still contain high explosive bombs +(<<http://www.hnd.usace.army.mil/oew/factshts/factshts/myersbgr.htm>>). • The Babcock Ranch FF Project is seeking a perpetual conservation easement on all lands between Fred C. Babcock–Cecil M. Webb Wildlife Management Area and the Fisheating Creek Wildlife Management Area. If successful, this acquisition will create a huge, protected area in southwestern Florida, that would extend contiguously from Charlotte Harbor to Lake Okeechobee (with the inclusion of public lands outside this IBA).

Virtually this entire IBA is Priority One habitat for the Florida panther, and efforts to acquire privately owned properties should be accelerated.

NOMINATED BY: Charlie Ewell (Florida Ornithological Society) and Bill Pranty (Audubon of Florida)

REFERENCES: +USFWS 2000. Technical/agency draft revised recovery plan for the Red-cockaded Woodpecker (*Picoides borealis*). U.S. Fish and Wildlife Service. Atlanta, Georgia.

WEBSITE: <<http://www.hnd.usace.army.mil/oew/factshts/factshts/myersbgr.htm>>

BIG CYPRESS SWAMP WATERSHED

Big Cypress National Preserve (729,000 acres; 291,600 ha), **Collier–Seminole State Park** (6436 acres; 2574 ha), **Fakahatchee Strand Preserve State Park** (69,088 acres; 27,603 ha), **Florida Panther National Wildlife Refuge** (26,000 acres; 10,400 ha), and **Picayune Strand State Forest** (15,935 acres; 6374 ha). Adjacent private lands are sought for acquisition under the **Belle Meade CARL–FF Project** (9407 acres [3762 ha] remaining), **Fakahatchee Strand CARL–FF Project** (17,398 acres [6959 ha] remaining), and **Save Our Everglades CARL–FF Project** (35,139 acres [14,055 ha] remaining)

Collier, Miami-Dade, and Monroe counties

908,403 acres (363,361 ha), with 846,459 acres (338,583 ha) acquired

[This IBA needs additional information]

LOCATION: all of eastern Collier County, extreme northwestern Miami-Dade County, and northeastern Monroe County, mostly south of Interstate 75, extending southwest nearly to State Road 951, and south nearly to the Gulf of Mexico. Contiguous with the Rookery Bay National Estuarine Research Reserve and Ten Thousand Islands National Wildlife Refuge IBAs to the south and the Everglades National Park IBA to the south and southeast.

DESCRIPTION: a vast and extremely diverse area northwest of, and contiguous with, Everglades National Park, essential for the preservation of the Florida panther and numerous other floral and faunal species. Annual visitation of the sites is 503,000 recreationists and ___ hunters for Big Cypress National Preserve, ___ recreationists for Collier–Seminole State Park, ___ recreationists for Fakahatchee Strand Preserve State Park, and ___ recreationists and ___ hunters for Florida Panther National Wildlife Refuge.

OWNERSHIP: U.S. Fish and Wildlife Service (Florida Panther National Wildlife Refuge), U.S. National Park Service (Big Cypress National Preserve), Florida Division of Forestry (Picayune Strand State Forest), Florida Division of Recreation and Parks (Collier–Seminole State Park and Fakahatchee Strand Preserve State Park), and private owners (remaining acreage of the Belle Meade, Fakahatchee Strand, and Save Our Everglades CARL–FF projects)

HABITATS: Big Cypress National Preserve: *slash pine flatwoods, *temperate hammock, *cypress swamp, *hardwood swamp, *freshwater marsh, tropical hammock, mangrove forest, cattail marsh, tidal marsh, riverine, lacustrine, estuary, artificial. [Need information for the other sites].

LAND USE: Big Cypress National Preserve: *conservation, recreation, hunting, oil production, pilot training. [Need information for the other sites].

IBA CATEGORIES: Big Cypress National Preserve: significant populations of Endangered, Special Concern, FCREPA, and Watch List species; significant numbers of wading birds; complete diversity of slash pine flatwoods; significant natural habitats; and long-term research. [Need information for the other sites].

AVIAN DATA: Everglades National Park and Big Cypress National Preserve support the entire world population of “Cape Sable” Seaside Sparrows. The current status of sparrows in the Preserve is unknown, as surveys in recent years have concentrated on the population in the National Park. Picayune Strand State Forest may eventually support a viable population of Red-cockaded Woodpeckers. Bird diversity of all sites combined is ___ native species. [Is a bird list available for any site other than Big Cypress?].

Big Cypress National Preserve:

SPECIES	DATES	NUMBERS	COMMENTS
Least Bittern	annual	common	(R)
Great Egret	May 1996	200 nests	1% (B)
White Ibis	annually during dry-downs	>400 birds	(N)
Wood Stork	May 1996	>500 nests	9% (B)
Swallow-tailed Kite	annually in spring–summer	~100 pairs	16% (B)
White-tailed Kite	May 1993	1 nest	(B)
Limpkin	resident	common	
Red-cockaded Woodpecker	1998–1999	40 clusters	3% (R)
Brown-headed Nuthatch	resident	common	donor population for the recent reintroduction project into Everglades National Park
“Cape Sable” Seaside Sparrow	1980–1981	2900 birds	~50%? (R); no recent surveys
Long-term research	since 1979		Red-cockaded Woodpecker demographic study
Overall diversity	1997 list	177 natives 5 exotics	

Woodpecker data from +USFWS (2000), 1980–1981 sparrow data from Bass and Kushlan (1982 *in* +Stevenson and Anderson 1994), checklist data from +Pumilio et al. (1997), all other data provided by Deborah Jansen (U.S. National Park Service)

Picayune Strand State Forest:

SPECIES	DATES	NUMBERS	COMMENTS
Red-cockaded Woodpecker	2000	4 males (3 females released)	<1% currently (R)

Data from +Shoun (2000).

OTHER RESOURCES: Big Cypress National Preserve is one of the largest single conservation areas in Florida and contains a great diversity of habitats. It supports one-third of the remaining population of Florida panthers, and contains significant Miccosukee and Seminole Indian cultural sites. **Picayune Strand State Forest** contains hundreds of acres (ha) of old-growth (100–300 year-old) slash pine flatwoods

THREATS: Big Cypress National Preserve: *human disturbance (Off-Road Vehicles), *exotic plants, *altered hydrology, habitat succession, feral hogs, development (expansion of oil- and gas-drilling) [not anymore?]. [Need information for the other sites].

CONSERVATION ISSUES: Big Cypress National Preserve: In the early 1970s, an international airport and massive city were nearly built in Big Cypress Swamp, but this plan was scrapped when it was documented that the development would destroy Everglades National Park. The entire Big Cypress Swamp later was protected by the Federal Government, but a runway 3 miles (4.8 km) in length already had been constructed. This runway continues to be used by airline pilots for practicing take-offs and landings. • Altered quality and quantity of water flowing into the Preserve has impacted natural communities. • A proposal to expand oil and gas extraction activities is in the development and writing stages [not anymore?]. • Off-Road Vehicle (ORV) use of Big Cypress National Preserve has been substantial, and has damaged large portions of the Preserve; literally thousands of miles (km) of trails exist. An ORV management plan was recently established and will limit ORVs to a maximum of 400 miles (640 km) of existing trails. • An active program to control exotic plants is

underway. • Prescribed fires are set to restore and maintain fire-dependent communities. • **Picayune Strand State Forest** contained only four Red-cockaded Woodpeckers (all males) by 2000. Three females from Apalachicola National Forest were released into the Forest to rejuvenate the population. Based on the amount of old-growth habitat available, 25–30 woodpecker clusters may eventually be established.

Determination of the current range and population size of “Cape Sable” Seaside Sparrows at Big Cypress National Preserve should be a priority (+Post and Greenlaw 2000).

NOMINATED BY: Deborah Jansen (Big Cypress National Preserve), _____

REFERENCES: +Post, W., and J.S. Greenlaw. 2000. The present and future of the Cape Sable Seaside Sparrow. *Florida Field Naturalist* 28: 93–110. • +Pumilio, J., D. Jansen, and M. Dusek. 1997. Big Cypress National Preserve bird checklist. Big Cypress National Preserve. Ochopee, FL. • +Shoun, J. 2000. Biologists hope endangered woodpeckers will mate in state park [= state forest]. *Naples Daily News*, 8 December 2000. • +Stevenson, H.M., and B.H. Anderson. 1994. *The Birdlife of Florida*. University Press of Florida. Gainesville, FL. • +USFWS 2000. Technical/agency draft revised recovery plan for the Red-cockaded Woodpecker (*Picoides borealis*). U.S. Fish and Wildlife Service. Atlanta, Georgia.

WEBSITES: <<http://www.nps.gov/bicy>>,
<http://www.fl-dof.com/state_forests/Picayune_Strand.htm>,
<<http://www.npwrc.usgs.gov/resource/othrdata/chekbird/r4/flpanthr.htm>>,
<<http://www.dep.state.fl.us/parks/district4/fakahatcheestrand>>,
<<http://www.dep.state.fl.us/parks/district4/collier-seminole>>

BIG MARCO PASS SHOAL

Collier County

___ acres (___ ha)

LOCATION: on Marco Island in southwestern Collier County. [[More information](#)]

DESCRIPTION: sandflats about 0.6 miles (1 km) in length along the northwestern shoreline of Marco Island. The island is a former mangrove forest converted to a 2000 acre (800 ha) residential development beginning in the 1960s. Big Marco Pass Shoal is designated by the Florida Fish and Wildlife Conservation Commission as a Critical Wildlife Area. The shoal receives ___ recreationists annually. This site is also known as Tigertail Beach.

OWNERSHIP: State of Florida (sovereign lands)

HABITATS: *coastal strand, estuarine

LAND USE: *conservation, *recreation

IBA CATEGORIES: significant populations of Threatened, Special Concern, FCREPA, and Watch List species; significant numbers of shorebirds and larids; significant natural habitats; and long-term research

AVIAN DATA: Big Marco Pass is critically important for wintering Piping Plovers, other shorebirds, and breeding and roosting larids. Ted Below has conducted 798 twice-weekly shorebird and larid surveys of Marco Island since 1992. [[Is a bird list available?](#)].

SPECIES	DATES	NUMBERS	COMMENTS
Snowy Plover	1972–present	mean of 3 nests [range?]	1% (B)
	Jan–Feb 2001	17 birds	4% (R)
Wilson's Plover	1974–1999	mean of 15 nests [range?]	7% (B)
	winter 1999	35 birds	7% (W)
Piping Plover	Jan–Feb 2001	41 birds	8% (W)
	several 1999 surveys	mean of 103 birds [range?]	(W)
Shorebirds	several 1999 surveys	mean of 2000 birds [range?]	(W)
Royal Tern	several 1999 surveys	mean of 404 birds [range?]	(N)
Sandwich Tern	several 1999 surveys	mean of 517 birds [range?]	(N)
Black Skimmer	summer 1999	567 nests	35% (B)
Long-term research	since 1992		798 censuses by Ted Below

Data provided by Ted Below (Audubon of Florida)

OTHER RESOURCES: none known

THREATS: *development, *human disturbance

CONSERVATION ISSUES: Marco Island is a massive development surrounded by extensive mangrove forests (*see* Myers and Ewel 1990: 518 for photographs of Marco Island before and after development). The beach along the west side of the island is proposed [[now designated?](#)] by the U.S. Fish and Wildlife Service as critical wintering habitat for Piping Plovers. However, any conservation action on Marco Island is vehemently opposed by the pro-development community. Hence, proposed designation by the U.S. Fish and Wildlife Service of the outer beach and flats as Critical Wintering Habitat for Piping Plovers has been emphatically fought by local residents, even though designation merely maintains the status quo. The inner beach is heavily used for recreation, while the outer beach and flats—the area most used by plovers—are seldom used by humans.

