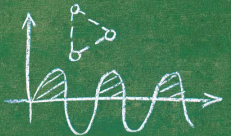


# Opening The Windows Of Curiosity

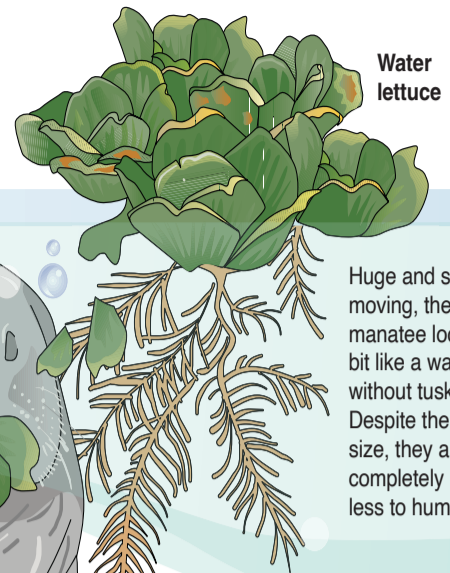
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## World of Wonder

By Laurie Triefeldt  
EXPLORING THE REALMS OF HISTORY, SCIENCE, NATURE AND TECHNOLOGY



Water lettuce

Huge and slow-moving, the manatee looks a bit like a walrus without tusks. Despite their size, they are completely harmless to humans.

Manatees in Florida can live in salt water or fresh water. They feed on more than 60 species of plants, including water grasses, mangrove leaves and algae.

### Location, location



- Steller's sea cow (extinct)
- West Indian manatee
- Amazonian manatee
- Dugong
- West African manatee

### Folklore

Manatees and dugongs may be responsible for the ancient stories of mermaids. Sailors likely mistook them for the half-human, half-fish sirens of legend.

Many coastal communities in West Africa have songs and stories of a sea goddess called Mami Water. This generous but jealous water spirit may have been inspired by the manatee. Despite its sacred connections, the West African manatee is still hunted and is seriously endangered.

Historically, some indigenous peoples along the Atlantic shores used ground-up manatee bones to make medicines for asthma and ear infections. Native Americans hunted the manatee for its meat, bones and fat. They also made shields and shoes from the manatee's thick, wrinkled skin.

### Red tide

Red tides are a naturally occurring, microscopic algae bloom that is lethal to manatees and other marine populations. Since 1996, red tides in Florida have been responsible for hundreds of manatee deaths.

### Ship collisions

Collisions with ship and boat hulls and propellers have caused about one-quarter of all manatee deaths since 1974 (when record-keeping began). Manatees feed in shallow water, where there is little time or room to dive to the bottom to avoid oncoming boats. Many manatees are killed by these accidents or have deep scars on their backs and tails from close encounters. Manatee populations are also threatened by habitat loss.

SOURCES: World Book Encyclopedia, World Book Inc.; www.savethemanatee.org; Manatee Park, Fort Myers, Florida; www.sirenian.org; Florida Fish and Wildlife Conservation Commission; www.livescience.com

# MANATEES

## SIRENIAS OF THE WORLD

The scientific order Sirenia includes three living and one extinct species of manatees, as well as the dugong, a close cousin. Most populations of these aquatic mammals are listed as endangered or vulnerable. Hunting, habitat destruction and collisions with ships and boats are serious threats to these gentle giants.

### What is in a name?

Manatees are sometimes called **sea cows**. The name **manatí** means "breast" in the Taíno language. The Taíno were a seafaring Caribbean people who were wiped out in the 16th century by European disease, war and slavery.

### Very special

**Sirenians** are distant cousins of the elephant. Like all mammals, they breathe air and feed their young milk, but unlike some marine mammals, sirenians never leave the water.

The manatee is sensitive to cold and migrates to warmer areas when water temperatures drop below 68° F (20° C).

### West Indian manatee

The **West Indian manatee** lives in coastal waters and rivers from the mid-Atlantic and southeastern United States to northeastern Brazil. It is also found off the coasts of Caribbean islands.

