



# Brown Pelican

*Pelecanus occidentalis*



Lee Carney, USFWS

*Brown pelican swimming*

“A wonderful bird is the pelican; his bill can hold more than his belly can. . . .” So begins Dixon Lanier Merritt’s well-known limerick. It is not far from the truth. The pouch suspended from the lower half of the pelican’s long, straight bill really can hold up to three times more than the stomach.

In addition to being used as a dip net, the pouch holds the pelican’s catch of fish until the accompanying water—as much as three gallons—is squeezed out. During this time, laughing gulls may hover above the pelican, or even sit on its bill, ready to steal a fish or two. Once the water is out, the pelican swallows the fish and carries them in its esophagus. The pouch also serves as a cooling mechanism in hot weather and as a feeding trough for young pelicans.

## Range and Description

The brown pelican, also called American brown pelican or common pelican, inhabits the Atlantic, Pacific, and Gulf Coasts of North and South America. On the Atlantic Coast, the species can be found from Nova Scotia to Venezuela and on the Pacific Coast, from British Columbia to south-central Chile and the Galapagos Islands. On the Gulf Coast,

the species is found in Florida, Alabama, Louisiana, Texas, Mississippi, and Mexico. The birds are fairly common inland at the Salton Sea in California, lakes in Florida, and bodies of water in southeast Arizona.

Measuring up to 54 inches long, weighing 8 to 10 pounds, and having a wingspan between 6-1/2 feet and 7-1/2 feet, brown pelicans are the smallest members of the seven pelican species worldwide. They can be identified by their chestnut-and-white necks; white heads with pale yellow crowns; brown-streaked back, rump, and tail; blackish-brown belly; grayish bill and pouch; and black legs and feet.

## Behavior, Diet, and Nesting Habits

Pelicans are long-lived birds. One pelican captured in Florida had been banded 31 years earlier!

Brown pelicans are strong swimmers; young ones barely able to fly have been timed swimming at 3 m.p.h. Rather clumsy on land, pelicans fly with their necks folded and their heads resting on their backs, using slow, powerful wing beats.

Pelicans are primarily fish-eaters, requiring up to four pounds of fish a day. Their diet consists mainly of “rough” fish such as menhaden, herring, sheepshead, pigfish, mullet, grass minnows, topminnows, and silversides. On the Pacific Coast, pelicans rely heavily on anchovies and sardines. The birds have also been known to eat some crustaceans, usually prawns.

Brown pelicans have extremely keen eyesight. As they fly over the ocean, sometimes at heights of 60 to 70 feet, they can spot a school of small fish or even a single fish. Diving steeply into the water, they may submerge completely or only partly—depending on the height of the dive—and come up with a mouthful of fish. Air sacs beneath their skin cushion the impact and help pelicans surface.

Pelicans are social and gregarious. Males and females and juveniles and adults congregate in large flocks for much of the year.

Brown pelicans typically begin to breed between the ages of 3 and 5 years. The birds nest in large colonies on the ground, in bushes, or in the tops of trees. On the ground, a nest may be a shallow depression lined with a few feathers and a rim of soil built up four to ten inches above ground, or it may be a large mound of soil and debris with a cavity in the top. A tree-top nest usually consists of reeds, grass, and straw heaped on a mound of sticks interwoven with the supporting tree branches.

The male delivers material to the female, who builds the nest. She typically lays 2 to 3 chalky white eggs that hatch in about a month. In most of the nesting range of the pelican in the United States—from South Carolina to Florida in the East, in southern California in the West, and in Alabama, Louisiana, and Texas on the Gulf—peak egg-laying usually occurs in March through May.

Parents share in incubating the eggs and raising the young. Like many birds, newly hatched pelicans are blind, featherless, and altricial—that

is, completely dependent upon their parents. They soon develop down that is soft and silky, followed by feathers. Average age at first flight is 75 days.

### Threats, Protection, and Recovery

Brown pelicans have few natural enemies. Although ground nests are sometimes destroyed by hurricanes, flooding, or other natural disasters, the biggest threat to pelicans comes from people. In the late 19th and early 20th centuries, pelicans were hunted for their feathers, which adorned women's clothing, particularly hats.

Several efforts in the early part of the 20th century were meant to curb the decline of brown pelicans. In 1903, President Theodore Roosevelt designated Florida's Pelican Island as the first national wildlife refuge, a move that helped reduce the threat of plume hunters. Passage of the Migratory Bird Treaty Act in 1918 gave protection to pelicans and other birds and helped curb illegal killing.

During the food shortages following World War I, commercial fishermen claimed pelicans were decimating their industry and slaughtered them by the thousands. The nests were also frequently raided for eggs.

With the advent and widespread use of pesticides such as DDT in the 1940s, pelican populations plummeted due to lack of breeding success. When pelicans ate fish contaminated with DDT, the eggs that they laid had shells so thin that they broke during incubation.



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By the 1960s, brown pelicans had nearly disappeared along the Gulf Coast and experienced almost complete reproductive failure in southern California. Studies proving the pelicans were not harming commercial fisheries helped to stop their wholesale slaughter. In 1970, under a law that preceded the Endangered Species Act of 1973, the U.S. Fish and Wildlife Service listed the brown pelican as endangered, a term that means the species is in danger of extinction throughout all or a significant portion of its range.

In 1972, the Environmental Protection Agency banned the use of DDT in the United States and restricted the use of other pesticides. Since then, there has been a decrease in the level of chemical contaminants in pelican eggs, and a corresponding increase in nesting success.

### Consistent Improvement

The Louisiana Department of Wildlife and Fisheries' reintroduction program from 1968 to 1980 reestablished brown pelicans in the State, while natural recolonization and improved reproduction restored the birds to their historic numbers in Texas and California. Brown pelicans responded well to efforts by conservation partners to protect, restore, and manage nesting islands, as well as create new islands with dredge spoils. These actions improved reproductive success in restoring the birds to their historic numbers.

In 1985, brown pelicans in the eastern United States, including Alabama, all

of Florida, Georgia, South Carolina and points northward along the Atlantic Coast, had recovered to the point that the populations were removed from the Endangered Species List. The U.S. Gulf Coast populations in Texas and Louisiana, although still listed as endangered, were recently estimated at nearly 12,000 breeding pairs. The brown pelican is also still listed as endangered in the Pacific Coast portion of its range and in Central and South America. The population of the subspecies found in southern California, which includes nesting islands in Mexico, is estimated at more than 11,000 breeding pairs.

As a result of the ban on the use of DDT in the United States, as well as complementary conservation efforts, the species has made a strong comeback and, in view of its improved status, has been proposed to be "delisted" throughout its range. With an estimated 400,000 birds in Peru, the U. S. Fish and Wildlife Service estimates the global population at 650,000 brown pelicans.

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