NOMINATED BY: Ted Below (Audubon of Florida)

BISCAYNE BAY

Bird Key (1 acre; 0.4 ha), **Bill Baggs–Cape Florida State Park** (412 acres; 164 ha), **Biscayne National Park** (172,924 acres [69,169 ha], with about 8500 acres [3400 ha] of uplands), **The Deering Estate at Cutler** (420 acres; 171 ha), and **Matheson Hammock Park** (629 acres; 251 ha)

Miami-Dade County

174,386 acres (69,757 ha), with about 9962 acres (3987 ha) of uplands

[This IBA needs additional information].

LOCATION: all sites are east of Miami in eastern Miami-Dade County. **Bird Key** is located in Biscayne Bay about 300 feet (90 m) east of the Intracoastal Waterway and less than 1 mile (<1.6 km) south of North Bay Causeway (State Road 934). **Bill Baggs–Cape Florida State Park** comprises the southern end of Key Biscayne, which forms the northern boundary of Biscayne Bay. **Biscayne National Park** occupies a substantial portion of the Miami-Dade County shoreline between Kendall and Turkey Point. Most of the Park consists of open water of Biscayne Bay. **The Deering Estate at Cutler** is on the mainland south of Kings Bay and is adjacent to the northern mainland boundary of Biscayne National Park. The Estate also includes Chicken Key, about 0.8 miles (1.5 km) offshore. **Matheson Hammock Park** is on the mainland east of Kendall. This IBA is nearly adjacent to the Florida Keys Ecosystem IBA to the south.

DESCRIPTION: **Bird Key** is a small mangrove key within the Flight Control Area of Miami International Airport. This may explain its omission from the state's colonial waterbird surveys, which are based primarily on aerial surveys. **Bill Baggs–Cape Florida State Park** formerly was composed largely of an Australian-pine forest, but now is being replanted largely with native species. The State Park receives 900,000 recreationists annually. **Biscayne National Park** is composed mostly of open salt water but includes a narrow fringe along the mainland. The Park also contains the northernmost Florida Keys, which because of their relative inaccessibility, are generally in pristine condition. The largest of these are Old Rhodes Key (adjacent to Upper Key Largo) and Elliott Key, which is over 7 miles (11.2 km) in length. The National Park boundary extends 10–14 miles (16–22.4 km) off the mainland coast. Most of the Park is inaccessible except by private boat. Biscayne National Park receives 500,000 recreationists, mostly boaters, annually. **The Deering Estate at Cutler** emphasizes historical and natural preservation and environmental education. **Matheson Hammock Park** is a passive-recreation park that consists of mostly natural habitats. The Park receives ____ recreationists annually.

OWNERSHIP: U.S. National Park Service (Biscayne National Park), Florida Division of Recreation and Parks (Bill Baggs–Cape Florida State Park), State of Florida and Miami-Dade County (The Deering Estate at Cutler, managed by Miami-Dade County Park and Recreation Department and the Deering Estate Foundation), Miami-Dade County Park and Recreation Department (Matheson Hammock Park), private (Bird Key)

HABITATS: **Bird Key:** *mangrove forest, **Bill Baggs–Cape Florida State Park:** *coastal strand (under restoration), tropical hammock (under restoration), mangrove forest (under restoration), lacustrine (under restoration), artificial, **Biscayne National Park:** *open water, *tropical hammock, *mangrove forest, _____. **The Deering Estate at Cutler:** *pine rocklands (150 acres; 60 ha), tropical hammock (115 acres; 46 ha), mangrove forest, estuarine, artificial. **Matheson Hammock Park:** *tropical hammock, _____.

LAND USE: **Bird Key:** *conservation. **Bill Baggs–Cape Florida State Park:** *recreation, conservation. **Biscayne National Park:** *conservation, recreation. **The Deering Estate at Cutler:** *historic preservation, *environmental education, recreation, conservation. **Matheson Hammock Park:** *recreation, *conservation.

IBA CATEGORIES: **Bird Key:** significant populations of Special Concern and IBA species; **Bill Baggs–Cape Florida State Park:** significant populations of Threatened and FCREPA species; and

significant numbers of Neotropical migrants. **Biscayne National Park:** significant natural habitats. **The Deering Estate at Cutler** significant natural habitats. **Matheson Hammock Park:** significant numbers and diversity of Neotropical migrants; and significant natural habitats.

AVIAN DATA: Bird Key supports a colonial waterbird rookery and a Magnificent Frigatebird roost. **Bill Baggs–Cape Florida State Park** is most important for Neotropical migrants, which can occur in large numbers, especially after storms. In a few hours during recent days during spring, thousands of wood-warblers were observed. Bird diversity for all sites combined is ___ native species. **Biscayne National Park:** >170 species. **The Deering Estate at Cutler:** no data. **Matheson Hammock Park** ____.

Bird Key:

SPECIES	DATES	NUMBERS	COMMENTS
Brown Pelican	1999	125 pairs	1% (B)
Magnificent Frigatebird	1999	50 birds	1% (N)
White Ibis	1999	500 pairs	2% (B)

Data supplied by Harry Kelton (Pelican Harbor Seabird Station, Inc.)

Bill Baggs–Cape Florida State Park:

SPECIES	DATES	NUMBERS	COMMENTS
Wilson's Plover	13 Aug 2000	23 birds	5% (N)
Least Tern	7 Aug 1997	205 birds	2% (N)
Wood-warblers	1 May 1999	1000s of birds	mostly Blackpoll and Black-throated Blue warblers
	30 May 2000	>4000 birds	mostly Black-throated Blue, Blackpoll, and Cape May warblers, American Redstarts, and Common Yellowthroats
Overall diversity	1994–2000	164 natives 7 exotics	[need earlier data]

Plover data provided by ____ (____), tern data provided by Elizabeth Golden (Florida Division of Recreation and Parks), wood-warbler observations by John Boyd published in *Florida Field Naturalist*.

Biscayne National Park:

SPECIES	DATES	NUMBERS	COMMENTS
Wading birds	___ Dec 1980	580 birds	(N)
Overall diversity	1980–2000	144 natives 3 exotics	CBC data only

Data from the Biscayne National Park CBC

OTHER RESOURCES: Bird Key: none known. **Bill Baggs–Cape Florida State Park** contains 16 listed plants, primarily in the coastal strand habitat, and 5 listed non-avian animals, including ♦ American crocodile (*Crocodylus acutus*), leatherback turtles, and loggerhead sea turtles. It also contains numerous dragonfly and butterfly species. • The Cape Florida Lighthouse was built in 1846. **Biscayne National Park** protects 44 barrier islands and keys, and the northernmost coral reef in North America. It preserves 14 continuous miles (22.4 km) of mangrove shoreline, the greatest extent remaining on the Atlantic coast. The National Park supports populations of 6 non-avian endangered vertebrates: ♦ Schaus' swallowtail butterfly (*Papilio aristodemus*), American crocodile, green turtle, hawksbill turtle, leatherback turtle, and Florida manatee. **The Deering Estate at Cutler** preserves

several historically significant buildings, including Charles Deering's "Stone House" built in 1922. The Richmond House (1896) and the Richmond Cottage (1900) are two of the few examples of early frame vernacular architecture remaining in southern Florida. Human remains from the Estate date back 10,000 years to the Paleo-Indians; Tequesta Indians occupied the site later, from 2000 YBP to the late 1700s. **Matheson Hammock Park** ____.

THREATS: Bird Key: [none?]. **Bill Baggs–Cape Florida State Park:** *proposed development (sports field), human disturbance, exotic plants, runoff. **Biscayne National Park:** *offsite development, human disturbance, runoff. **The Deering Estate at Cutler:** [none?]. **Matheson Hammock Park:** human disturbance.

CONSERVATION ISSUES: Bird Key: The landowner has permitted the Florida Fish and Wildlife Conservation Commission to close the island to the public to protect the rookery. **Bill Baggs–Cape Florida State Park:** Since Hurricane *Andrew* destroyed the State Park's predominantly exotic vegetation in August 1992, staff have been replanting with native species, which probably will increase its value to birds. Many areas still require work, and the vegetation needs to mature. • Exotic vegetation is controlled as needed by park staff and volunteers. • There is an ongoing local effort to develop a sports field within the park, a plan that is opposed by the State and Audubon. **Biscayne National Park:** [mention the plan to covert Homestead Air Force Base into a commercial airport!]. **The Deering Estate at Cutler** ____ . **Matheson Hammock Park** ____ .

NOMINATED BY: Bird Key: Harry Kelton (Pelican Harbor Seabird Station, Inc.), **Bill Baggs–Cape Florida State Park:** Elizabeth Golden (Florida Division of Recreation and Parks), **Biscayne National Park, The Deering Estate at Cutler, and Matheson Hammock Park:** Mark Kraus and Bill Pranty (Audubon of Florida)

WEBSITES: <<http://www.biscayne.national-park.com>>,
<<http://www.dep.state.fl.us/parks/district5/billbaggscape>>,
<<http://www.metro-dade.com/parks/deering.htm>>

CORKSCREW SWAMP WATERSHED

Corkscrew Swamp Sanctuary (10,895 acres; 4358 ha), **Corkscrew Regional Ecosystem Watershed CARL–FF Project** (61,568 acres [24,627 ha], including 21,493 acres [8597 ha] acquired as **CREW Wildlife and Environmental Area**), and **Stairstep Mitigation Area** (____ acres; ____ ha)

Collier and Lee counties
72,463 acres (28,985 ha), with 32,388 acres (12,955 ha) acquired

LOCATION: in southeastern Lee County and northwestern Collier County, from County Road 850 south in a narrow band through Camp Keatis Swamp west of State Road 29 to Florida Panther National Wildlife Refuge. Contiguous with the Big Cypress Swamp Watershed IBA to the south.

DESCRIPTION: Corkscrew Swamp Sanctuary is one of the most significant natural areas in Florida, containing the largest virgin cypress swamp remaining in North America. The Corkscrew Regional Ecosystem Watershed Project was designed to further protect the Sanctuary by purchasing surrounding habitats, including a direct link to conservation areas to the south. The Stairstep Mitigation Area protects additional wetlands north of the Sanctuary. Corkscrew Swamp receives 100,000 recreationists annually and contains an environmental education center for about 6000 schoolchildren each year. The CREW Wildlife and Environmental Area receives ____ recreationists and ____ hunters annually.

OWNERSHIP: National Audubon Society (Corkscrew Swamp Sanctuary), South Florida Water Management District (acquired acreage of the Corkscrew Regional Ecosystem Watershed CARL–FF Project), and private owners (remaining acreage of the Corkscrew Regional Ecosystem Watershed CARL–FF Project) – what about Stairstep Mitigation Area?

HABITATS: *slash pine flatwoods, *cypress swamp, *sawgrass marsh, temperate hammock, agricultural fields, freshwater marsh, lacustrine, artificial

LAND USE: **Corkscrew Swamp Sanctuary:** *conservation, environmental education. **Corkscrew Regional Ecosystem Watershed CARL–FF Project:** *conservation, recreation, hunting, grazing. **Stairstep Mitigation Area:** *conservation.

IBA CATEGORIES: significant populations of Endangered and FRCREPA species; significant numbers of wading birds; significant natural habitats; and long-term research

AVIAN DATA: Corkscrew Swamp Sanctuary contains what often is the nation's largest Wood Stork rookery, although nesting success (which is dependent on local water levels) is extremely variable. The colony has been monitored annually since 1958. The Sanctuary also supports a diversity of Neotropical migrants, and large numbers of wintering landbirds. Corkscrew Swamp Sanctuary and the Stairstep Mitigation Area contain the third- and fourth-largest Swallow-tailed Kite roosts in the United States. Bird diversity of Corkscrew Swamp Sanctuary is 218 native species; neither of the other sites within the IBA is known to contain additional species.