The **Florida manatee** is a subspecies of the West Indian manatee and is the official state mammal of Florida. It is also the most endangered marine mammal in the U.S.

### West African manatee

The **West African manatee** lives in the rivers and coastal waters of West Africa. These shy, nocturnal creatures have not been studied very much, but they are thought to behave very much like their West Indian cousins. Although the African manatee is primarily a herbivore, it also eats mollusks and fish.

### Amazonian manatee

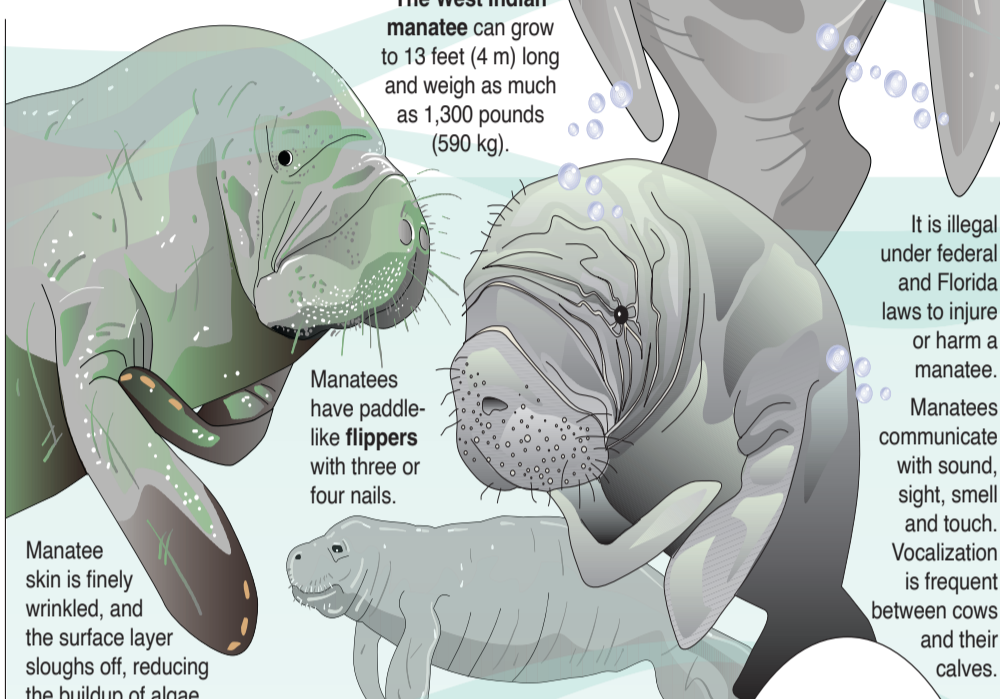
The **Amazonian manatee**, or South American manatee, was once a common sight in the rivers of the Amazon River basin, but hunting has drastically reduced its numbers.

### Dugong

The **dugong** is found in the warm waters of Indonesia and Australia. It looks a lot like a manatee but is smaller, and its tail is forked, unlike the tail of the manatee.

### Steller's sea cow

The largest of the sirenians, this sea cow was discovered by Europeans in the North Pacific in 1741. Just 27 years later, **Steller's sea cow** had been hunted to extinction. Fossils show that this aquatic mammal was once widespread along North Pacific coastlines.



