

U.S. Fish & Wildlife Service

# Pelican Island

*Honoring a Legacy*



# A Refuge to Remember

*It all began with **one man and one boat**, protecting pelicans on a tiny five-acre island in Florida. From that humble beginning arose the world's largest and most diverse network of lands dedicated to the protection and management of a vast array of wildlife. America's National Wildlife Refuge System now encompasses over 93 million acres on over 500 refuges.*

*In 1903 Pelican Island became the center of an epic battle between conservationists and feather hunters. After years of relentless slaughter, many of our most majestic birds were at the brink of extinction. Pelican Island was the last breeding ground for brown pelicans along the entire east coast of Florida and it was here that a stand was made.*

*Urged on by a German immigrant named Paul Kroegel, many prominent people rallied around this small island to spearhead the protection of the last remaining areas vital to the survival of wildlife. Under the leadership of President Theodore Roosevelt, wildlife protection became a national interest, and for the first time, was based upon wildlife's intrinsic worth rather than its utilitarian value. With the stroke of a pen, on March 14, 1903, Teddy Roosevelt set in motion a commitment to the preservation of our wildlife heritage and, in so doing, prevented many species from certain extinction.*

*Pelican Island National Wildlife Refuge, the birthplace of the magnificent National Wildlife Refuge System, is threatened once again. This historic jewel is losing its luster as it falls under the shadow of development. Waves continue to erode away the island's shoreline and alien plants are invading precious habitat. Yet Pelican Island National Wildlife Refuge, 5000 acres larger and almost 100 years older, still operates with just **one man and one boat**.*



# A Refuge at Risk

*The challenges facing our first national wildlife refuge are symptomatic of the challenges facing our entire National Wildlife Refuge System. Encroaching development, degradation of habitat, infestation by exotic species, and insufficient funding and staffing threaten to undermine the very purposes for which all refuges were created. Pelican Island NWR can set the stage for a renewed commitment to our refuges that will benefit wildlife for the next hundred years, and beyond. We can avoid losing the cornerstone of our wildlife heritage by taking these important steps:*



**Land acquisition** for an upland buffer to prevent condos from towering over a threatened rookery



**Shoreline stabilization** on Pelican Island to stop erosion and prevent further loss of nesting habitat



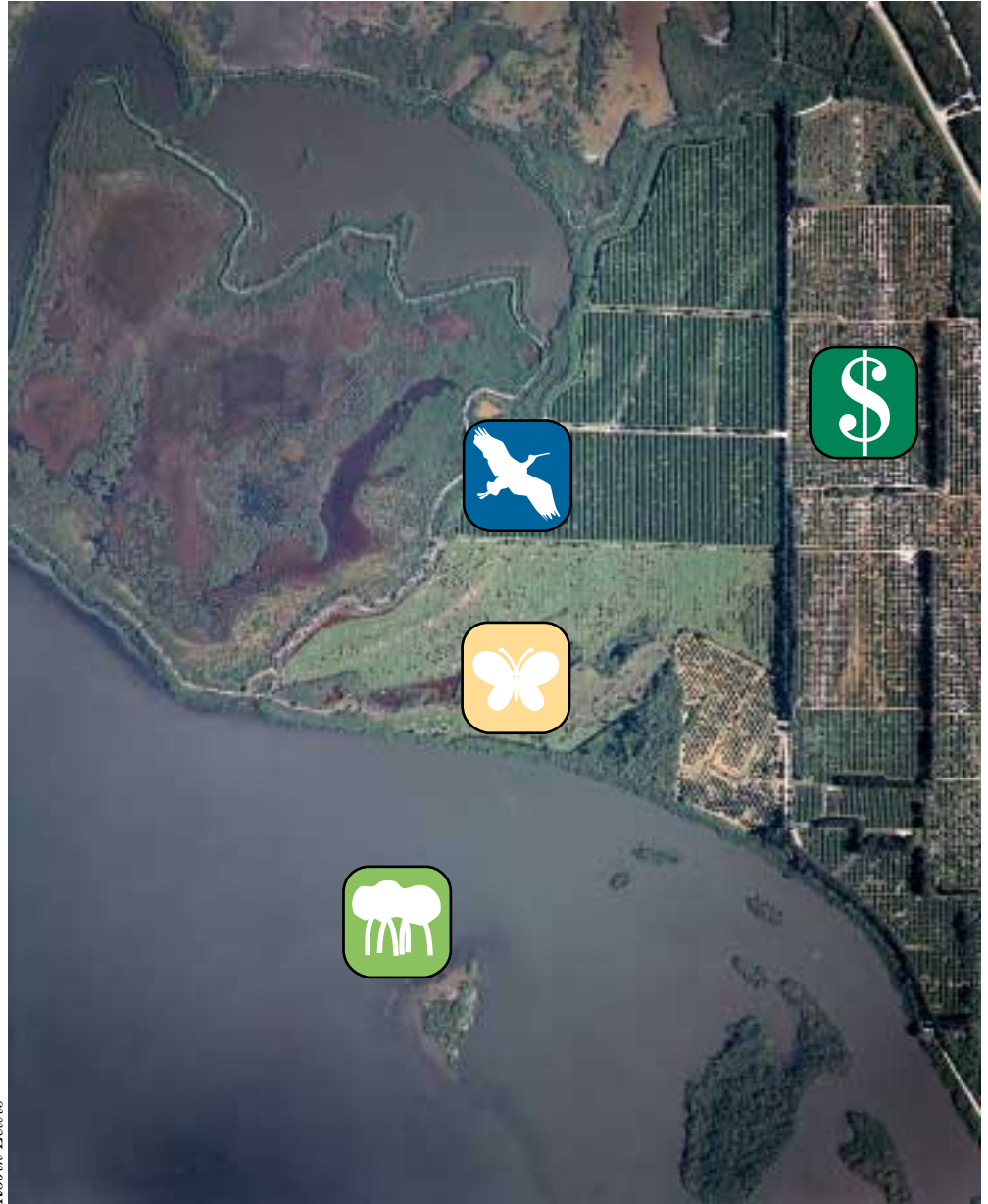
**Habitat restoration** on the refuge to remove invasive plants, increase foraging opportunities for wading birds, and provide habitat for other wildlife.