Corkscrew Swamp Sanctuary:

SPECIES	DATES	NUMBERS	COMMENTS
Wood Stork	1997–2001 seasons	mean of 478 nests (range of 0–1721)	mean of 8%, range of 0–31% (B)
Swallow-tailed Kite	25 Jul 1989	344 birds	>20% (N)
	27 Jul 1996	348 birds	>20% (N)
	Jul 2000	<100 birds	6% (N)
Long-term research	since 1958		Wood Stork monitoring
Overall diversity	undated list	218 natives 4 exotics	

Stork data provided by Andrew Mackie (formerly of Audubon of Florida); kite roost data from +Bensen (1992), observations of Robbie Wooster published in *Florida Field Naturalist*, and provided by Ken Meyer (Avian Research and Conservation Institute).

CREW Wildlife and Environmental Area:

SPECIES	DATES	NUMBERS	COMMENTS
Wading birds [<u>Cattle Egrets?</u>]	Mar 1995	912 birds observed, 6100 estimated	(N)
	Aug 1995	1482 birds observed, 9900 estimated	(N)
	Mar 1996	756 birds observed, 5000 estimated	(N)
	Aug 1996	1501 birds observed, 10,000 estimated	(N)
	Mar 1997	1232 birds observed, 8200 estimated	(N)
Diversity	2001 list	110 natives 2 exotics	

Data from +Bozzo et al. (2001)

Stairstep Mitigation Area:

SPECIES	DATES	NUMBERS	COMMENTS
Swallow-tailed Kite	1990s	~200 birds	~13%

Data provided by Ken Meyer (Avian Research and Conservation Institute)

OTHER RESOURCES: Some cypresses at Corkscrew Swamp Sanctuary are more than 600 years old and up to 8 feet (2.4 m) in diameter. A 2.25-mile (3.6-km) boardwalk allows visitor access to several habitats at the Sanctuary, including wet prairie, cypress swamp, and “lettuce” lakes. The Sanctuary was designated by the U.S. Department of the Interior in 1964 as a Registered Natural History Landmark.

THREATS: *development, *human disturbance, *exotic plants, feral hogs [none of these are addressed in Conservation Issues]

CONSERVATION ISSUES: If acquisition efforts of the Corkscrew Regional Ecosystem Watershed CARL–FF Project are successful, Corkscrew Swamp Sanctuary and adjacent lands will be linked directly—albeit via a narrow corridor—with conservation areas to the south, such as Florida Panther National Wildlife Refuge, Big Cypress National Preserve, and Fakahatchee Strand State Preserve.

NOMINATED BY: Andrew Mackie (formerly of Audubon of Florida) and Bill Pranty (Audubon of Florida)

REFERENCES: +Bensen, K.J. 1992. Dynamics of an American Swallow-tailed Kite communal roost at Corkscrew Swamp Sanctuary, Florida. *Florida Field Naturalist* 20: 66–71. • +Bozzo, J., J. Schortemeyer, D. Myers, J. Goodwin, and D. Fousek. 2001. Corkscrew Regional Ecosystem Watershed General Management Plan, 2001–2006. Florida Fish and Wildlife Conservation Commission and South Florida Water Management District.

WEBSITE: <<http://www.audubon.org/local/sanctuary/corkscrew>>

EVERGLADES NATIONAL PARK

Miami-Dade and Monroe counties

1,550,865 acres (620,346 ha), nearly all acquired

LOCATION: at the southern tip of the Florida Peninsula, in western Miami-Dade County and virtually all of mainland Monroe County, ranging from Everglades City in the northwest to Florida City in the southeast. The Park is 43 miles (70 km) east to west and the same distance north to south. U.S. Highway 41 east of Forty-Mile Bend forms the Park's northern boundary, while its southern boundary extends into Florida Bay, including dozens of small keys, and approaches to within a few miles (km) of the Mainline Florida Keys. Contiguous with the Big Cypress Swamp Watershed IBA to the north, and near the Ten Thousand Islands National Wildlife Refuge IBA to the northwest.

DESCRIPTION: At 1,507,850 acres (603,140 ha), Everglades National Park is the largest single conservation area in Florida, and undoubtedly is one of the world's best-known natural treasures. It is an extremely diverse area and receives over 1,000,000 recreationists annually, of which one-third are from other countries. The former fishing village of Flamingo now contains a campground, visitor's center, lodge, restaurants, and living quarters for Park employees. The park and the entire Everglades ecosystem are currently targeted for the largest habitat restoration project in history, expected to cost \$8 billion and take 30 years to complete. This IBA also includes over 40,000 acres (16,000 ha) of adjacent marshland purchased to improve water flow to the park and to buffer it from development. These sites are the **Frog Pond–L-31 Transition Lands** portion of the **East Everglades CARL–FF Project** (6853 acres [2741 ha] acquired as **Frog Pond Wildlife Management Area**), **Southern Glades SOR Tract** (30,722 acres; 12,288 ha), and the **8.5 Square-Mile Area** (5440 acres; 2176 ha, some acquired).

OWNERSHIP: U.S. National Park Service (Everglades National Park), South Florida Water Management District (Southern Glades SOR Tract), Florida Division of Wildlife (Frog Pond Wildlife Management Area), and private owners (unacquired acreage of the East Everglades CARL–FF Project, and the 8.5 Square-Mile Area)

HABITATS: *sawgrass marsh, *tidal marsh, *tropical hammock, *mangrove forest, *estuarine, *cypress swamp, slash pine flatwoods, bayhead, freshwater marsh, cattail marsh, riverine, lacustrine, coastal strand, artificial

LAND USE: *conservation, recreation

IBA CATEGORIES: significant populations of Endangered, Threatened, Special Concern, and FCREPA species; significant numbers of wading birds, raptors, shorebirds, and larids; significant diversity of colonial waterbirds, shorebirds, and wintering wood-warblers; significant overall diversity; significant natural habitats; and long-term research

AVIAN DATA: Everglades National Park is the most ornithologically diverse site in Florida, supporting 340 native species. Although reduced by over 90% of their historic numbers—from 265,000 pairs in the 1930s to 18,500 pairs presently (reference?)—wading birds remain the most conspicuous birds of the Everglades. A few of the numerous other species with significant populations in the park are Bald Eagles, wintering American Kestrels and shorebirds, perhaps half of the state's breeding White-crowned Pigeons, and perhaps most of the world's population of “Cape Sable” Seaside Sparrows. Additionally, small numbers of perhaps two dozens species of wood-warblers winter regularly in the park; along with the Florida Keys, the Park probably contains the greatest diversity of wintering wood-warblers in North America.

SPECIES	DATES	NUMBERS	COMMENTS
Brown Pelican	1997–2000	mean of 404 pairs (range of 200–570)	mean of 4% (range of 2–6); (R)
“Great White” Heron	1997–2000	mean of 121 pairs (range of 4–200)	mean of 13% (range of <1–22); (R)
Great Egret	1997–2000	mean of 1042 pairs (range of 477–1407)	mean of 6% (range of 3–9); (R)
Tricolored Heron	1997–2000	mean of 124 pairs (range of 13–250)	(R)
Roseate Spoonbill	1997–2000	mean of 40 pairs (range of 0–119)	mean of 4% (range of 0–11); (R)
White Ibis	1997–2000	mean of 327 pairs (range of 151–520)	mean of 1% (range of <1–nearly 3); (R)
Wood Stork	1997–2000	mean of 519 pairs (range of 25–1592)	mean of 9% (range of <1–28); (R)
Wading Birds	1997–2000	mean of 2687 pairs (range of 1680–4386)	
Osprey	Dec 1997	27 nests	1% (B)
Swallow-tailed Kite	9 Aug 2001	140 birds	9% (N)
Snail Kite	1970	13 birds	6% of then-current numbers (R)
Bald Eagle	Feb 2000	55 pairs	5% (B)
American Kestrel	Feb 2000	1000 birds	(W)
Shorebirds	winter 1993–1994	>22,632 birds	Carl Ross Key (>10,000), the SE end of Lake Ingraham (4892), NW of Palm Key (5800), Sandy Key (477), and Snake Bight Channel (1463)
White-crowned Pigeon	1991	5055 nests	59% (B)
Mangrove Cuckoo	May 2000	?	(R)
“Cuban” Yellow Warbler	May 2000	?	(R)
“Cape Sable” Seaside Sparrow	May 2000	3500 birds	possibly 100% (R)
Wintering wood-warbler diversity	Dec 2000–Jan 2001	21 species	(W)
Overall diversity		340 natives 12 exotics	The most diverse IBA in Florida

Snail Kite data from +Sykes (1983); White-crowned Pigeon data from +Strong et al. (1991); 1997 wading bird data from +Bass and Oberhofer (1997) and +Browder et al. (1997), 1997 Osprey data from +Browder et al. (1998), 1998 data from +Bass and Osborne (1998), 1998–1999 spoonbill data from +Lorenz (1999), 1998 other 1999 wading bird data from +Bass and Osborne (1999) and +Browder et al. (1999), 2000 wading bird data from +Bass and Osborne (2000) and +Browder et al. (2000), shorebird data from +Sprandel et al. (1997), kite data from an observation by Bryant Roberts published in *Florida Field Naturalist*, wintering wood-warbler diversity from the Coot Bay–Everglades N.P. CBC and observations of Steve Backes and John Boyd, other data provided by Oron Bass, Jr. (U.S. National Park Service).

OTHER RESOURCES: Everglades Park is one of the nation's most valuable conservation areas, encompassing over 1.5 million acres (620,000 ha—nearly 2500 square miles or 620 square km). It has been designated an International Biosphere Preserve, a World Heritage Site, and a Wetland of International Significance. Dedicated in 1947, Everglades National Park contains 150 miles (240 km) of shoreline, the largest stands of pine rocklands and mangrove forests remaining in Florida, and

dozens of small mangrove keys in Florida Bay. Everglades National Park is the only area in the world in which alligators and crocodiles co-exist.

THREATS: *exotic plants, *altered hydrology, *sea-level rise, feral hogs

CONSERVATION ISSUES: The hydrology of the Park has been disrupted for agriculture and flood-control, which has severely impacted its wildlife and the health of Florida Bay. An \$8-billion, 30-year Everglades restoration project recently began, which is projected to involve filling in many drainage canals, reflooding marshes cut off from natural water flow, delivering more water to the park, and acquiring additional acreage. Funding is intended to be split evenly between the Federal and State governments, but the project already is behind schedule. • A management plan, including an intensive prescribed-burning program, is in place. • Water mismanagement! • It is absolutely critical to the ecosystems—and human residents—of South Florida that the Everglades restoration projects are completed. [Need to mention the issue of the 8.5 square-mile area].

NOMINATED BY: Oron Bass, Jr. (U.S. National Park Service)

REFERENCES: +Bass, S. and L. Oberhofer. 1997. Regional nesting report: Everglades National Park. Pages 3–4 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL. • +Bass, S., and J. Osborne. 1998. Regional nesting report: Everglades National Park. Page 5 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL. • +Bass, S., and J. Osborne. 1999. Regional nesting report: Everglades National Park. Page 7 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL. • +Bass, S., and J. Osborne. 2000. Regional nesting report: Everglades National park. Page 8 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL. • +Browder, J.A., O. Bass, J. Gebelein, and L. Oberhoffer. 1997. Regional nesting report: Florida Bay. Page 5 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL. • +Browder, J.A., J. Gebelein, M. Hearon, O. Bass, L. Oberhoffer, and J. Osborne. 1998. Regional nesting report: Florida Bay. Pages 6–7 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL. • +Browder, J.A., O. Bass, J. Osborne, J. Gebelein, L. Oberhoffer, M. Hearon, and T. Jackson. 1999. Regional nesting report: Florida Bay. Pages 8–9 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL. • +Browder, J.A., O. Bass, J. Osborne, J. Gebelein, L. Oberhoffer, T. Jackson, and M. Hearon. 2000. Regional nesting report: Florida Bay. Pages 9–10 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL. • +Lorenz, J. 1999. Regional nesting report: Roseate Spoonbill – Florida Bay. Pages 10–11 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL. • +Sprandel, G.L., J.A. Gore, and D.T. Cobb. 1997. Winter shorebird survey. Final performance report, Florida Game and Fresh Water Fish Commission. Tallahassee, FL. • +Strong, A.M., R.J. Sawicki, and G.T. Bancroft. 1991. Estimating White-crowned Pigeon population size from flight-line estimates. *Journal of Wildlife Management* 58: 156–162. • +Sykes, P.W., Jr. 1983. Snail Kite use of the freshwater marshes of South Florida. *Florida Field Naturalist* 11: 73–88.

