

U.S. Fish & Wildlife Service

# J.N. "Ding" Darling *National Wildlife Refuge*



*The J. N. “Ding” Darling National Wildlife Refuge is located on the subtropical barrier island of Sanibel in the Gulf of Mexico. The refuge is part of the largest undeveloped mangrove ecosystem in the United States. It is world famous for its spectacular wading bird populations. J. N. “Ding” Darling is one of over 500 refuges in the National Wildlife Refuge System, and is managed by the U.S. Fish and Wildlife Service.*





*This blue goose, designed by Mr. "Ding" Darling, has become a symbol of the Refuge System.*

### **In times gone by....**

What began as a sandbar is now Sanibel, a barrier island fringed with mangrove trees, shallow bays, and white sandy beaches located off the southwest coast of Florida.

For over 2,000 years the Calusa Indians made the lush island, with its ready source of food from the sea, their home. By the mid-1800's, European settlers arrived and soon displaced the Calusa tribe.

For years the island was mainly used by farmers until a fierce hurricane in 1926 destroyed the agriculture industry. Construction of the Sanibel Causeway in 1963 opened the way for tourism on the island.



*Steve Alvarez*

### **The J. N. "Ding" Darling National Wildlife Refuge**

Established in 1945 as the Sanibel National Wildlife Refuge, the refuge was renamed in 1967 in honor of

pioneer conservationist Jay Norwood "Ding" Darling. The refuge consists of over 6,300 acres of mangrove forest, cordgrass marshes, and West Indian hardwood hammocks. Approximately 2,800 acres of the refuge are federally designated as Wilderness Area.



*Charlie Heidecker ©*

*red-shouldered hawk*

The refuge was created to safeguard and enhance the pristine wildlife habitat of Sanibel Island, to protect endangered and threatened species, and to provide feeding, nesting and roosting areas for migratory birds. Today, the J. N. "Ding" Darling National Wildlife Refuge provides important habitat to over 170 species of birds.

*Cover photo:  
roseate spoonbill by  
Charlie Heidecker ©*

*Photo at left:  
Steve Alvarez*

## **“Ding” Darling, the Famous Cartoonist and Wildlife Conservationist**

Born in Norwood, Michigan to the Reverend Marcellus and Clara Darling, Jay Norwood Darling was to become one of the most well known men of his era. A nationally syndicated editorial cartoonist, he was famous for his witty commentary on the many different subjects that concerned the nation.

“Ding” Darling Society



An affable, dynamic, and talented man, Darling began his cartooning career in 1900 with the Sioux City Journal. After joining the Des Moines Register as a cartoonist in

**Ding**\*

1906, he began signing his cartoons with the nickname “Ding” — derived by combining the first initial of his name with the last three letters.

In 1924, “Ding” was honored with a Pulitzer Prize for one of his cartoons that espoused hard work. He would again win this prestigious award in 1942. An avid hunter and fisherman, Mr. Darling became alarmed at the loss of wildlife habitat and the possible extinction of many species. Concerned about wildlife conservation, he worked this theme into his cartoons.

*First Duck  
Stamp designed  
by “Ding”  
Darling in 1934*

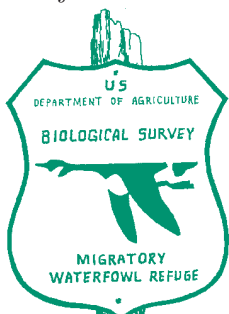


In July 1934, President Franklin D. Roosevelt appointed “Ding” Darling as the Director of the U.S. Biological Survey, the



forerunner of the U.S. Fish and Wildlife Service. While Director, Darling initiated the Federal Duck Stamp Program, designed the first duck stamp, and vastly increased the acreage of the National Wildlife Refuge System.

*Tribute to  
Teddy Roosevelt*



With the passage of the Migratory Bird Hunting Act, all waterfowl hunters 16 years and older are required by law to purchase a Federal Duck Stamp. Proceeds from the sales of these stamps are used to purchase wetlands for the protection of wildlife habitat. Since 1934, over \$500 million in funds have been raised and more than 4.5 million acres of habitat have been purchased for wildlife.