**Visitor facilities** to tell the story of Pelican Island and provide wildlife viewing opportunities for the public.

The target date for meeting all of these objectives is March 14, 2003, the centennial anniversary of the birth of the National Wildlife Refuge System.

Robin Lennis



# Land Acquisition

## *Filling the Gaps*

Our first national wildlife refuge has expanded over the years, each time in response to threats.

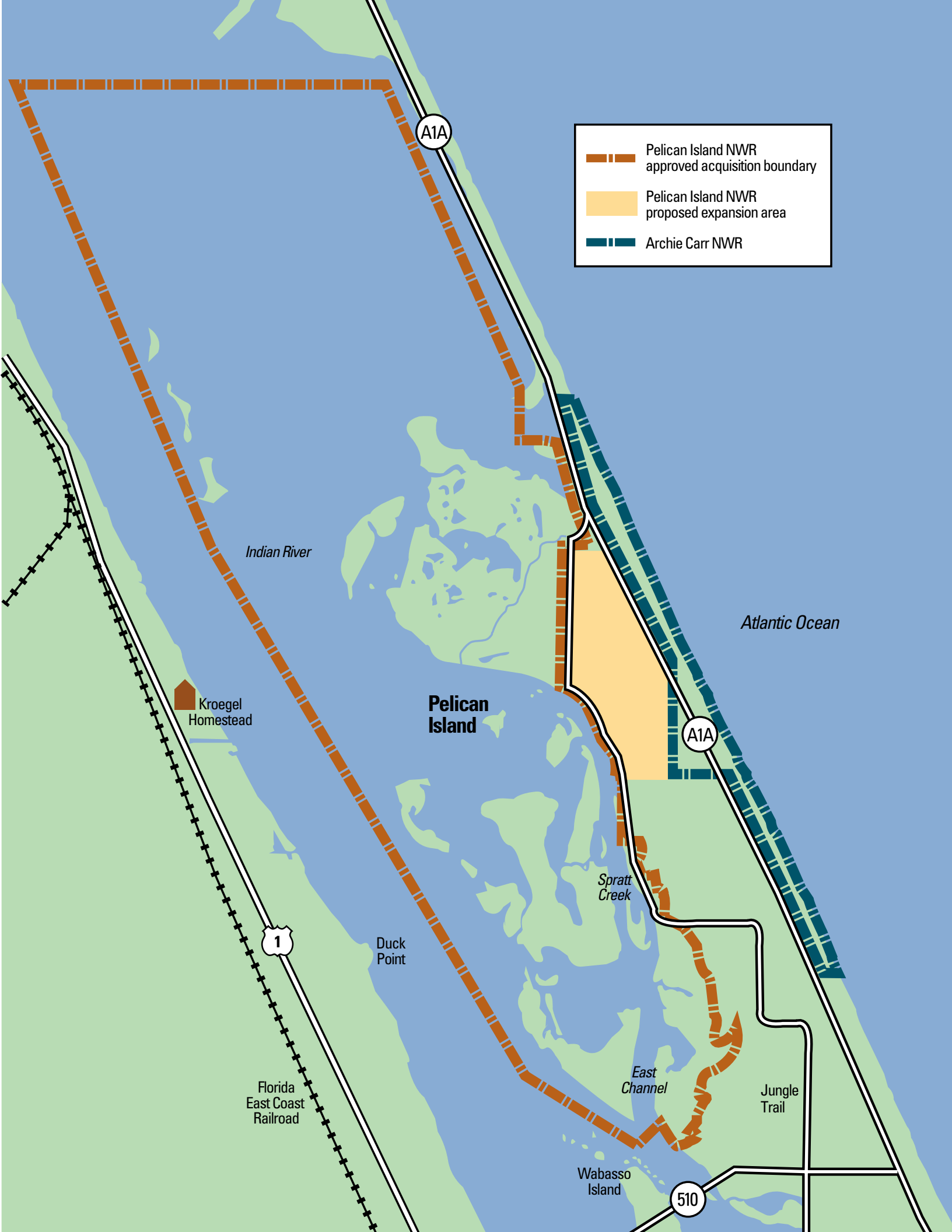
In 1909, President Theodore Roosevelt added four small neighboring islands to the refuge because the pelicans would nest there when conditions were unfavorable on Pelican Island.