WEBSITES: <<http://www.nps.gov/ever>>,

<<http://www.npwrc.usgs.gov/resource/othrdata/chekbird/r4/everglad.htm>>

FISHEATING CREEK WATERSHED

Fisheating Creek FF Project, with acquired acreage known as Fisheating Creek Wildlife Management Area

Glades and Highlands counties

176,760 acres (67,344 ha), including 18,272 acres (7308 ha) acquired, and perpetual conservation easements obtained on an additional 41,606 acres (16,642 ha)

LOCATION: much of northern Glades County and a portion of southeastern Highlands County, generally from the Glades/Highlands county line south to State Road 74 extending east along Fisheating Creek to Lake Okeechobee. The Fisheating Creek IBA is adjacent to the Babcock–Webb IBA to the west, and to the Lake Okeechobee IBA to the east. It is nearly contiguous with parts of the Lake Wales Ridge IBA to the north.

DESCRIPTION: a vast area west of Lake Okeechobee until recently mostly under a single ownership, roughly 26 miles (43 km) east to west. The State purchased the entire creek drainage in 1999 and intends to acquire perpetual conservation easements on >116,000 acres (>46,400 ha) of adjacent uplands. In 2000, an adjacent ranch in Highlands County was added to the Fisheating Creek FF Project. The Wildlife Management Area receives ____ recreationists and ____ hunters annually.

OWNERSHIP: Florida Division of Wildlife (Fisheating Creek Wildlife Management Area) and private owners (unacquired acreage of the Fisheating Creek FF Project, and conservation easements; monitored by the Florida Division of Wildlife)

HABITATS: *longleaf pine flatwoods, *temperate hammock, *dry prairie, *cypress swamp, *riverine, pine plantation, xeric oak scrub, non-native pasture, hardwood swamp, bayhead, freshwater marsh, cattail marsh, lacustrine, artificial, ♦eucalyptus (*Eucalyptus* spp.) plantation

LAND USE: *conservation, *cattle grazing, recreation, hunting, timber production

IBA CATEGORIES: significant populations of Threatened and FCREPA species; significant numbers of raptors; and significant natural habitats

AVIAN DATA: The site is a Strategic Habitat Conservation Area for the Swallow-tailed Kite and Crested Caracara (+Cox et al. 1994), and contains a significant population of Florida Scrub-Jays. The largest Swallow-tailed Kite roost in North America is within the publicly owned area. “Florida” Grasshopper Sparrows previously occurred (and still may be present), and some areas are suitable for relocation efforts. [Is a bird list available?].

Excepting the Swallow-tailed Kite roost, all these data refer only to the 41,606 acres (16,642 ha) that comprise the “Phase 1 conservation easement lands;” totals for the entire property undoubtedly are higher for most, if not all, species.

SPECIES	DATES	NUMBERS	COMMENTS
Swallow-tailed Kite	used annually since discovery in 1986; highest numbers in the early 1990s	up to 2200 birds at once (1840 was peak in 2000); total use estimated at >3000 birds annually	up to 60% of the U.S. population (N)
Swallow-tailed Kite	22 Apr–22 May 2000	77 birds; 25–30 nests likely	4–5% (B)
Short-tailed Hawk	22 Apr–22 May 2000	4 birds; 2 probable nest sites	1% (B)
Crested Caracara	1–4 May 2000	7 pairs	3% (R)
“Florida” Sandhill Crane	26–27 Apr 2000	16 nests	1% (B)
Red-cockaded Woodpecker	14–20 Apr 2000	3 active clusters	<1% (R)
Florida Scrub-Jay	13–28 Apr 2000	71 groups	nearly 2% (R)

Kite data provided by Ken Meyer (Avian Research and Conservation Institute), all other data from +Enge and Douglass (2000). See also +Millsap (1987)

OTHER RESOURCES: the Fisheating Creek Watershed also is a Strategic Habitat Conservation Area for the Florida panther (+Cox et al. 1994), and contains large populations of three plants endemic to central Florida: ♦Edison’s St. John’s-wort (*Hypericum edisonianum*), cutthroatgrass, and ♦nodding pinweed (*Lechea cernua*). • Fisheating Creek is the only undammed tributary leading into Lake Okeechobee, and flows through largely natural areas all the way the Highlands County line, a distance of more than 25 miles (40 km). • At least 31 archaeological sites are known, including many associated with the Fort Center Site Complex of the Belle Glades culture (300–2200 YBP).

THREATS: *human disturbance, *habitat succession, exotic plants, feral hogs, runoff

CONSERVATION ISSUES: Fisheating Creek contains a staging area for Swallow-tailed Kites that is the largest in the United States. Up to **2200** kites have been seen at once, and perhaps 3000 individuals use the roost annually, which represents about 60% of the North American population. By the early 1990s, the roost moved from a cypress swamp to a grove of Australian-pines; disturbance from airboaters was thought to be the cause. • Florida Scrub-Jay habitat is mostly overgrown from long-term fire exclusion. Habitat within the acquisition area should be restored via prescribed fire as soon as possible, and some arrangement for management of scrub in the easement areas should also be attempted. • Reintroduction of “Florida” Grasshopper Sparrows into suitable (and if necessary, restored) dry prairie habitats within the FF Project should be considered. • Invasive exotic plants mostly are limited to the Hoover Dike along Lake Okeechobee along the eastern edge of the site. • Water quality in some canals has been reduced from agricultural runoff. [what about pine and Eucalyptus plantations?].

It is essential that managers of the Fisheating Creek Wildlife Management Area prohibit airboat use of the creek from early June to early September to protect the Swallow-tailed Kite roost from disturbance, and perhaps airboats should be banned from the site at all times.

NOMINATED BY: Bill Pranty (Audubon of Florida)

REVIEWED BY: Ken Meyer (Avian Research and Conservation Institute)

REFERENCES: +Cox, J., R. Kautz, M. MacLaughlin, and T. Gilbert. 1994. *Closing the Gaps in Florida’s Wildlife Habitat Conservation System*. Florida Game and Fresh Water Fish Commission. Tallahassee, FL. • +Enge, K.M., and N.J. Douglass. 2000. Easement documentation report (Volume II: vertebrate surveys) for Fisheating Creek Ecosystem – Phase 1, Glades County, Florida. Florida Fish and Wildlife Conservation Commission. Tallahassee, FL. • +Millsap, B.A. 1987. Summer concentration of American Swallow-tailed Kites at Lake Okeechobee, Florida, with comments on post-breeding movements. *Florida Field Naturalist* 15: 85–92.

J.N. “DING” DARLING NATIONAL WILDLIFE REFUGE

Lee County
6310 acres (2542 ha)

LOCATION: on Sanibel Island off western Lee County, encompassing much of the island north of Sanibel–Captiva Road. [Need more information]

DESCRIPTION: _____ The Refuge was established in 1945 to protect tidal habitats. The Refuge receives _____ recreationists annually. [Need more information]

OWNERSHIP: U.S. Fish and Wildlife Service

HABITATS: *tropical hammock, *mangrove forest, *estuarine, tidal marsh, artificial

LAND USE: *conservation, *recreation

IBA CATEGORIES: significant populations of Special Concern and FCREPA species; significant numbers of wading birds and shorebirds; significant diversity of mangrove forest species; and significant natural habitats

AVIAN DATA: The Refuge is most important for wading birds and shorebirds, with lesser numbers of waterfowl. Neotropical migrants are found in the hammocks in spring and fall.

SPECIES	DATES	NUMBERS	COMMENTS
Brown Pelican	1998–2000	mean of 456 pairs (range of 425–514)	mean of 4% (range of 4–5%) (B)
Snowy Egret	7 Feb 2000	463 birds	(N)
Tricolored Heron	Apr–Aug 1998	135 pairs	(B)
Reddish Egret	Apr 2000	10 birds	1% (N)
White Ibis	15 Aug 2000	1442 birds	3% (N)
Roseate Spoonbill	Jul 2000	66 birds	2% (N)
Black-necked Stilt	Mar 2000	319 birds	(W)
Short-billed Dowitcher	Mar 2000	1370 birds	(W)
Shorebirds	winter 1993–1994	1278 birds	(W)
Mangrove Cuckoo	May 1999	6 birds	(B)
“Florida” Prairie Warbler	9 May 2000	12 birds	(B)
Overall diversity		229 natives 9 exotics	1993 checklist – includes all of Sanibel and Captiva islands

1998 data from +Coppin (1998), 1999 pelican data from +Coppin (1999), 2000 pelican data from +Coppin (2000), cuckoo data provided by Charlie Ewell (Florida Ornithological Society), wood-warbler data provided by Jorge Coppin (U.S. Fish and Wildlife Service), shorebird data from +Sprandel et al. (1997), other data provided by Allison Baker (U.S. Fish and Wildlife Service).

OTHER RESOURCES: The Refuge contains extensive acreage of tropical hammock. • Other listed animals include the indigo snake, American crocodile, all four species of sea turtles, and Florida manatee. A listed plant that occurs onsite is the beautiful pawpaw. • Cultural resources include Calusa Indian mounds.

THREATS: *exotic plants, monofilament fishing line, runoff

CONSERVATION ISSUES: Exotic vegetation is the primary concern. Because of the small refuge staff size, control is difficult. Present goals are to achieve a maintenance level status. • High human use also is an issue, causing disturbance to wildlife. • Monofilament fishing line kills birds at roosting or nesting sites. • Runoff from the road surface could impact water quality in the estuary.

NOMINATED BY: J. Allison Baker (U.S. Fish and Wildlife Service)

REFERENCES: +Coppin, J. 1998. Regional nesting report: J.N. “Ding” Darling National Wildlife Refuge complex. Page 11 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water

management District. West Palm Beach, FL. • +Coppen, J. 1999. Regional nesting report: J.N. “Ding” Darling National Wildlife Refuge complex. Page 14 *in* South Florida wading bird report (D.E. Gawlik, editor). South Florida Water management District. West Palm Beach, FL. • +Coppen, J. 2000. Regional nesting report: J.N. “Ding” Darling National Wildlife Refuge complex. Page 14 *in* South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL. • +Sprandel, G.L., J.A. Gore, and D.T. Cobb. 1997. Winter shorebird survey. Final performance report. Florida Game and Fresh Water Fish Commission. Tallahassee, FL.

WEBSITE: <<http://dingdarling.fws.gov>>,

<<http://www.npwrc.usgs.gov/resource/othrdata/chekbird/r4/dingdarl.htm>>

LAKE OKEECHOBEE

Glades, Hendry, Martin, Okeechobee, and Palm Beach counties

470,000 acres (188,000 ha), including >28,250 acres (>11,300 ha) of marshland

LOCATION: in south-central Florida, bordered by Glades County to the west, Okeechobee County to the north, Martin County to the northeast, Palm Beach County to the southeast and south, and Hendry County to the southwest. Contiguous with the Kissimmee Lake and River IBA to the north and the Fisheating Creek Watershed IBA to the west. Near part of the Loxahatchee River and Slough IBA to the east.