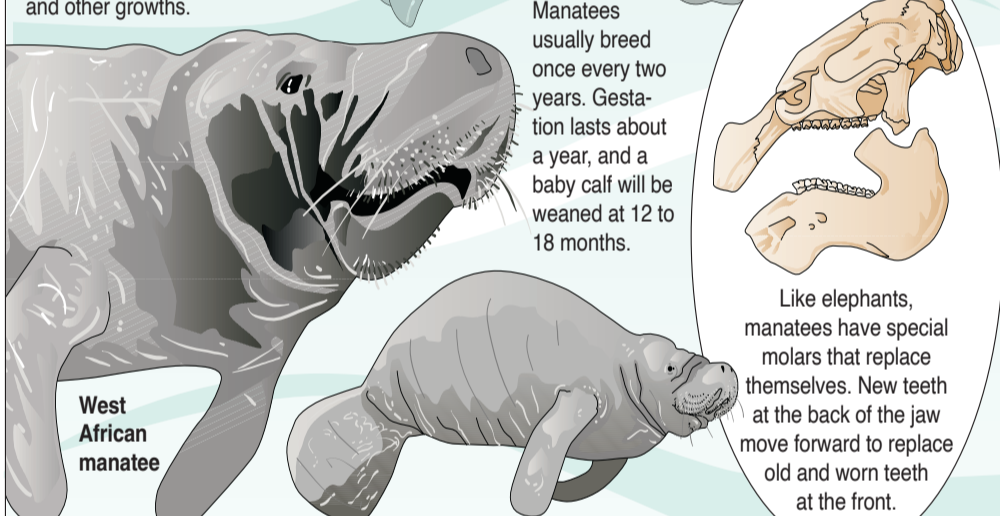
The **West Indian manatee** can grow to 13 feet (4 m) long and weigh as much as 1,300 pounds (590 kg).

Manatees have paddle-like **flippers** with three or four nails.

Manatee skin is finely wrinkled, and the surface layer sloughs off, reducing the buildup of algae and other growths.

It is illegal under federal and Florida laws to injure or harm a manatee.

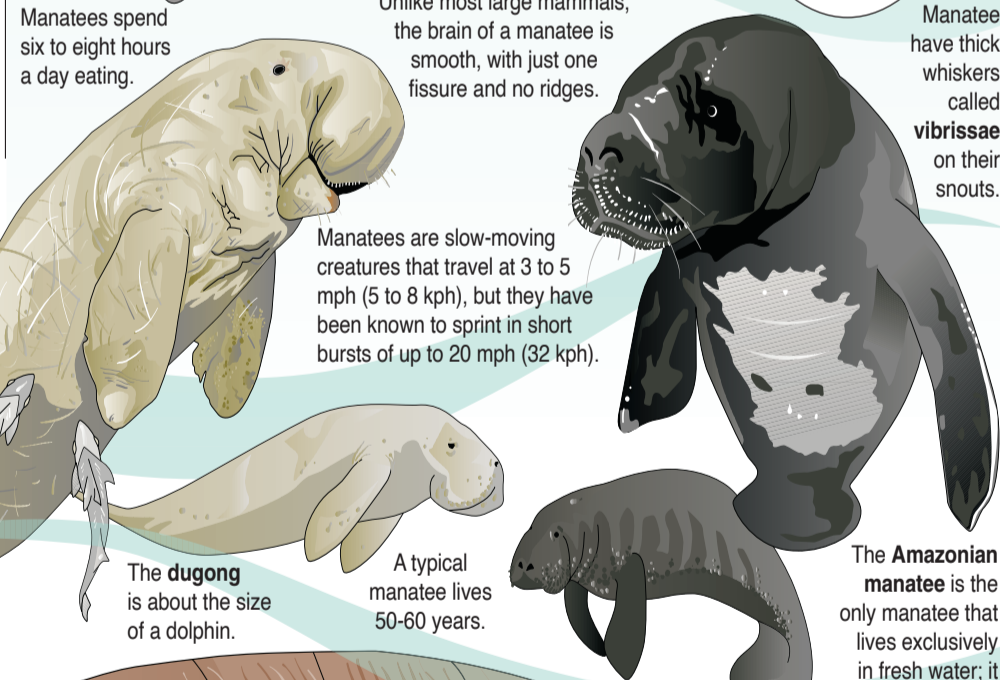
Manatees communicate with sound, sight, smell and touch. Vocalization is frequent between cows and their calves.



Manatees usually breed once every two years. Gestation lasts about a year, and a baby calf will be weaned at 12 to 18 months.