In 1968, the refuge was enlarged to protect the other neighboring islands and wetlands that were threatened by fill and construction.

Yet today, the eastern flank of the refuge remains exposed as development advances toward the fragile shoreline overlooking Pelican Island.

Land acquisition along the eastern boundary of Pelican Island National Wildlife Refuge will not only provide an effective buffer from approaching development, but will also establish a connection with Archie Carr National Wildlife Refuge.





-  Pelican Island NWR approved acquisition boundary
-  Pelican Island NWR proposed expansion area
-  Archie Carr NWR

Indian River

Atlantic Ocean

**Pelican Island**

Kroegel Homestead

A1A

1

Duck Point

Spratt Creek

Florida East Coast Railroad

East Channel

Jungle Trail

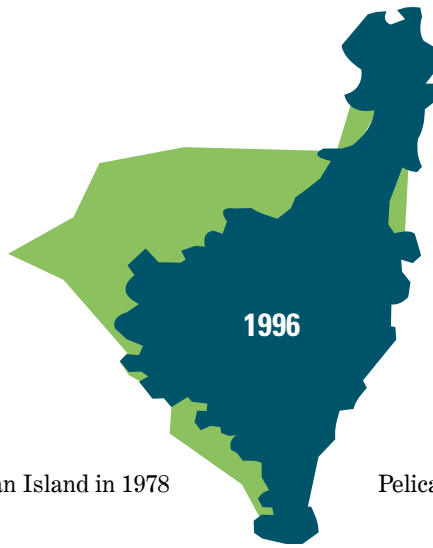
Wabasso Island

510

# Shoreline Stabilization



Pelican Island in 1943



Pelican Island in 1978



Pelican Island in 1988



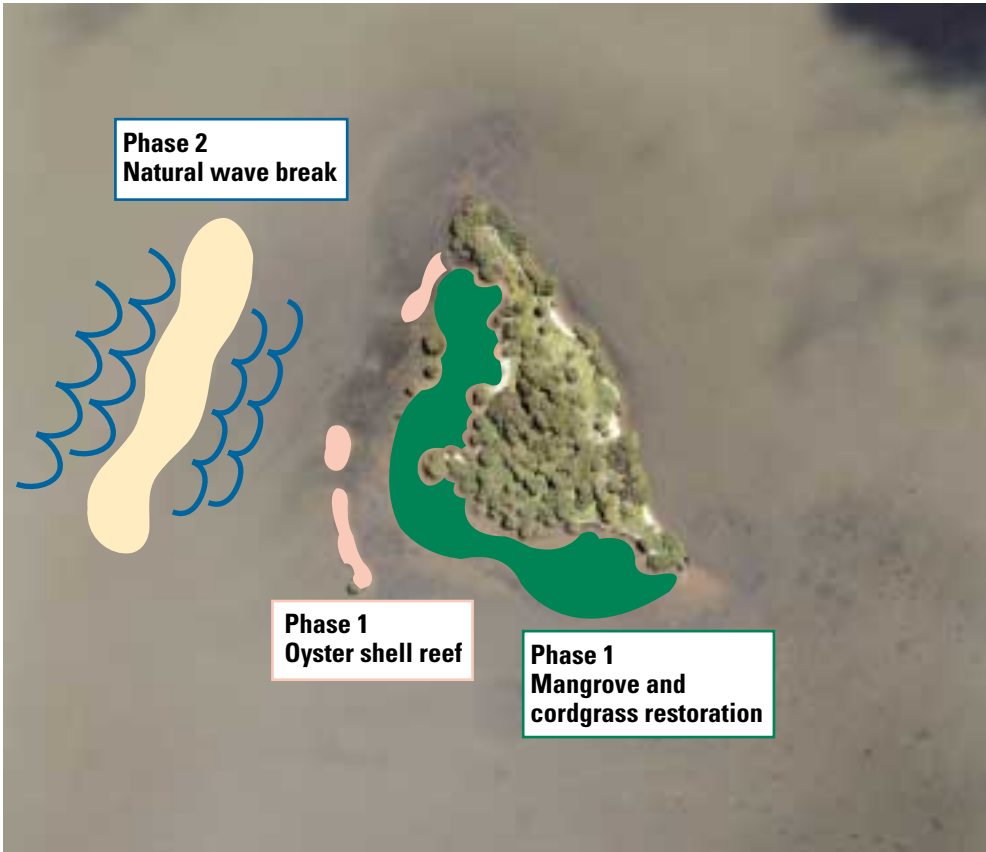
Pelican Island in 1961

## *The Incredible Shrinking Island*

Pelican Island has changed dramatically over the years. In 1858, it was lush with mangroves and populated with many varieties of nesting birds. In 1903, after several hard winters and a massive mangrove die-off, it became a barren sand spit populated with only ground-nesting brown pelicans. The size of the island changed little until recently. Since 1943, the island has decreased in size by more than 50%.

Pelican Island in 1999





## Stemming the Tide of Erosion

The shoreline restoration plan for Pelican Island involves two phases:

### Phase 1

Planting smooth cordgrass and red mangroves along the eroded northern and western shorelines, and anchoring bags of oyster shell around stressed mangroves; and

### Phase 2

Creating a natural wave break consisting of either a coquina reef, oyster bar, or sand bar offshore that would reduce or deflect wave energy from the island, and provide habitat for shorebirds.



Volunteers help staff plant smooth cordgrass as part of Phase 1.

# Habitat Restoration

## *Eliminating Exotics*

The restoration plan for the refuge buffer involves the removal of exotic plants, such as citrus trees, Brazilian pepper, Australian pines, and Johnson grass.