DESCRIPTION: at over 730 square miles (1880 square km), Lake Okeechobee is the second-largest freshwater lake entirely within the Lower 48 states (second only to Lake Michigan). It is quite shallow, with its deepest portions only 20 feet (6 m) deep. Much of the southern and western portions are composed of extensive marshes. Hurricanes in the 1920s swept over the lake, causing it to overflow its banks, which killed over 2000 people at Belle Glade, Okeechobee, and Moore Haven. To prevent this human tragedy from recurring, an earthen dike 35 feet (10.5 m) tall and 140 miles (224 km) long was built from the 1930s to the 1960s, completely encircling the lake. This dike separated the lake from the Everglades, into which it previously drained. Extensive marshes remain inside the dike, along the lake's western half and to a lesser degree in the south and southeast. There is even a development – a campground a marina complex – built on uplands inside the dike. For several decades, water levels in Lake Okeechobee have been manipulated for human uses and the lake now serves primarily as an artificial reservoir. Unnatural water levels, and unseasonable releases of water into the Everglades to protect agricultural lands, have had devastating effects on the lake, the Everglades, and their associated wildlife. The lake receives about 2,500,000 recreationists and 60,000 waterfowl hunters annually.

OWNERSHIP: State of Florida; 28,250 acres (11,300 ha) of marshes in the western portion of the Lake are designated as Audubon Sanctuaries

HABITATS: *lacustrine, *freshwater marsh, cattail marsh, and sawgrass marsh, willow heads, mudflats

LAKE USES: *conservation, *water supply (up to 700 million gallons per day; 2.6 billion liters/day), *recreation, *fishing, hunting, and commercial uses (frogs, alligators, turtles, lotus seeds)

IBA CATEGORIES: significant populations of Endangered, Threatened, FCREPA, and IBA species; significant numbers of aquatic birds, wading birds, and shorebirds; significant natural habitats; and long-term research.

AVIAN DATA: Lake Okeechobee is (or was) one of the two most critical sites in Florida for Snail Kites in Florida, and when water levels are favorable, is used abundantly by wading birds, waterfowl, and shorebirds. [Is a bird list available?].

Current statewide estimates are not applied to the wading bird data because of their age, but the numbers clearly are extremely significant.

SPECIES	DATES	NUMBERS	COMMENTS
Great Egret	1977–1981 (highest monthly count per year)	mean of 5823 birds (range of 2090–13,210)	(N)
	1977–1981 (highest monthly count per year)	mean of 1352 pairs (range of 100–3250)	(B)
Snowy Egret	1977–1981 (highest monthly count per year)	mean of 2285 birds (range of 625–5622)	(N)
	1977–1981 (highest monthly count per year)	mean of 315 pairs (range of 50–750)	(B)
White Ibis	1977–1981 (highest monthly count per year)	mean of 9682 birds (3040–20,525)	(N)
	1977–1981 (highest monthly count per year)	mean of 1910 pairs (range of 0–3050)	(B)
Glossy Ibis	1977–1981 (highest monthly count per year)	mean of 612 birds (range of 156–1155)	(N)
	1977–1981 (highest monthly count per year)	mean of 80 pairs (range of 0–200)	(B)
Wood Stork	1977–1981 (highest monthly count per year)	mean of 920 birds (range of 0–1407)	(N)
Wading birds	1977–1981 (highest monthly count per year)	mean of 19,352 birds (range of 8297–41,519)	(N)
	1977–1981 (highest monthly count per year)	mean of 4081 pairs (range of 1695–6350)	(B)
	Jul 1990	50,000 birds	(N)
Lesser Scaup	20 Apr 1999	between 750–1650 pairs	aerial surveys only (B)
	winters of 1990–1991 to 2000–2001	mean of 70,000 birds (range of 35,000–91,000)	(W)
Waterfowl	1981–1982	11,886 birds	Fisheating Bay only (W)
American Coot	winters of 1995–1996 to 2000–2001	mean of 19,000 birds	(W)
Snail Kite	1973–1980	mean of 47 birds (range of 39–214)	16–33% of then-current numbers (R)
	1996	35 nests	
	1999–2000	0 nests	8% (R)
Bald Eagle	1999–2000	10 nests within 1.5 miles (2.4 km) of the lake	lake mismanagement nearly 1% (B); lake used extensively for foraging
Shorebirds	drought periods 17 Mar 2001	1000–10,000 birds “thousands” of birds	mostly yellowlegs, with hundreds of dowitchers, peeps, and others
Black Skimmer	annually in recent years	>1000 birds	Jaycee Park roost (N)
Long-term research	since the 1940s		wading bird and Snail Kite monitoring by Audubon wardens
Overall diversity		_____ natives _____ exotics	

Waterfowl data from +Johnson and Montalbano (1984), 1977–1981 wading bird data from +Zaffke (1984), 1990 wading bird data from +Smith et al. (1995), 1999 wading bird data provided by Julia Dodge (Florida Fish and Wildlife Conservation Commission), scaup and coot data from annual Midwinter Waterfowl Inventory of the (former) Florida Game and Fresh Water Fish Commission, provided by Paul Gray (Audubon of Florida), kite data

from +Sykes (1983), and provided by Victoria Dreitz and Wiley Kitchens (1996 data; University of Florida), and by Paul Gray (1999–2000 data; Audubon of Florida), eagle GIS coverage provided by Julia Dodge (Florida Fish and Wildlife Conservation Commission), shorebird and skimmer data by Paul Gray (Audubon of Florida); 17 Mar 2001 observation by Dave Goodwin.

OTHER RESOURCES: Islands along the southern portion of Lake Okeechobee support one of only two known populations of the ♦Okeechobee gourd (*Cucurbita okeechobeensis*).

THREATS: *exotic plants, *altered hydrology, *runoff, human disturbance

CONSERVATION ISSUES: “... Lake Okeechobee is managed under a multiple-use concept that includes competing objectives such as: flood control, water supply, protection against saltwater intrusion for wellfields, production of fish and [other] wildlife resources, recreation, and a water source for the Water Conservation Areas and Everglades National Park” +(David 1994a). See +David (1994b) for a comparison of wading bird use of Lake Okeechobee relative to water levels. • Lake Okeechobee is used by the South Florida Water Management District primarily as a water storage reservoir. The optimal water depth is between 12–15 feet (3.6–4.5 m) above mean sea level (MSL), a level that was maintained through the 1970s. However, state agencies maintained extremely high water levels (above 15 feet [4.5 m] MSL) during the late 1990s, which drowned out more than 50,000 acres (20,000 ha) of marshes and willow stands. This action virtually extirpated all wading birds, waterfowl, and Snail Kites +(see Smith et al. 1995). During the drought of 2001, when Snail Kites needed nesting and foraging habitats, the South Florida Water Management District pumped water out of the lake (dropping its level to a record low of 9 feet [2.7 m] MSL) to supply water for the Everglades Agricultural Area immediately to the south. The subsequent pumping of polluted irrigation water back *into* the lake contributed to its rapid refilling, and prevented drowned plant communities from becoming reestablished. • Agricultural runoff from farms along the Kissimmee River and the lake's northern shore has resulted in large amounts of phosphorus (around 200 parts per billion) entering the lake, which has caused massive algae blooms, the spread of cattails over preferred vegetation, increased turbidity, changes from a sand-bottom community to a mud-based community, and other damaging impacts. A management plan has recommended a maximum phosphorus level of about 40 parts per billion.

The agencies responsible for managing Lake Okeechobee claim to manage the lake for its value to wildlife, but their management practices strongly indicate otherwise.

NOMINATED BY: Paul Gray (Audubon of Florida)

REFERENCES: +David, P.G. 1994a. Wading bird nesting at Lake Okeechobee, Florida: An historic perspective. *Colonial Waterbirds* 17:69–77. • +David, P.G. 1994b. Wading bird use of Lake Okeechobee relative to fluctuating water levels. *Wilson Bulletin* 106: 719–732. • +Johnson, F.A., and F. Montalbano. 1984. Selection of plant communities by wintering waterfowl on Lake Okeechobee, Florida. *Journal of Wildlife Management* 48:174–178. • +Smith, J.P., J.R. Richardson, and M.W. Collopy. 1995. Foraging habitat selection among wading birds (Ciconiiformes) at Lake Okeechobee, Florida in relation to hydrology and vegetative cover. *Archives of Hydrobiological Special Issues of Advanced Limnology* [is this the correct journal name?] 45: 247–285. • +Sykes, P.W., Jr. 1983. Snail Kite use of the freshwater marshes of South Florida. *Florida Field Naturalist* 11: 73–88. • +Zaffke, M. 1984. Wading bird utilization of Lake Okeechobee marshes 1977–1981. Technical Publication 84-9. South Florida Water Management District. [West Palm Beach, Florida].

WEBSITE: <http://www.sfwmd.gov/koe_section/2_lakeokee.html>

LITTLE ESTERO LAGOON**Lee County**

<10 acres (<4 ha)

LOCATION: in southwestern Lee County south of Fort Myers, at the very southern tip of Estero Island (Fort Myers Beach)

DESCRIPTION: Located at the southern end of a Gulf barrier island, Little Estero Lagoon is quite dynamic, with frequent changes occurring to the outer beach, dunes, and lagoon inlets. Extensive mudflats are exposed on the lagoon side of the sandbar during low tides. Little Estero Lagoon is designated by the Florida Fish and Wildlife Conservation Commission as a Critical Wildlife Area. The site receives an estimated 36,500 recreationists annually.

OWNERSHIP: City of Fort Myers Beach

HABITATS: *coastal strand, mangrove forest, estuarine

LAND USE: *recreation, conservation

IBA CATEGORIES: significant populations of Threatened, FCREPA, and Watch List species; and significant numbers of shorebirds and larids.

AVIAN DATA: Little Estero Lagoon supports significant populations of resident and migratory shorebirds, and breeding and roosting larids. It is especially important for small plovers.

SPECIES	DATES	NUMBERS	COMMENTS
Snowy Plover	4 Aug 2000	10 birds	2% (R); up to 20 birds in recent years
	Jan–Feb 2001	15 birds	3% (R); “Estero Island”
Wilson's Plover	4 Aug 2000	24 birds	6% (N)
	25 Nov 2000	50 birds	(W)
Piping Plover	25 Nov 2000	30 birds	6% (W)
	Jan–Feb 2001	9 birds	2% (W); “Estero Island”
Red Knot	fall 1999	up to 1000 birds	(M)
Royal Tern	winter 1999–2000	300 birds	(W)
Sandwich Tern	winter 1999–2000	200 birds	(W)
	25 Nov 2000	200 birds	(W)
Least Tern	Jun–Jul 2000	>50 pairs	1% (B)
Black Skimmer	25 Nov 2000	500 birds	(W)
Overall diversity	since 1997	70 natives 2 exotics	List compiled by Charlie Ewell

2001 plover data provided by Patty Kelly (U. S. Fish and Wildlife Service), all other data provided by Charlie Ewell (Florida Ornithological Society)

OTHER RESOURCES: none known

THREAT: *human disturbance

CONSERVATION ISSUES: The upper beach and dunes of Little Estero Lagoon is a designated Critical Wildlife Area, and is posted against human entry during 1 April–31 August. However, human intrusion occurs frequently, causing severe disturbance to beach-nesting and -roosting shorebirds and larids.

NOMINATED BY: Charlie Ewell (Florida Ornithological Society)

LOXAHATCHEE RIVER AND SLOUGH

Atlantic Coastal Ridge CARL–FF Project (13,112 acres [5244 ha], 5971 acres [2388 ha] acquired), **City of West Palm Catchment Area** (14,592 acres; 5836 ha), **Dupuis Reserve** (21,935 acres; 8774 ha), **J.W. Corbett Wildlife Management Area** (60,224 acres; 24,089 ha), **Jonathan Dickinson State Park** (11,573 acres; 4629 ha), **Loxahatchee Slough Natural Area** (10,838 acres; 4335 ha), **Loxahatchee Slough SOR Tract** (1426 acres; 570 ha), and the **Pal-Mar CARL–FF Project** (35,409 acres [14,163 ha], 12,737 acres [5094 ha] acquired). [and Loxahatchee Greenway?]