Like elephants, manatees have special molars that replace themselves. New teeth at the back of the jaw move forward to replace old and worn teeth at the front.



Manatees spend six to eight hours a day eating.

Unlike most large mammals, the brain of a manatee is smooth, with just one fissure and no ridges.

Manatee have thick whiskers called **vibrissae** on their snouts.

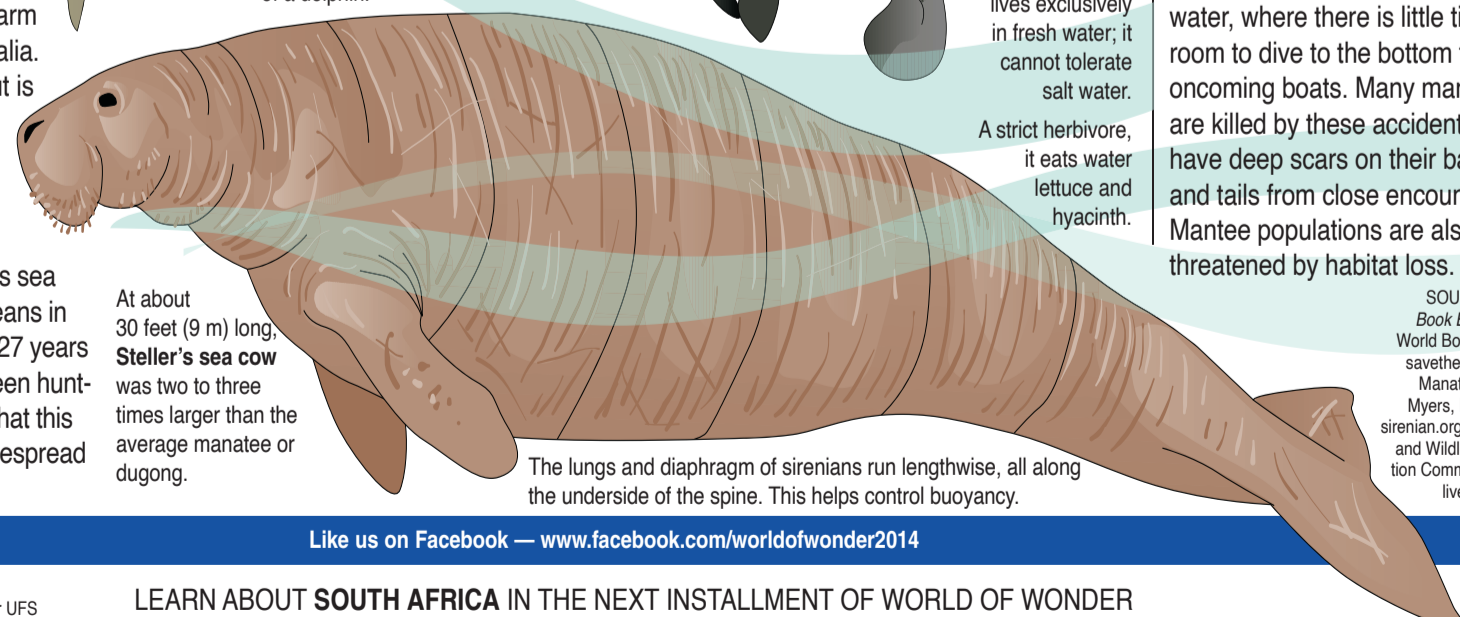
Manatees are slow-moving creatures that travel at 3 to 5 mph (5 to 8 kph), but they have been known to sprint in short bursts of up to 20 mph (32 kph).

The **dugong** is about the size of a dolphin.

A typical manatee lives 50-60 years.

The **Amazonian manatee** is the only manatee that lives exclusively in fresh water; it cannot tolerate salt water.

A strict herbivore, it eats water lettuce and hyacinth.



At about 30 feet (9 m) long, **Steller's sea cow** was two to three times larger than the average manatee or dugong.

The lungs and diaphragm of sirenians run lengthwise, all along the underside of the spine. This helps control buoyancy.

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