Robin Lewis

citrus grove



USFWS

Brazilian pepper



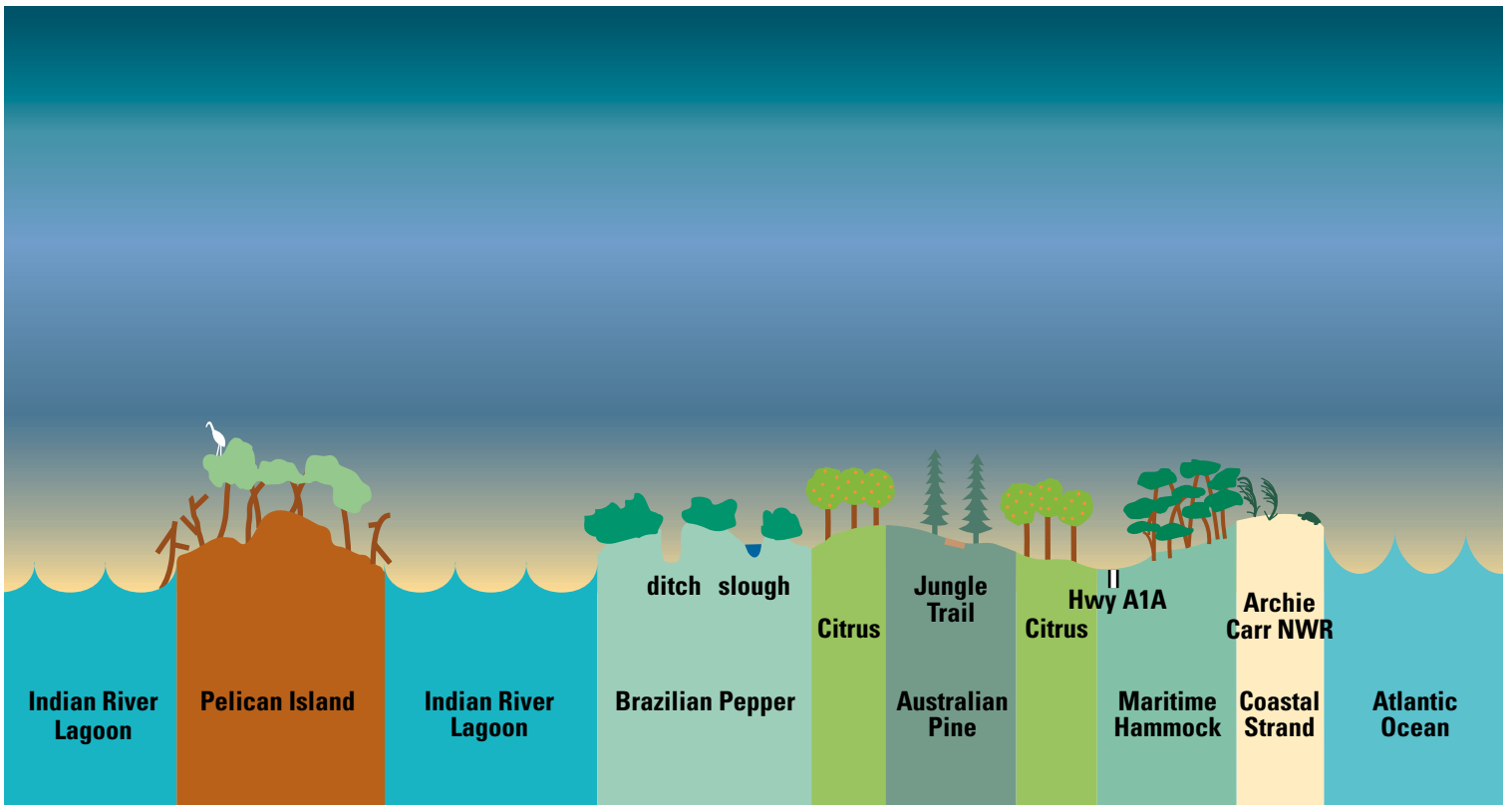
Robin Lewis

Australian pines



Robin Lewis

Johnson grass





USFWS



maritime hammock

## Lending Nature a Hand

The restoration plan on the refuge buffer also includes restoration and creation of mangrove forest, tidal marsh, freshwater wetlands, palm prairies, hydric hammocks, and maritime hammocks. The water table will be restored to historic, natural conditions and soils will be excavated to appropriate depths necessary to support natural fresh and estuarine plant communities. These habitats will be managed for the long-term benefit of wildlife.

