



# West Indian Manatee

## *Trichechus manatus*

### Introduction

Christopher Columbus was the first European to report seeing a manatee in the New World. To Columbus, and other sailors who had been at sea for a long time, manatees were reminiscent of mermaids—the mythical half-fish, half-woman creatures of the ocean. Manatees are not fish, however, but marine mammals.

### Range and Description

The West Indian manatee—sometimes called sea cow—is found along the coast of Florida and in the Caribbean. Most adult manatees are about 10 feet long and weigh 800 to 1,200 pounds, although some larger than 12 feet and weighing as much as 3,500 pounds have been recorded. These “gentle giants” have tough, wrinkled brown-to-gray skin that is continuously being sloughed off. Hair is distributed sparsely over the body. With stiff whiskers around its mouth, the manatee’s face looks like a walrus without tusks.

### Behavior and Diet

The manatee maneuvers through the water moving its paddle-like tail up and down and steering with its flippers. It is very agile for such a large animal, sometimes somersaulting and doing barrel rolls in the water.

The manatee often rests suspended just below the water’s surface with only the snout above water. It feeds underwater, but must surface periodically to breathe. Although the manatee can remain underwater for as long as 12 minutes, the average time is 4-1/2 minutes.

Manatees are herbivores, a term that means they eat only plants. They consume 4 to 9 percent of their body weight each day—that’s 32 pounds of plants for an 800-pound animal! To do this, manatees spend 5 to 8 hours a day eating—typically non-native water hyacinths and hydrilla, along with native aquatic plants such as *Vallisneria* or eelgrass.

Manatees move between fresh-water, brackish, and saltwater



*Manatee cow and calf*

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environments. They prefer large, slow-moving rivers, river mouths, and shallow coastal areas such as coves and bays. The animals may travel great distances as they migrate between winter and summer grounds. During the winter, manatees congregate around warm springs and around power plants that discharge warm water. During summer months, they have occasionally been seen as far north as Virginia and Maryland.

Manatees reach breeding maturity between 3 and 10 years of age. The gestation period is approximately 13 months. Calves may be born at any time during the year. Usually a single calf is born, but twins do occur. An adult manatee will usually give birth to a calf every 2 to 5 years. The low reproductive rate makes the species less capable of rebounding from threats to its survival. Newborn calves weigh 60 to 70 pounds and are 4 to 4-1/2 feet long. They nurse underwater for about three minutes at a time from a nipple located behind their mother’s forelimb. Born with teeth, calves begin eating plants within a few weeks but remain with their mother for up to 2 years. Manatees may live for several decades.

Manatees communicate with each other by emitting underwater sounds that are audible to humans. The vocalizations, which sound like squeaks and squeals, are especially important for maintaining contact between mother and calf. One field report described a mother and her calf, separated by a flood gate, calling to each other for three hours without interruption until they were reunited.

### Threats

Manatees face many threats to their survival throughout their range. Historically, they were hunted for their flesh, bones, and hide. Manatee fat was used for lamp oil, bones were used for medicinal purposes, and hides were used for leather. Hunting is thought to be largely responsible for the initial decline of the species; however, hunting is no longer allowed in countries where manatees are protected.

Today, the greatest threats to manatee survival are collisions with boats and, in Florida, loss of warm water habitat.

Speeding boats can injure and kill manatees that are submerged just below the surface. Manatees that

survive such encounters carry distinctive scars. In fact, biologists studying the species use the scars as ways of identifying individual animals. As a conservation measure, many areas now post speed-limit signs for boats or prohibit them completely.

The loss of natural springs as a result of the increasing demands on water usage from development pressure, and the potential loss of warm water from power plants that are eventually shut down, could limit the available habitat for manatees in the future. Biologists are working to secure sources of warm water for manatees in Florida to eliminate this future threat.

Flood gates and canal locks can kill manatees either by crushing them or drowning them; however, recent modifications of operating procedures have reduced the number of fatalities from this source.

Fishing line and other trash discarded into the water are responsible for a small number of manatee deaths each year.

Natural events also imperil manatees. Because manatees cannot survive long in cold water, unusually cold winters in Florida pose a serious threat. As the water temperature drops below 60°F, manatees become sluggish and stop eating. Young manatees are especially susceptible to the effects of cold temperatures.

Periodic red tide blooms have also been associated with a number of manatee deaths. The microorganisms associated with red tide produce a toxin that can kill manatees if the animals breathe them or eat them.

Harassment of manatees from skin divers, fishermen, and boaters can interrupt feeding and breeding. During the winter, manatees may be driven into cooler water where they are susceptible to disease and cold stress.

The species has difficulty rebounding from all of these threats because of its late breeding maturity and its low reproductive rate. As a result of conservation and protection measures now in place, however, the status of manatee populations in Florida and Puerto Rico is improving.

### Recovery

Manatee population counts are usually conducted from airplanes. Obtaining an exact figure is

a challenge because of poor visibility or murky water. Aerial surveys in Florida have counted up to 3,300 manatees statewide. In Puerto Rico, the population is estimated at between 150 and 350 animals.

Biologists use radio-tracking to study individual manatees, locate and assess habitat use areas, and learn about migratory patterns.

As long ago as 1893, Florida passed a law to protect this marine mammal. Since 1907, there has been a \$500 fine for any person who kills or harms a manatee. In 1978, Florida designated the entire State as a "refuge and sanctuary for manatees" through the Florida Manatee Sanctuary Act. This law allows the State to designate manatee sanctuaries and establish speed zones for boats.

The Fish and Wildlife Service may also designate refuges and sanctuaries for manatees, especially important during the winter in providing safe areas with warm water for these marine mammals.

Federal manatee sanctuaries are areas where boats are seasonally prohibited, and Federal manatee refuges are areas where boating activity is restricted. One example of a Federal manatee refuge is Crystal River National Wildlife Refuge, established in 1983 on Florida's west coast specifically for the protection of manatees.

In 1967, under a law that preceded the Endangered Species Act of 1973, the manatee was listed as an endangered species, meaning it is considered in danger of extinction throughout all or a significant portion

of its range. The manatee also is protected at the Federal level under the Marine Mammal Protection Act of 1972.

A vital component of the Service's recovery efforts is increasing public awareness and cooperation among boaters, skin divers, fishermen, the power industry, and anyone else using the rivers and coastal waters where manatees live. With growing awareness and positive action, the manatee can be saved for generations to come.

Service National Wildlife Refuges (NWR) in Florida, Georgia, Texas, and Puerto Rico where the West Indian manatee is known to occur:

- Ace Basin NWR
- Blackbeard Island NWR
- Chassahowitzka NWR
- Crystal River NWR
- Harris Neck NWR
- Island Bay NWR
- J. N. "Ding" Darling NWR
- Lake Woodruff NWR
- Lower Suwannee NWR
- Matlacha Pass NWR
- Merritt Island NWR
- Pelican Island NWR
- Pine Island NWR
- Pinellas NWR
- Savannah-Pinckney NWR
- St. Mark's NWR
- Ten Thousand Islands NWR
- Vieques NWR
- Wolf Island NWR.

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*Playing with a crab trap*