Martin and Palm Beach counties

169,109 acres (67,634 ha), with 139,296 acres (55,718 ha) acquired

[This IBA needs additional information]

LOCATION: in southern and eastern Martin County and northern Palm Beach County, encompassing several sites south of St. Lucie Canal between Lake Okeechobee and the Atlantic Ocean. Near the Lake Okeechobee IBA to the west and the Northern Everglades IBA to the south.

DESCRIPTION: ____ Visitation to the sites is: ____ recreationists and 12,000 [check this!] hunters for Corbett Wildlife Management Area, ____ recreationists and ____ hunters for Dupuis Reserve, and ____ recreationists for Jonathan Dickinson State Park.

OWNERSHIP: Florida Division of Recreation and Parks (Jonathan Dickinson State Park), Florida Division of Wildlife (J.W. Corbett Wildlife Management Area), South Florida Water Management District (Dupuis Reserve, Loxahatchee Slough SOR Tract), Palm Beach County Department of Environmental Resource Management (Loxahatchee Slough Natural Area), West Palm Beach (City of West Palm Beach Water Catchment Area), and private owners (remaining acreage of the Atlantic Coastal Ridge CARL–FF Project and the Pal-Mar CARL–FF Project)

HABITATS: slash pine flatwoods, freshwater marsh, sawgrass marsh, sand pine scrub, xeric oak scrub, riverine, and lacustrine [need to identify the primary habitats]

LAND USE: ____

IBA CATEGORIES: significant populations of Endangered, Threatened, Special Concern, and FCREPA species; significant numbers of wading birds; and significant natural habitats.

AVIAN DATA: ____ Bird diversity for all sites combined is ____ native species. [Is a bird list available for any site?].

City of West Palm Beach Water Catchment Area:

SPECIES	DATES	NUMBERS	COMMENTS
Great Egret	Apr 1999	600 pairs	4% (B)
Snowy Egret	Apr 1999	300 pairs	(B)
White Ibis	Apr 1999	600 pairs	3% (B)
Wood Stork	Apr 1999	300 pairs	5% (B)
Wading birds	Apr 1999	>2700 pairs	(B)
Snail Kite	12 Jun 1985	372 birds	37% (N)
	May 1989	212 birds	21% (N)
	1991	11 nests	2% (B)

Wading bird data from [where? not in South Florida Wading Bird Report]; Snail Kite data from +Rumbold and Mihalik (1994)

J.W. Corbett Wildlife Management Area

SPECIES	DATES	NUMBERS	COMMENTS
Red-cockaded Woodpecker	1999	8 clusters	<1% (R)

Data from the +USFWS (2000)

Jonathan Dickinson State Park:

SPECIES	DATES	NUMBERS	COMMENTS
Florida Scrub-Jay	1999	25–30 groups	<1% (R)

Data provided by Hank Smith (Florida Division of Recreation and Parks)

Palm Beach County Solid Waste Authority:

SPECIES	DATES	NUMBERS	COMMENTS
Anhinga	9 May 2000	330 nests	(B)
White Ibis	9 May 2000	962 nests	5% (B)
Wood Stork	9 May 2000	172 nests	3% (B)
Wading birds	9 May 2000	2024 nests	(B)

Data from +Mihalik and Sandt (2000)

All sites combined:

SPECIES	DATES	NUMBERS	COMMENTS
Bald Eagle	1998–1999 and 1999–2000	12 nests	1% (B); nests distributed as follows: Dupuis Reserve (7), Corbett Wildlife Management Area (3), Jonathan Dickinson State Park (1), and the City of West Palm Beach Water Catchment Area (1)

Bald Eagle GIS database provided by Julia Dodge (Florida Fish and Wildlife Conservation Commission)

OTHER RESOURCES: ____ The Loxahatchee Greenways Natural Resource Task Force is working to connect the remaining natural areas within the Loxahatchee River watershed.

THREATS: ____

CONSERVATION ISSUES: ____

NOMINATED BY: Bill Pranty (Audubon of Florida) and ____

REVIEWED BY: ____

REFERENCES: +Rumbold, D.G., and M.B. Mihalik. 1994. Snail Kite use of a drought-related habitat and communal roost in West Palm Beach, Florida: 1987–1991. *Florida Field Naturalist* 22: 29–38. • +Mihalik, M.B., and T. Sandt. 2000. Regional nesting report: Solid Waste Authority of Palm Beach County. Page 11 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL. • +USFWS. 2000. Technical/agency draft revised recovery plan for the Red-cockaded Woodpecker (*Picoides borealis*). U.S. Fish and Wildlife Service. Atlanta, GA.

WEBSITE: <<http://www.dep.state.fl.us/parks/district5/jonathandickinson>>

NORTHERN EVERGLADES

Arthur R. Marshall Loxahatchee National Wildlife Refuge (145,787 acres; 58,314 ha), **East Coast Buffer** (15,164 acres; 6065 ha), **Everglades Buffer Strip North** (1155 acres; 462 ha), **Everglades and Francis S. Taylor Wildlife Management Area** (671,831 acres; 268,732 ha), **Holey Land Wildlife Management Area** (35,350 acres; 14,140 ha), **Rotenberger Wildlife Management Area** (27,810 acres; 11,124 ha), and **Talisman property** (51,210 acres; 20,484 ha). Private lands are sought for public acquisition through the **East Everglades CARL–FF Project** (104,615 acres unacquired; 41,846 ha) and **Stormwater Treatment Areas SOR project** (47,630 acres; 19,052 ha, with 45,519 acres acquired; 18,207 ha).

Broward, Miami-Dade, and Palm Beach counties

1,100,552 acres (440,220 ha), with 993,916 acres (397,566 ha) acquired

[This IBA needs additional information]

LOCATION: much of southern and western Palm Beach County, central and western Broward County, and northwestern Miami-Dade County, from the Everglades Agricultural area south to Everglades National Park. Contiguous with the Everglades National Park IBA to the south and the Big Cypress Swamp Watershed IBA to the west. Near the Loxahatchee River and Slough IBA to the north.

DESCRIPTION: a vast area of Everglades marsh and agricultural lands part of Everglades restoration north of, and contiguous with, Everglades National Park. Most of the marsh portions of this IBA are accessible only via airboat. Many of the sites are State-owned Water Conservation Areas that are managed by the Florida Fish and Wildlife Conservation Commission as Wildlife Management Areas. Water Conservation Area 1 is leased to the Federal Government as Arthur R. Marshall Loxahatchee National Wildlife Refuge, and receives 305,000 recreationists and ____ hunters annually.

OWNERSHIP: Florida Division of Wildlife (Holey Land Wildlife Management Area and Rotenberger Wildlife Management Area), South Florida Water Management District (all other publicly owned sites; Everglades and Taylor Wildlife Management Area is managed by Florida Division of Wildlife, and Loxahatchee National Wildlife Refuge is managed by U.S. Fish and Wildlife Service), and private owners (remaining acreage of the East Everglades CARL–FF Project and the Stormwater Treatment Areas SOR Project).

HABITATS: **Arthur R. Marshall Loxahatchee National Wildlife Refuge:** *wet prairie (56,478 acres; 22,591 ha), *sawgrass marsh (28,042 acres; 11,216 ha), *tree islands (21,915 acres; 8766 ha), cattail marshes (5726 acres; 2290 ha), cypress swamp (400 acres; 160 ha), open water (282 acres; 112 ha), and sloughs (272 acres; 108 ha). [need information for the other sites]

LAND USE: *conservation, *recreation, *water storage and supply

IBA CATEGORIES: significant populations of Endangered, Special Concern, and FCREPA species; significant numbers of wading birds; significant natural habitats; [and long-term research?]

AVIAN DATA: Bird diversity of all sites combined is ____ native species. [Is a bird list available for the other WCAs?].

Arthur R. Marshall Loxahatchee National Wildlife Refuge:

SPECIES	DATES	NUMBERS	COMMENTS
Great Egret	1997–2000	mean of 979 nests (range of 516–2037)	mean of 6% (range of 3–13%) (B)
Snowy Egret	1997–2000	mean of 154 nests (range of 15–470)	(B)
Little Blue Heron	1997–2000	mean of 1124 nests (range of 557–1592)	mean of 15% (range of 9–26%) (B)
Tricolored Heron	1997–2000	mean of 1124 nests (range of 147–489)	(B)
White Ibis	1997–2000	mean of 2167 nests (range of 873–5780)	mean of 12% (range of 5–33%) (B)
Wading birds	1997–2000	mean of 5690 nests (range of 2064–11,416)	(B)
Snail Kite	1967–1980	mean of 11 birds (range of 0–45)	up to 44% (1970) of then-current numbers (R)
Overall diversity	Sep 1998 list	252 natives 6 exotics	

Kite data from +Sykes (1983); 1997 data from +Bailey and Jewell (1997), 1998 data from +Bailey et al. (1998), 1999 data from +Thomas et al. (1999), 2000 data from +Thomas et al. (2000)

Water Conservation Areas 2 and 3:

SPECIES	DATES	NUMBERS	COMMENTS
Anhinga	1997–2000	mean of 1095 nests (range of 318–2181)	(B)
Great Egret	1997–2000	mean of 3179 nests (range of 2608–4373)	mean of 20% (range of 17–29%)
Snowy Egret	1997–2000	mean of 904 nests (226–2388)	(B)
Little Blue Heron	1997–2000	mean of 634 nests (range of 209–1311)	mean of 8% (range of 3–21%)
Tricolored Heron	1997–2000	mean of 984 nests (range of 629–1278)	(B)
White Ibis	1997–2000	mean of 7070 nests (range of 535–21,117)	mean of 40% (range of 3–“123”%) (B)
Roseate Spoonbill	1997–2000	mean of 21 nests (range of 10–47)	mean of 2% (range of 1–4%) (B)
Wood Stork	1997–2000	mean of 213 nests (0–500)	mean of 3% (range of 0–9%) (B)
Wading birds	1997–2000	mean of 14,246 nests (range of 6241–29,728)	
Snail Kite	1975–1980	mean of 129 birds (range of 50–421)	up to 80% of then-current numbers (R)

Kite data from +Sykes (1983), 1997 data from +Frederick and Battaglia (1997), 1998 data from +Frederick and Fontaine (1998), 2000 data from +Frederick et al. (2000)

OTHER RESOURCES: ____ Arthur R. Marshall Loxahatchee National Wildlife Refuge represents the last remaining parcel of the Northern Everglades system and contains a 400 acre (160 ha) remnant cypress swamp. It also supports 25 species of dragonflies,

THREATS: ____ [exotic plants, water mismanagement, etc.]

CONSERVATION ISSUES: In 1999, some Florida Legislators proposed breaking the lease of Arthur R. Marshall Loxahatchee National Wildlife Refuge with the Federal Government and selling the Refuge to sugar cane and other agricultural interests (!). Fortunately, this appalling legislation failed to pass.