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salt marsh mallow

Claudine Laabs ©



roseate spoonbill

Robin Lewis

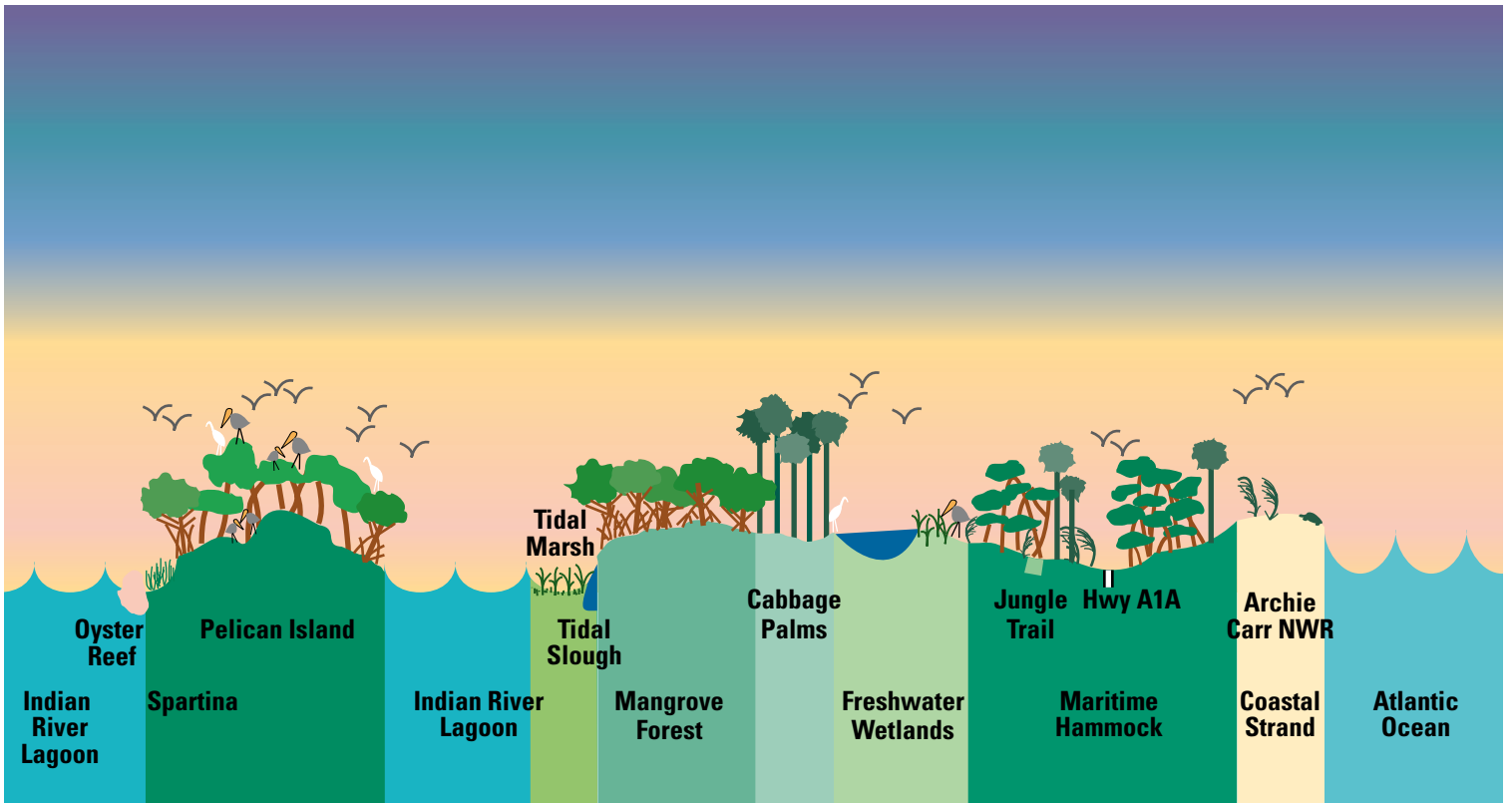


freshwater wetland

USFWS



mangrove swamp



# Visitor Facilities and Habitat Restoration



## *Showcasing our Birthplace*

A site plan combines creatively-designed visitor facilities with habitat restoration efforts in an attempt to provide the visitor with a natural, yet nostalgic experience.

Tree-lined trails wind through restored habitat into open areas where the visitor is given the opportunity to observe wading birds, shorebirds, and waterfowl.

