



# **Brown Pelicans & Mobile Bay Lighthouses**



# The Brown Pelican on Mobile Bay

**Description:** The brown pelican (*Pelecanus occidentalis*) is a fairly large water bird weighing up to eight pounds and can have a wing span of over seven feet. The adult is dark grey to silver in coloration, with a white and brown head and a light yellow crown. Juveniles are grey-brown all over with white under parts. Pelicans have long bills with an expandable pouch that is three times the size of their stomach, and short legs and webbed feet.

The brown pelican and the American white pelican (*Pelecanus erythrorhynchos*) are the only pelican species that occur in Alabama. Five other species inhabit various habitats throughout the world. Brown pelicans are the smallest member of the pelican family and are known for their low soaring over the water's surface and diving after their prey.

**Distribution:** The brown pelican has a large range extending from North America to South America.

**Habitat:** Pelicans are strictly a coastal species that are rarely seen inland or far out at sea. They make extensive use of sand bars, offshore sand bars, and islets for nocturnal roosting and daily loafing, especially by non-breeders and during the non-nesting season. However, some roosting sites may eventually become nesting areas.

**Feeding habits:** Brown pelicans forage in shallow estuarine and inshore waters, usually close to the coastline. Pelicans look for their prey from the air and then dive into the water to trap their catch in their expandable pouch. The water is drained from the pouch and then food is swallowed. Pelicans feed on menhaden, mullet, sardines, pinfish, herring, grass and top minnows, anchovies and some crustaceans.

**Life history and ecology:** Brown pelicans often nest in colonies with other shore birds such as herons, terns and gulls (mostly on coastal islands) seeking protection from predators such as raccoons. Nests are large, flat and created in trees, tops of bushes or found on the ground. Nesting material is brought to the nesting site and the female constructs a nest of interwoven sticks lined with grass or reeds.

Two to three chalky white eggs are laid March thru April that are soon covered in guano as a predator defense. Both males and females share in incubating eggs and chick rearing. Eggs are incubated for 28-30 days and chicks are born pink, naked and helpless. About 35 days after hatching chicks can walk out of nests but do not leave until they are about 63 days of age. Young can usually fly 74 to 76 days after hatching.

Brown pelicans are considered a long-lived species as one in Brevard, Florida was banded in 1933 and was recaptured in 1964, 31 years old.

Populations of brown pelicans (especially in California, Texas, and Louisiana) were decimated in the U.S. in the 1950s and 60s by pesticides (DDT and related compounds). In the U.S. Caribbean, 7% of the pelican population in 1982 died as a result of fish die-offs in connection to chemical runoffs (e.g., organophosphates).

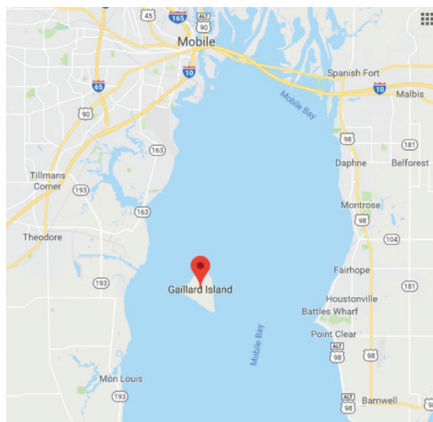
Currently, breeding numbers in most states are stable or increasing, however, pelicans are extremely vulnerable to chemical and pesticide pollution, which results in eggshell thinning and reproductive failure. Other threats to pelican populations include disturbance of nesting birds by humans, declining fish (food) populations, increased turbidity (e.g., from dredging, resulting in reduced visibility of prey); oil and other chemical spills, entanglement in fishing gear, shooting, extreme weather conditions (freezing of soft parts, destruction of nest sites by hurricanes, storms), disease, and parasitism. Human disturbance, such as recreational boating and poaching, not only disrupts reproductive success, but may affect distribution patterns and age structure of pelicans using roosting sites during the nonbreeding season (Jaques and Anderson 1987). Habitat degradation affects both roosting and nesting patterns. On the Gulf Coast, nesting efforts have failed because nesting sites are susceptible to flooding as a result of continued site erosion (McNease et al. 1992).

The brown pelican was first listed as Endangered on June 2, 1970. It is currently designated as Endangered in its entire range, except Florida and Alabama. It was removed from the endangered list in Florida and Alabama on February 4, 1985.

**What is Gaillard Island?** In 1979 the Army Corps of Engineers elected to dredge a channel to the Theodore Industrial Park and pile the displaced sediment into a man-made avian preserve near the mouth of Dog River on the west side of Mobile Bay. The planners promised it would attract brown pelicans, who had all but disappeared from the area, to nest. Thirty thousand pelicans later, Gaillard Island has become yet another success story of the Bay. Sport fish are more plentiful in Mobile Bay and the fishing resources (speckled trout, flounder, redfish) are plentiful as well. If the sport fish are there, the food chain must be healthy!