NOMINATED BY: Bill Pranty (Audubon of Florida)

REFERENCES: +Bailey, M.[M.], and S.D. Jewell. 1997. Regional nesting report: A.R.M. Loxahatchee National Wildlife Refuge. Pages 6–7 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL. • +Bailey, M.M, S.D. Jewell, and W.G. Thomas. 1998. Regional nesting report: A.R.M. Loxahatchee National Wildlife Refuge. Page 9 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL. • +Frederick, P, and D. Battaglia. 1997. Regional nesting reports: Water Conservation Areas 2 and 3. Pages 2–3 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL. • +Frederick, P, and P. Fontaine. 1998. Regional nesting reports: Water Conservation Areas 2 and 3. Pages 3–5 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL. • +Frederick, P, M. Ruane, and B. Hylton. 2000. Regional nesting reports: Water Conservation Areas 2 and 3. Pages 4–5 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL. • +Sykes, P.W., Jr. 1983. Snail Kite use of the freshwater marshes of South Florida. *Florida Field Naturalist* 11: 73–88. • +Thomas, B., L. Brandt, and M.[M]. Bailey. 1999. Regional nesting report: A.R.M. Loxahatchee National Wildlife Refuge. Pages 5–6 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL. • +Thomas, B., M.[M]. Bailey, and L. Brandt. 2000. Regional nesting report: A.R.M. Loxahatchee National Wildlife Refuge. Pages 6–7 in South Florida wading bird report (D.E. Gawlik, editor). South Florida Water Management District. West Palm Beach, FL.

WEBSITES: <<http://loxahatchee.fws.gov>>,

<<http://www.npwrc.usgs.gov/resource/othrdata/chekbird/r4/loxahatc.htm>>

PINE ISLAND NATIONAL WILDLIFE REFUGE

Lee County

602 acres (240 ha) of uplands

LOCATION: in Pine Island Sound in northwestern Lee County

DESCRIPTION: 17 small keys between Cayo Costa and Pine Island. Four of the islands (Broken Island, Hemp Key, Pine Island Bird Key, and Useppa Bird Key) support or have supported colonial water bird colonies.

OWNERSHIP: U.S. Fish and Wildlife Service (all islands except Hemp Key) and private owners (Hemp Key)

HABITATS: *mangrove forest, tropical hammock, estuarine

LAND USE: *conservation, recreation, private (Hemp Key)

IBA CATEGORIES: significant populations of Special Concern species; significant numbers of breeding wading birds; and significant natural habitats

AVIAN DATA: islands in the Refuge support significant breeding populations of colonial water birds.

SPECIES	DATES	NUMBERS	COMMENTS
Brown Pelican	May 1986	848 pairs	(R)
	20 Jun 1996	682 pairs	7% (R)
Snowy Egret	May 1986	145 pairs	(R)
	29 Jun 1996	138 pairs	(R)
Little Blue Heron	May 1986	40 pairs	(R)
	29 Jun 1996	96 pairs	1% (R)
Tricolored Heron	May 1986	280 pairs	(R)
	29 Jun 1996	266 pairs	(R)
Reddish Egret	May 1986	7 pairs	(R)
	29 Jun 1996	13 pairs	3% (R)
White Ibis	May 1986	558 pairs	(R)
	29 Jun 1996	520 pairs	3% (R)
Wading birds	May 1986	2034 pairs	(B)
	20 Jun 1996	1779 pairs	(B)

Data provided by Rich Paul (Audubon of Florida)

OTHER RESOURCES: Hemp Key contains an Indian mound

THREATS: monofilament fishing line, raccoons

CONSERVATION ISSUES: except for Hemp Key, all current rookery islands are posted against human intrusion. • Monofilament fishing line and raccoons should be removed as necessary.

NOMINATED BY: Bill Pranty and Rich Paul (Audubon of Florida)

ROOKERY BAY NATIONAL ESTUARINE RESEARCH RESERVE

Collier County

110,000 acres (44,000 ha) – there is some boundary overlap with Ten Thousand Islands National Wildlife Refuge

LOCATION: in southwestern Collier County, from south of Naples, surrounding Marco Island, and extending east to just west of Chokoloskee. The Reserve boundary includes submerged portions of Ten Thousand Island National Wildlife Refuge, which is being maintained as a separate IBA. This IBA is contiguous with the Everglades National Park IBA to the east and the Big Cypress Ecosystem IBA to the north.

DESCRIPTION: a large area of saline and wetland habitats protecting significant coastal habitats in the region. The Reserve includes the Rookery Bay Colony, which are two small keys designated by the Florida Fish and Wildlife Conservation Commission as a Critical Wildlife Area. Briggs Nature Center is part of the Research Reserve. The Reserve receives an estimated 10,000 recreationists annually.

OWNERSHIP: Florida Office of Coastal and Aquatic Managed Areas; parts are co-managed with the U.S. Fish and Wildlife Service. Briggs Nature Center is run by The Conservancy.

HABITATS: *slash pine flatwoods, *temperate hammock, *mangrove forest 36,030 acres; 14,412 ha), *tidal marsh, *estuarine, *open water, tropical hammock, xeric oak scrub, cypress swamp, freshwater marsh, cattail marsh, sawgrass marsh, riverine, lacustrine, coastal strand, seagrass beds

LAND USE: *conservation, recreation, environmental education

IBA CATEGORIES: significant populations of Threatened and FCREPA species; significant numbers of wading birds and larids; significant natural habitats; long-term research

AVIAN DATA: the Reserve supports significant populations of wading birds, shorebirds, and larids (especially at Cape Romano), and probably support upland species such as Mangrove Cuckoos, Black-whiskered Vireos, and “Florida” Prairie Warblers (e.g., see the Ten Thousand Islands National Wildlife Refuge IBA, pages 250–251). A small patch of xeric oak scrub that was never known to be occupied naturally by Florida Scrub-Jays has served as a translocation experiment since 1989. This population, which numbers two pairs, has required additional transplanted birds from Archbold Biological Station to be maintained. Ted Below has conducted bi-weekly dusk roost counts of the Rookery Bay Colony islands since 1977.

SPECIES	DATES	NUMBERS	COMMENTS
Brown Pelican	1977–2002	mean of 102 birds (range of 0–727)	(N); Rookery Bay Colony
	1982–2002	mean of 153 birds (range of 2–1072)	(N); Cape Romano
Great Egret	1977–2002	mean of 98 birds (range of 0–519)	(N); Rookery Bay Colony
Snowy Egret	1977–2002	mean of 206 birds (range of 0–727)	(N); Rookery Bay Colony
	1984–2002	mean of 70 pairs (range of 1–202)	(B); Rookery Bay Colony
Little Blue Heron	1977–2002	mean of 155 birds (range of 0–468)	(N); Rookery Bay Colony
Tricolored Heron	1977–2002	mean of 115 birds (range of 0–979)	(N); Rookery Bay Colony
	1984–2002	mean of 78 pairs (range of 10–176)	(B); Rookery Bay Colony
White Ibis	1977–2002	mean of 920 birds (range of 0–2543 birds)	(N); Rookery Bay Colony
Glossy Ibis	1998–2002	mean of 90 birds	(N); Rookery Bay Colony

Wading birds	1977–2002	(range of 0–319) mean of 2000 birds (range of 89–4455 birds	(N); Rookery Bay Colony
Osprey	1994–2001	mean of 33 pairs (range of 22–40 pairs)	range of 2% (B); Reserve-wide survey
American Oystercatcher	1982–2002	mean of 49 birds (range of 0–156)	(N); Cape Romano
Snowy Plover	summer 2001	2 pairs	1% (R)
	winter 2001–200	12 birds	(N)
Wilson's Plover	13 May 2002	3 pairs	1% (R);
	1974–2002	mean of 5 birds (range of 0–57)	(N); Rookery Bay–Big Marco Pass
	13–14 May 2002	5 pairs	2% (B); Key Island and Second Chance Island
Red Knot	1974–2002	mean of 94 birds (range of 0–1211)	(N); Rookery Bay–Big Marco Pass
Shorebirds	1982–2002	mean of 5081 birds (range of 173–15,854 birds)	(N); Cape Romano
Least Tern	1999–2002	mean of 359 pairs (range of 166–566)	mean of 8% (range of 4–14%; B); Second Chance Island
	1974–2002	mean of 61 birds (range of 0–1170)	(N); Rookery Bay–Big Marco Pass
Royal Tern	1982–2002	mean of 787 birds (range of 23–3812)	(N); Cape Romano
Sandwich Tern	1982–2002	mean of 284 birds (range of 0–4767)	(N); Cape Romano
Terns and skimmers	1982–2002	mean of 1071 birds (range 23–8579)	(N); Cape Romano
Black Skimmer	1982–2002	mean of 71 birds (range of 0–412)	(N); Cape Romano
Long-term research	1974–2002		(N); 824 survey of Rookery Bay– Big Marco Pass
	1977–2002		(N); 722 surveys of Rookery Bay Colony
	1982–2002		(N); 207 surveys of Cape Romano
	1984–2002		(B); 18 annual censuses of Rookery Bay Colony
Overall diversity	May 2002 list	224 natives 4 exotics	

All long-term data provided by Ted Below (Audubon of Florida); other data provided by Beverly Anderson (Florida Office of Coastal and Aquatic Managed Areas) and Ricardo Zambrano (Florida Fish and Wildlife Conservation Commission)

OTHER RESOURCES: Along with Everglades National Park and Ten Thousand Islands National Wildlife Refuge, Rookery Bay National Estuarine Research Reserve is part of the one of the most significant and pristine mangrove ecosystems in the U.S. • The Florida Department of Environmental Protection has designated all tidal waters within the Reserve as Outstanding Florida Waters. • Other listed species supported by the Reserve include ♦ golden leather fern (*Acrostichum aureum*), ♦ clamshell orchid (*Prosthechea cochleata*), ♦ Florida thatch palm (*Thrinax radiata*), ♦ Florida tree snail (*Liguus fasciatus*), sea turtles, gopher tortoise, ♦ mastiff bat (*Eumops glaucinus*), and Florida manatee. • Calusa Indians inhabited the area in the 1600s, and numerous shell mounds are still present. The Reserve also contains significant archaeological material from six post Civil War homesteads.

THREATS: *offsite development, *human disturbance, *exotic plants, altered hydrology, runoff, feral hogs, monofilament fishing line

CONSERVATION ISSUES: Rookery Bay National Estuarine Research Reserve: Increasing human development in the Naples area is creating additional human disturbance problems within the Reserve, especially areas closest to Marco Island. Efforts are underway to minimize disturbance through the construction of trails and boardwalks, informational signage, and public workshops. The larid colony at Cape Romano is closed to public access, posted, and monitored weekly. • Long-term monitoring stations assess water quality from offsite developments and agricultural areas. • Reserve staff and other agencies are pursuing acquisition of private inholdings. • Large-scale removal programs for exotic plants, especially Australian-pine, Brazilian pepper, and ♦latherleaf (*Colubrina asiatica*), are underway. • Native habitats are prescribed burned. **Rookery Bay Colony Islands:** Wading birds are disturbed by boaters and recreational fishermen, and the latter often leave monofilament fishing line in the mangroves. • Although the islands are a designated Critical Wildlife Area, there is no known management plan.

NOMINATED BY: Beverly Anderson (Florida Office of Coastal and Aquatic Managed Areas) and Ted Below (Audubon of Florida)

SANIBEL LIGHTHOUSE PARK

Lee County
5 acres (2 ha)

LOCATION: in southwestern Lee County, at the extreme eastern end of Sanibel Island

DESCRIPTION: a small recreational and historical park

OWNERSHIP: City of Sanibel Parks and Recreation

HABITATS: *tropical hammock, mangrove forest, Australian-pine forest, artificial

LAND USE: *recreation, conservation

IBA CATEGORIES: significant numbers of Neotropical migrants; and significant diversity of wood-warblers

AVIAN DATA: Though small, the Park has attracted large numbers of Neotropical migrants, especially after storms.

SPECIES	DATES	NUMBERS	COMMENTS
Common Nighthawk	16 Sep 2000	1000 birds	(M)
Chestnut-sided Warbler	23 Apr–3 May 2000	12 birds	(M)
Blackburnian Warbler	16–17 Sep 2000	>100 birds	(M)
Wood-warbler diversity		33 species	(M)
Overall diversity		___ natives ___ exotics	

Data provided by Charlie Ewell (Florida Ornithological Society)

OTHER RESOURCES: The Sanibel Lighthouse was built in 1884 and is the Island’s oldest standing structure.