**Pelican Island**

# The Kroegel Homestead

## *Preserving a Piece of History*

*Telling the story of the birth of America's first national wildlife refuge cannot be better accomplished than on the very grounds Paul Kroegel lived and worked. The Kroegel Homestead remains much the same way as it did 100 years ago and would be an ideal site for a visitor center. The Kroegel homestead would be the perfect setting for the Centennial Celebration of our National Wildlife Refuge System.*



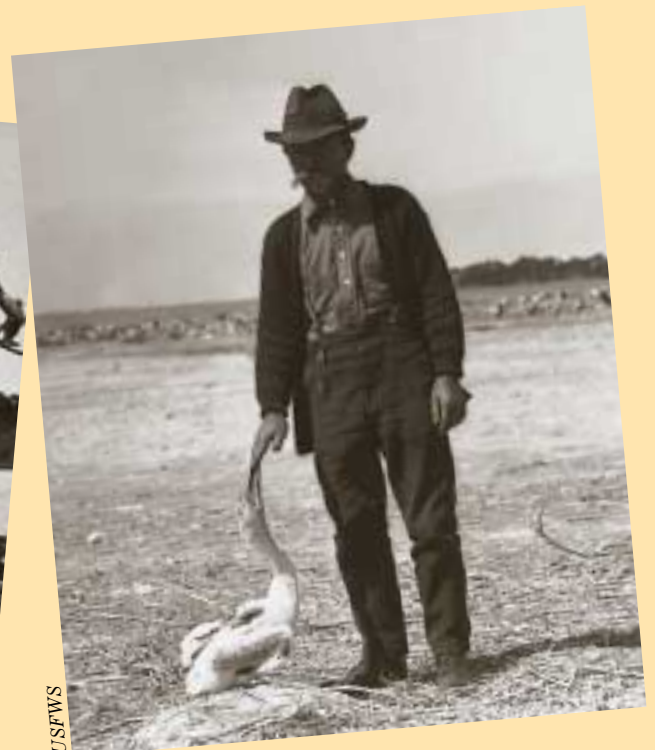
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Kroegel home