Darling also designed the Blue Goose logo, the national symbol of the refuge system. Rachel Carson, author of *Silent Spring*, scientist and chief editor for the U.S. Fish and Wildlife Service from 1932- 52, wrote of the emblem "Wherever you meet this sign, respect it. It means that the land behind the sign has been dedicated by the American people to preserving, for themselves and their children, as much of our native wildlife as can be retained along with our modern civilization."

*Original design of Blue Goose Sign  
by "Ding" Darling*



## Mangrove Ecosystem

Approximately half of the J. N. “Ding” Darling Refuge is mangrove estuary. Three species of trees dominate this subtropical forest and are specially adapted to grow in this salty, swampy environment. The red mangrove is the most common and distinctive mangrove in the refuge. The twisted, tangled roots of the red mangrove give credence to the claim, “the tree that walks.” Large dart-shaped seedlings called propagules can often be seen hanging from the branches of this tree.

Bob Lindholm ©



The black mangrove thrives a little further ashore than the red mangrove. The black mangroves breathe through specialized roots called

*American crocodile*

pneumatophores which thrust upwards through black marshy soil. Further from the water's edge is the white mangrove. These trees excrete salt from pores in their leaves.

Mangroves play a vital role in the food chain of this marine environment. Microorganisms thriving on the decaying leaves of mangroves become food for animals such as shrimp, crabs, snails and worms. Rich in marine life these shallow waters attract thousands of small fish which are preyed upon by the numerous wading birds of the refuge.

Charlie Heidecker ©



*white ibis*

The distinctive roots of the mangrove tree serve as nursery areas for many fish species such as mullet, snook, and snapper, and provide shelter for numerous marine organisms. The roots also serve to stabilize sediments and to provide coastal protection against erosion and storm damage.

*Left: decaying mangrove leaves form the basis of the food chain, photo: USFWS*

## **Uplands and Interior Wetlands**

Elevated above the level of the adjacent swamp, unique plant communities have evolved within the island interior. These vegetative communities create an array of diverse habitats which attract a wide variety of wildlife.



*J. Charles McCullough*

The sand and shell ridges of the island provide relatively high and dry ground and are dominated by sea grapes and cabbage palms. Plants such as saw palmetto, wild coffee, and Jamaica caper form the undergrowth of this woodland environment. Tracts of hardwood hammocks vegetated by gumbo limbo, strangler fig, mastics, and other tropical trees are protected in the refuge and contain some of the rarest plants and animals in the United States.



*Charlie Heidecker ©*

*pileated woodpecker*

The uplands are extremely important to migrating songbirds.



Jason Seitz



*pig frog*

The abundant seeds, berries, and insects found in this forest habitat provide essential energy for their long migratory journey. The forest canopy offers the birds protection from predators and severe weather. Other woodland animals include gopher tortoises, bobcats, racoons, and reptiles, such as the green anole, coral snake and the extremely rare indigo snake.



Situated among the low lying areas of the island, freshwater to brackish wetlands are heavily vegetated with cordgrass, leather ferns, and sedges. The freshwater cordgrass marshes are unusual on barrier islands and provide a haven for wildlife species. Alligators, river otters, turtles, and frogs are commonly found in this habitat.



*Gulf Fritillary*

Roger Exline

Management of the upland and wetland areas is primarily done to maintain and restore native plants. Two types of management techniques are regularly used to improve wildlife habitat on the refuge.

Prescribed burns are used to maintain a variety of plant communities, mimic natural fire cycles, and reduce devastating fire conditions. Fires help wildlife by enhancing new plant growth, eliminating thick undergrowth, and controlling non-native plants.

Charlie Heidecker ©



*gopher tortoise*

The refuge staff chemically treats hundreds of acres of invasive non-native plants such as Brazilian pepper and Australian pine. These pest species can quickly out-compete native plants and degrade important wildlife habitat.