THREATS: *development, human disturbance, exotic plants

CONSERVATION ISSUES: [development, exotic plants, human disturbance]

NOMINATED BY: Charlie Ewell (Florida Ornithological Society)

SOUTHERN ATLANTIC MIGRANT STOPOVER

Hugh Taylor Birch State Park (180 acres; 72 ha), **John U. Lloyd Beach State Park** (253 acres; 101 ha), and **Spanish River Park** (94 acres; 37 ha)

Broward and Palm Beach counties

527 acres (210 ha)

LOCATION: various; all three sites are on barrier islands fronting the Atlantic Ocean. **Spanish River Park** is located near Boca Raton in Palm Beach County, and extends west to the Intracoastal Waterway. **Hugh Taylor Birch State Park** is immediately east of downtown Fort Lauderdale in Broward County, while **John U. Lloyd Beach State Park** is about 5 miles (8 km) to the south.

DESCRIPTION: all sites are small coastal parks in a massively urbanized region of Florida. These small habitat oases offer perhaps the only significant coastal stopover habitats for Neotropical migrants in Broward and Palm Beach counties. The parks are heavily infested with exotic species, which actively are being removed at Spanish River Park. Annual visitation of the parks are: 265,000 for Birch, 600,000 for Lloyd, and 17,500 for Spanish River.

OWNERSHIP: Florida Division of Recreation and Parks (Hugh Taylor Birch State Park and John U. Lloyd Beach State Park), City of Boca Raton (Spanish River Park)

HABITATS: **Hugh Taylor Birch State Park:** *tropical hammock, *mangrove forest, *freshwater marsh, *coastal strand, fields, artificial. **John U. Lloyd Beach State Park:** *mangrove forest, coastal strand, tropical hammock, fields, artificial. **Spanish River Park:** *tropical hammock, mangrove forest, coastal strand, artificial

LAND USE: **Hugh Taylor Birch State Park:** *recreation, conservation, **John U. Lloyd Beach State Park:** *recreation, conservation, **Spanish River Park:** *conservation, *recreation

IBA CATEGORIES: significant numbers and diversity of Neotropical migrants; and significant natural habitats.

AVIAN DATA: All sites are used extensively by Neotropical migrants in spring and fall, and some of these species winter in small numbers. The parks also attract various West Indian landbirds (i.e., Ruddy Quail-Dove, La Sagra's Flycatcher, Cuban Pewee, Bahama Mockingbird, and Western Spindalis); the Bahamas are as few as 65 miles (104 km) away. The beach at Lloyd State Park is used by shorebirds and larids. Bird diversity for all sites combined is 241 native and 9 exotic species.

Hugh Taylor Birch State Park:

SPECIES	DATES	NUMBERS	COMMENTS
Red-eyed Vireo	18 Sep 2000	>100 birds	(M)
Northern Parula	18 Sep 2000	>50 birds	(M)
Blackpoll Warbler	25 Apr 2000	>200 birds	(M)
Black-throated Blue Warbler	25 Apr 2000	>75 birds	(M)
Cape May Warbler	25 Apr 2000	>75 birds	(M)
Ovenbird	18 Sep 2000	>50 birds	(M)
American Redstart	25 Apr 2000	>100 birds	(M)
Common Yellowthroat	25 Apr 2000	>250 birds	(M)
Wood-warbler diversity	Mar 2000 list	37 species	(M)
Overall diversity	Mar 2000 list	207 natives 9 exotics	

Observations of Wally George published in *Florida Field Naturalist*, diversity data from the park list

John U. Lloyd Beach State Park:

SPECIES	DATES	NUMBERS	COMMENTS
Overall diversity		156 natives 7 exotics	

List compiled by Susan Epps, with contributions by Jocie Baker

Spanish River Park:

SPECIES	DATES	NUMBERS	COMMENTS
Black-and-white Warbler	17 Oct 1995	90 birds	(M)
Worm-eating Warbler	6 Apr 1995	20 birds	(M)
Ovenbird	5 Sep 1993	75 birds	(M)
Vireo diversity		8 species	(M)
Wood-warbler diversity		38 species	(M)
Overall diversity		182 natives 3 exotics	

All data supplied by Brian Hope, much of it published in *Florida Field Naturalist*.

OTHER RESOURCES: **Hugh Taylor Birch State Park** contains a rare coastal dune–lake community with several listed plant species. • **Hugh Taylor Birch's** former home now houses the park visitor center • **John U. Lloyd Beach State Park** represents one of the last areas in Broward County with native coastal habitats. The beach is important for nesting sea turtles • **Spanish River Park** supports some of the only remaining coastal strand and tropical hammock habitats along the barrier island in Palm Beach County.

THREATS: **Hugh Taylor Birch State Park:** *offsite development, *exotic plants, *feral cats, habitat succession, runoff, water quality • **John U. Lloyd Beach State Park:** *offsite development, *human disturbance, *exotic plants, habitat succession, erosion • **Spanish River Park:** *exotic plants

CONSERVATION ISSUES: **Hugh Taylor Birch State Park:** Exotic plants are feral cats are removed • A 40-acre (16-ha) mangrove restoration–enhancement project began in January 2001; intense coastal development has removed most of the mangrove forests that previously occurred in Palm Beach County. Storm-water runoff affecting water quality is a minor concern • **John U. Lloyd Beach State Park:** Broward County proposes to “claim” the northern third of the park to allow for the expansion of Port Everglades to increase cruise-ship tourism, an attempt strongly opposed by the State and Audubon. • The county also wants to add 250 feet (75 m) of sand to the beach, which is expected to severely impact the first reef immediately outward of the beach. • Over 90% of the park contains exotic vegetation, mostly Australian-pines and Brazilian pepper. In fall 1999, Australian-pines were removed from the beach, which resulted in rapid recruitment of native vegetation. Brazilian pepper is controlled as time allows, but control efforts are insufficient. • **Spanish River Park:** Parts of the park are infested with Brazilian pepper and Australian-pines. Some areas have already been cleared of exotics and replanted with native tropical hardwoods species. The program is continuing. • Future modifications to the park for maintenance or recreational purposes should be designed for maximum compatibility with the park's natural resources. A management plan has been created.

NOMINATED BY: **Hugh Taylor Birch State Park:** Jim Higgins (Florida Division of Recreation and Parks), **John U. Lloyd Beach State Park:** Susan Epps (____), **Spanish River Park:** Steve Bass (Gumbo Limbo Nature Center)

REVIEWED BY: Jocie Baker and Wally George

WEBSITE: <<http://www.dep.state.fl.us/parks/district5/johnlloydbeach>>, <<http://www.dep.state.fl.us/parks/district5/hughtaylorbirch>>

TEN THOUSAND ISLANDS NATIONAL WILDLIFE REFUGE

Collier County
35,000 acres (14,000 ha)

LOCATION: in southwestern Collier County approximately 20 miles (32 km) southeast of Naples, from U.S. Highway 41 south to the Gulf of Mexico. The western boundary is County Road 92 (except for a small parcel west of this road) and the eastern boundary is just west of Faka Union Canal. The Refuge surrounds Collier–Seminole State Park on three sides, overlays a portion of Cape Romano–Ten Thousand Islands State Aquatic Preserve, and is just west of Everglades National Park. Contiguous with the Big Cypress Swamp Ecosystem IBA to the north and the Rookery Bay National Estuarine Research Reserve to the west, and near the Everglades National Park IBA to the east and southeast.

DESCRIPTION: Encompassing the northern Ten Thousand Islands region of southwest Florida, the Refuge was established in 1996 to protect its unique subtropical estuarine ecosystem and its wildlife resources.

OWNERSHIP: U.S. Fish and Wildlife Service

HABITATS: *mangrove forest, *tidal marsh, *estuarine, tropical hammock, freshwater marsh, cattail marsh, sawgrass marsh, riverine, lacustrine, coastal strand

LAND USE: *conservation, recreation, hunting

IBA CATEGORIES: significant populations of Threatened, Special Concern, and FCREPA species; significant numbers of wading birds; complete diversity of mangrove forest species; and significant natural habitats

AVIAN DATA: The Refuge supports very large numbers of wading birds, and undoubtedly significant numbers of mangrove-breeding species. “Cuban” Yellow Warblers reach their northwestern-most range at the Refuge.

SPECIES	DATES	NUMBERS	COMMENTS
Snowy Egret	16 Sep 1999	636 birds	(N)
Tricolored Heron	6 Aug 2000	793 birds	(N)
White Ibis	Jun–Sep 2000	up to 8242 birds	20% (N)
Wading birds	Aug 2000	10,224 birds	(N)
Least Tern	summer 2000	>125 birds	1% (N)
Royal Tern	5 May 2000	190 birds	1% (N)
Mangrove Cuckoo	7–26 May 2000	64 birds	(B)
Black-whiskered Vireo	7–26 May 2000	103 birds	(B)
“Florida” Prairie Warbler	7–26 May 2000	53 birds	(B)
Overall diversity	since 1996	187 natives 5 exotics	

Data provided by Terry Doyle (U.S. Fish and Wildlife Service)

OTHER RESOURCES: The Refuge is part of a larger Ten Thousand Islands system, which is one of the largest and most pristine mangrove systems in the Western Hemisphere. +Odum and McIvor (1990) refer to the region as “part of the most significant wilderness area” in Florida. The Refuge supports several Endangered and Threatened species, including the Florida manatee. • The Calusa Indians were known to inhabit the region in the 17th century, and were present when the Spaniards explored the area. Indian artifacts have been found throughout the Refuge, primarily in the hardwood hammocks.

THREATS: *altered hydrology, exotic plants

CONSERVATION ISSUES: Perhaps the most significant short- and long-term impact to the Refuge is the South Golden Gate Estates (SGGE) Restoration Project. The SGGE is an area of about 60,000 acres (24,000 ha) that is part of the bankrupt Gulf of America Corporation's (GAC) massive planned

development. From 1968 through 1971, GAC excavated a series of canals that drastically drained the area and changed its ecology. Prior to development, the area was characterized by seasonal flooding and broad, slow-moving sheet flow that served as the headwaters of the Ten Thousand Islands system. Today, 40 miles (64 km) of canals intercept large volumes of surface and groundwater flow and quickly divert them into Faka Union Bay, thus over-draining the area and damaging the ecology of the bay. The State now is buying back hundreds of 5-, 10-, and 20-acre (2-, 4-, and 8-ha) lots to create Picayune Strand State Forest. The South Florida Water Management District's "Hydrologic Restoration of Southern Golden Gate Estates Conceptual Plan" proposes to restore the hydrology and sheet water flow to the SGGE area by blocking canals, removing roads, and pumping water out of canals. The plan cannot begin all the private lots are purchased or condemned. • Several invasive exotic plants occur on the Refuge, including Brazilian pepper, Australian-pine, and latherleaf. They are controlled as needed. • A variety of recreational and commercial uses (e.g., commercial and sport fishing, crabbing, and waterfowl hunting) occur on the Refuge, which may create excessive human disturbance. Ecotourism includes canoe camping trips, boat cruises, and shelling trips. • Ten Thousand Islands National Wildlife Refuge has an approved Comprehensive Conservation Plan that provides the framework for management for the next 15 years. Included within the Plan are several proposed reductions to address some of the above concerns.

NOMINATED BY: Terry Doyle (U.S. Fish and Wildlife Service)

REFERENCE: +Odum, W.E., and C.C. McIvor. 1990. Mangroves. Pages 517–548 in *Ecosystems of Florida* (R.L. Myers and J.J. Ewel, editors). University of Central Florida Press. Orlando, FL.

WEBSITE: <<http://www.npwrc.usgs.gov/resource/othrdata/chekbird/r4/tenthou.htm>>