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Pelican Island circa 1910

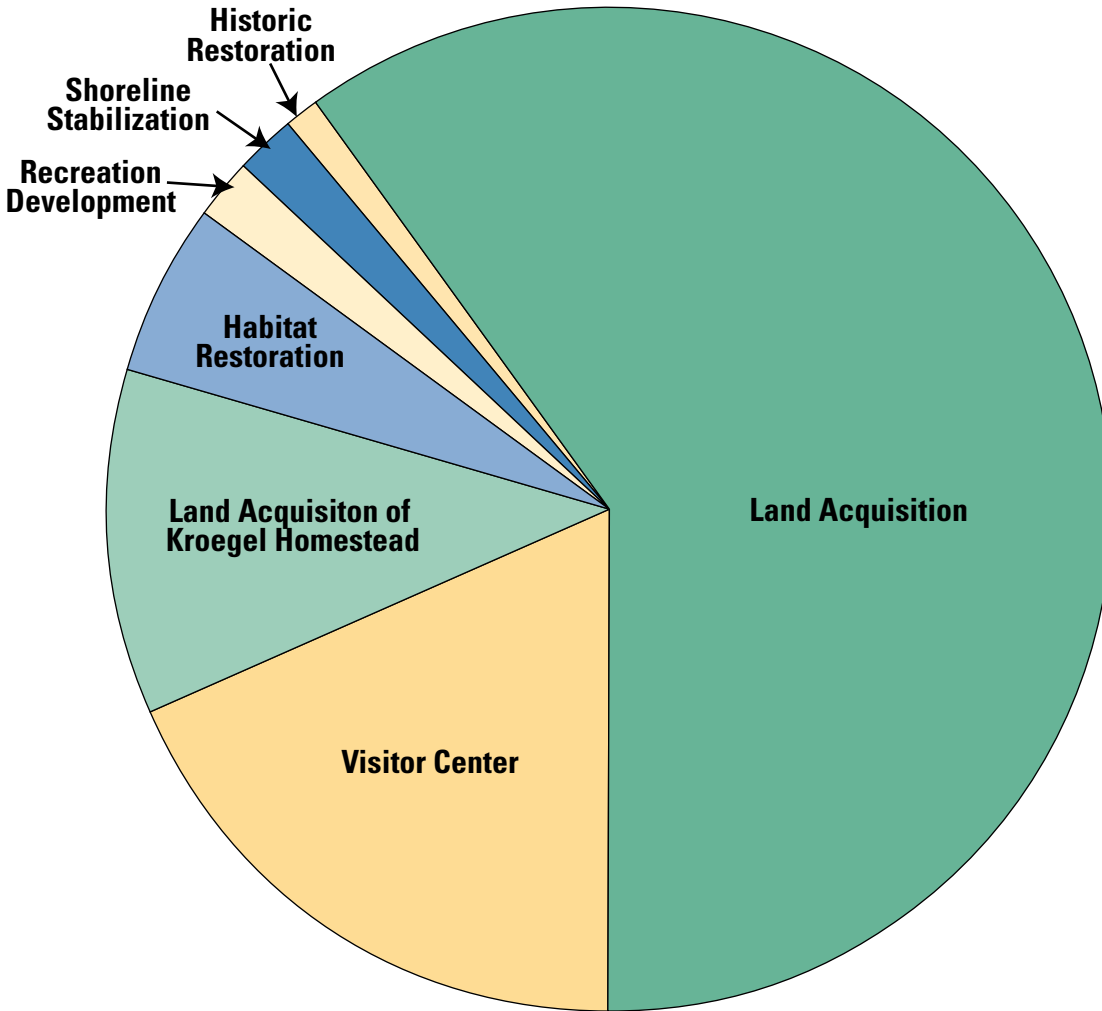


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Paul Kroegel circa 1910

# Investing in Our Future

*Pelican Island can become a showcase for the National Wildlife Refuge System.*



Land acquisition of 250 acres of critical refuge buffer (estimate) .....	\$ 16,200,000
Land acquisition of 15 acres of Kroegel homestead (estimate) .....	\$ 1,500,000
Shoreline stabilization on Pelican Island .....	\$ 500,000
Habitat restoration on 300 acres of current and proposed refuge buffer .....	\$ 3,000,000
Recreation development (trails, boardwalks, tower) on refuge buffer .....	\$ 500,000
Visitor center development on Kroegel homestead .....	\$ 5,000,000
Historic restoration of Kroegel homestead .....	\$ 300,000
<b>Total .....</b>	<b>\$27,000,000</b>

Annual funding and permanent staffing are necessary to protect our investment in Pelican Island.

# Fulfilling the Promise



Jim Angly ©

A promise was made almost one hundred years ago by President Theodore Roosevelt and carried out by all refuge employees since. That promise was to preserve wildlife and habitat for its own sake and for the benefit of the American people. Beginning with Paul Kroegel, a legacy of leadership and dedication was passed on to the likes of “Ding” Darling, Aldo Leopold, J. Clark Salyer II, and Rachel Carson.

That legacy was also shared by a host of partners including Boone and Crockett Club (which Teddy Roosevelt co-founded) and the National Audubon Society. Frank Chapman, as National Audubon Society co-founder, was instrumental in the protection of important bird rookeries, such as Pelican Island.

Those partnerships and many others continue to this day as do the responsibilities that come with honoring a legacy. By honoring our past, we can dedicate ourselves to wildlife conservation in preparation for the future.