Chris Scott ©



*yellow rat snake*

## South Florida Ecosystem

Agriculture and development have destroyed or degraded millions of acres of unique South Florida environments. Restoration of the South Florida ecosystem, including the Everglades, has become one of the largest coordinated conservation efforts in the history of the United States. Private organizations, local, state and federal governments are working together to restore this fragile environment.

Charlie Heidecker ©



The health of J.N. “Ding” Darling National Wildlife Refuge and its estuarine environment is dependent on the health of the Everglades

watershed, which encompasses the Kissimmee River, Lake Okeechobee, and the Caloosahatchee River. Artificially regulated freshwater releases from the Caloosahatchee directly affect the refuge and its water quality. Too much freshwater (or too little), at the wrong time, can disrupt the fragile estuarine ecosystem and its dependent wildlife.

## South Florida Endangered Species

National Wildlife Refuges in South Florida provide protected natural areas for many endangered species. Because of its subtropical climate and diverse plant communities, South Florida has some of the rarest and most fascinating endangered plants and animals found in the United States. Nowhere else in the United States can you see American crocodiles and West Indian manatees in the wild.

Photos, from top to bottom:  
West Indian manatee,  
roseate spoonbill,  
bald eagle, wood  
stork

On Sanibel, giant endangered sea turtles crawl on to pristine beaches to deposit eggs. Wood storks, with their large unusual beaks, can be seen feeding in the shallow waters along Wildlife Drive. Bald eagles



Patrick M. Rose ©



bird photos: Charlie Heidecker ©



soar above the open waters of the estuary, hunting for fish, while peregrine falcons are occasionally spotted during the winter diving into a flock of shorebirds.

A strong Federal Endangered Species Act has played a vital role in protecting wildlife faced with extinction. Because of this effective legislation, and the protection provided by National Wildlife Refuges, several endangered species' populations have recovered, including the bald eagle and the American alligator.

## Wildlife Drive

The most popular place to view wildlife on the refuge is Wildlife Drive. This 5-mile, one-way, unpaved road leads you through the heart of a mangrove forest. While on Wildlife Drive, you will begin to appreciate why Mr. Darling wanted to protect this fragile and fascinating environment. Today, over 600,000 visitors travel Wildlife Drive annually.

The visitor can access Wildlife Drive by vehicle, guided tram, bicycle, or on foot. An entrance fee of \$5.00 per vehicle (or \$1 per pedestrian/bicyclist) is required. Those visitors carrying a Federal Duck Stamp, Golden Age, Golden Eagle, and/or Golden Access Card are not required to pay the entrance fee. **There are no restrooms or drinking facilities on the drive.**

The best time to observe wildlife is early morning or evening, near or at low tide. November through April are the optimum months for bird viewing on the refuge. Water, insect repellent, and binoculars are recommended for the tour.



Bob Lindholm ©

*American alligators*

Occasionally, alligators or crocodiles can be seen basking along the water's edge. These large, but quick and agile reptiles, prefer the brackish to freshwater areas

on the left side of the drive. For your own safety, please do not approach or feed alligators or crocodiles. These animals are wild and can be **extremely** dangerous. Feeding of alligators and crocodiles is illegal, and violators will be prosecuted.



### Recreational Opportunities

- guided tram service
- nature trail
- hiking
- kayak/canoeing
- fishing
- crabbing
- birdwatching
- photography
- biking
- auto tour route



### Refuge Concessionaires

Tarpon Bay Recreation  
 941/472 8900  
 900 Tarpon Bay Road  
 Sanibel Island, FL 33957

Mangrove Fishing Adventures  
 941/395 9647  
 P.O. Box 1712  
 Sanibel Island, FL 33957

Canoe Adventures  
 941/472 5218

Refuge Natural History Association  
 "Ding" Darling Wildlife Society  
 941/472 1840  
 1 Wildlife Drive  
 Sanibel, FL 33957

*Top to bottom:  
 reddish egret,  
 American anhinga,  
 black-necked stilt*

**J.N. "Ding" Darling  
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