*The population of the pelicans, terns, laughing gulls, egrets, ibis and little blue and tricolored herons nesting on Gaillard Island is determined by the food supply, said Roger Clay, a wildlife biologist with the Alabama Division of Wildlife and Freshwater Fisheries.*

Gaillard Island is just a 20-minute boat ride from downtown Mobile, but folks taking a boat out into the bay should not plan a stop at the 1,300-acre island, AKA Pelican Island. It's not something you can see on foot because it is against the law to access the island itself. The reason why is simple: it's gone to the birds. Gaillard Island is home to 15 species of birds including the formerly endangered brown pelican. The island gets its name from a Mobile dentist who envisioned the island as a bird refuge, but first, the island had to be created. The Army Corp. of Engineers dredges the Theodore Ship Channel every two years so that ships can navigate the shallow waters of Mobile Bay. The material dug from those dredgings ends up at Gaillard Island.



## Middle Bay Lighthouse

Commissioned: 1885 | Decommissioned: 1963 | Deactivated: 1967

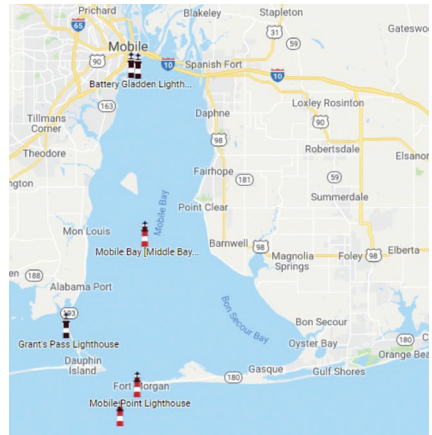
Coordinates: 30.4382° N, 88.0112° W

Middle Bay Light, also known as Middle Bay Lighthouse and Mobile Bay Lighthouse, is an active hexagonal-shaped cottage style screw-pile lighthouse. The structure is located offshore from Mobile, Alabama, in the center of Mobile Bay (3 miles SW of Point Clear). It is not open to the public, but may be viewed by boat.

Its original optic was a Fourth Order Fresnel lens, currently displayed at the museum at Fort Morgan, Alabama (also on display are the lenses from Sand Island and Mobile Point). In 1905, the lens and the lantern room were removed and two small red acetylene lights were placed on an iron post. A single light is all that burns today.

**Fact or fiction?** In the early World War I era, the light keeper's family needed fresh milk for his family; hence, a cow lived on the deck.

*Mobile Bay Lighthouse was placed on the National Register of Historic Places in 1975.*



## Sand Island Lighthouse

Year first constructed: 1838 (first), 1859 (second), 1864 (third)

Year first lit: 1873 (current) | Year automated: 1921 | Deactivated: 1971

Shape: Conical | Foundation: Granite Stone | Construction materials: Brownstone

Coordinates: 30°11'16"N 88°03'02"W

Sand Island Lighthouse is located roughly three miles from the Mobile Bay entrance, between Mobile Point on the east and Dauphin Island on the west, stands Sand Island Lighthouse on a tiny strip of land that was once 400 acres.

**Issues:** Situated on a sandy island that has eroded, leaving the tower surrounded by water. Over the decades, the island has washed away and all that remains is the



large rocks. It is 132 feet tall and was constructed of brick in 1873, the third lighthouse to be built on Sand Island. Its original optic was a Second Order Fresnel lens (now on display at Fort Morgan).

The first lighthouse on Sand Island, constructed by Winslow Lewis in 1837, was a 55-foot (17 m) structure completed in 1839. The lighting was provided by 14 lamps in 16 inch reflectors and a first-order lens, known as the Lewis lamp, which was a poorly designed version, or Argand-style lamp. Lewis enjoyed a monopoly through his relationship with Stephen Pleasonton that lasted until 1853.

In 1859 a new lighthouse was completed but was destroyed during the Civil War, on February 23, 1863, by Confederate John W. Glenn. The Confederate soldiers at Fort Morgan observed Union soldiers in the lighthouse, spying on the fort, and the guns of the fort open fire totally destroying the lighthouse. In 1864 a 48-foot (15 m) wooden tower was built that lasted until 1873.

Today, the lighthouse is owned by the residents of Dauphin Island where an extensive restoration process is beginning. The Alabama Lighthouse Association continues its support for the restoration of this historical landmark. While it looks very promising that the lighthouse and its site can be restored someday, the need for funding will be essential. The Alabama Lighthouse Association continues its support for the restoration of this light. The lighthouse is not open to the public.





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