Theodore Roosevelt Collection, Harvard College Library

*“To waste, destroy, our natural resources...will result in the undermining in the days of our children the very prosperity which we ought by right to hand down to them.”*

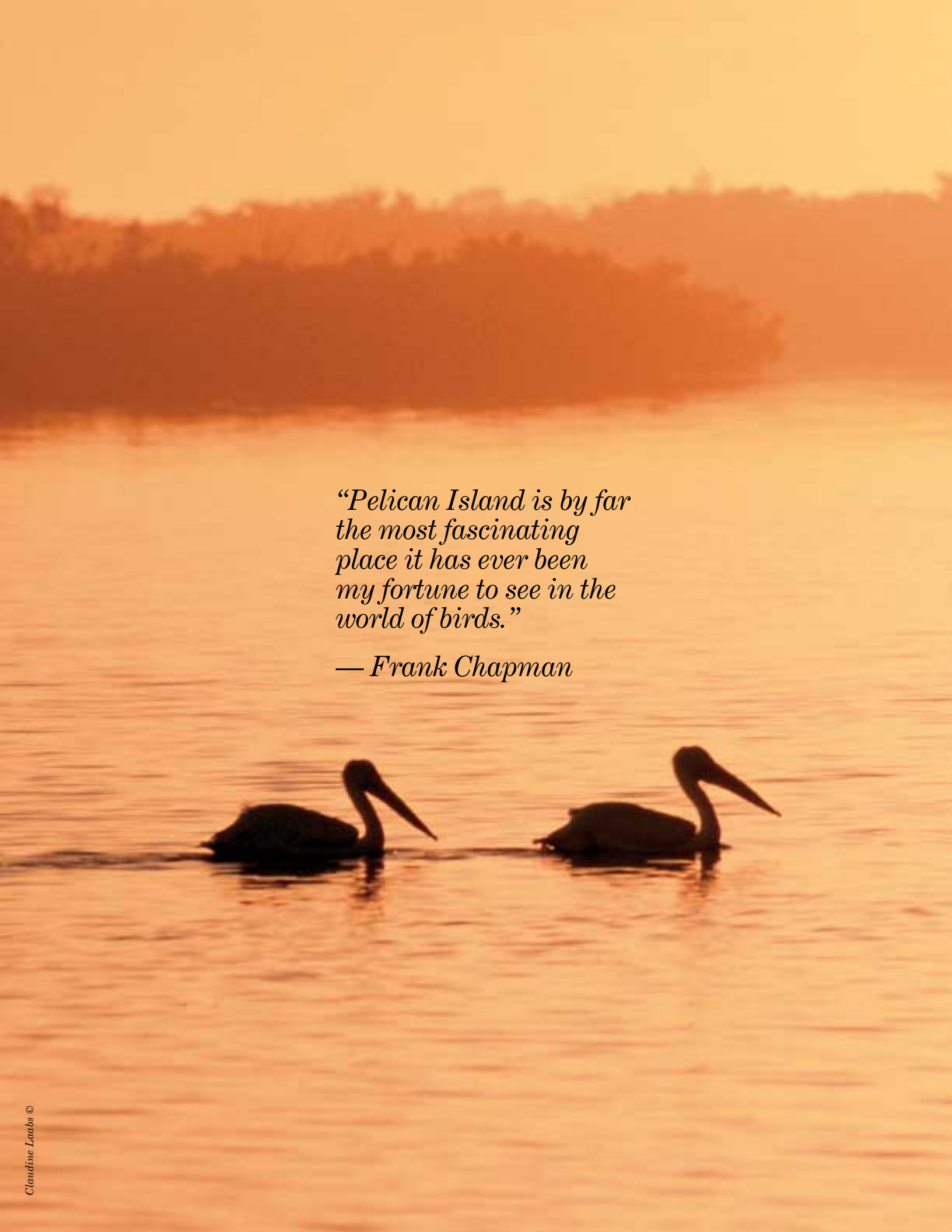
— Theodore Roosevelt

Dorn Whitmore



The Fish and Wildlife Service has many partners in this effort to address the deficiencies at Pelican Island. They include:

- Environmental Learning Center
- Florida Audubon Society
- Florida Inland Navigation District
- Florida Institute of Technology
- Friends of the St. Sebastian River
- Indian River County Board of Commissioners
- Indian River County Historical Society
- Lewis Environmental Services
- Marine Resources Council
- National Audubon Society
- National Fish and Wildlife Foundation
- National Park Service
- National Wildlife Refuge Association
- Natural Resources Conservation Service
- North Beach Civic Association
- Pelican Island Preservation Society
- Pelican Island Audubon Society
- Sebastian Inlet State Recreation Area
- Sebastian River Area Historical Society
- Sembler & Sembler, Inc.
- St. John's River Water Management District
- The Conservation Fund
- The Disney Company
- Theodore Roosevelt Society
- Trust for Public Land
- U.S. Army Corps of Engineers

A photograph of two swans swimming in a pond at sunset. The water is a warm, golden-orange color, and the background shows a line of trees silhouetted against the bright sky. The swans are dark against the light water, with their long necks curved forward.

*“Pelican Island is by far  
the most fascinating  
place it has ever been  
my fortune to see in the  
world of birds.”*

*— Frank Chapman*

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