



# Marvelous Manatees

## Background Information

### **Manatees are marine mammals.**

Manatees are mammals that live in warm fresh water and seawater. They belong to the scientific order Sirenia, which includes both manatees and dugongs. There are four living species of sirenians: the West Indian manatee (of which the Florida manatee is a subspecies), West African manatee, Amazonian manatee, and the dugong. There was a fifth species of sirenian, the Steller's sea cow, discovered in 1741. In 1768, 27 years after it was discovered, the Steller's sea cow was hunted to extinction.



### **A healthy herbivorous diet.**

All manatees are herbivores—they eat only plants. In fact, adult manatees eat about four to nine percent of their body weight or 15-49 kg (32-108 lb.) each day. Florida manatees, a subspecies of the West Indian manatee, feed on over 60 species of aquatic vegetation including manatee grass, turtle grass, water hydrilla, mangrove leaves, and water hyacinth.

### **Moving molars**

A feeding manatee uses its front flippers and muscular upper lips to bring plants to its mouth. Because it has no front teeth, the manatee relies on the thick, ribbed pads in the front of its mouth to help break vegetation into small, chewable pieces. Manatees have an endless supply of molars. An adult manatee may have six to seven functional molars on each side of its jaw. These grinding teeth form in the rear of the jaw and move forward. As the older molars in the front become worn, they fall out and are replaced by new teeth moving forward from the back of the jaw.

### **Manatee mothers**



A female manatee or cow can give birth to a single calf every three years. The calf begins feeding on plants when it's a few weeks old, but continues to nurse from its mother for about 12 to 18 months. Twins are rare. This long period of nursing allows the calf to learn migration routes, foods, and preferred feeding areas from its mother. Manatees are mostly solitary creatures, but they sometimes gather in unorganized groups of a dozen or more.

### **Staying submerged**

Manatees are usually found at or near the surface. The deepest recorded dive by a West Indian manatee is about 10 m (33 ft.). On average, manatees return to the surface every two to three minutes for air, but can stay underwater for up to 20 minutes. Manatees can renew about 90% of the air in their lungs in a single breath (humans renew only about 10%).

### **Manatee migration.**

All species of manatee migrate during particular seasons. West Indian manatees migrate to areas with warmer waters when water temperatures drop below 20°C (70°F). Historically, these manatees migrated south, however many manatees now migrate to power plant outfalls and other manmade, warm-water discharges. In dry seasons, West African and Amazonian manatees migrate downstream or into deeper parts of rivers and lakes to avoid starvation and predation.

### **Sirenian senses**

Manatees use all of the same senses humans do. Manatees are adapted for hearing low frequencies. Hearing is an important sense between mother and calf for recognition. Manatees have well-developed eyes. They can detect objects from tens of yards away. It's unknown if manatees can see color. Although manatees are able to smell, the accuracy of this sense isn't known.

Manatees also have taste buds and can taste, but we don't know how well.

One of the most important senses for manatees is tactile. Body contact is common between mother and calf. Manatees have been observed making contact with ropes, buoys, logs, rocks, and scuba divers.



### **Manatee mortality.**

It's estimated that as few as 2,000 Florida manatees remain in Florida waters. About ten percent die every year. How do they die? Besides natural causes of death, many are injured and killed in accidents involving boats (boat impact and propellers cause severe injuries). Entanglement, ingesting garbage in the water such as fishing line and hooks, habitat destruction, and poaching are other threats to the manatee's survival. If they continue to die at this rate, this endangered species could become extinct in the next few decades.

### **What can you do to help the manatee?**

The Florida manatee is protected by two major federal government acts: the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973. In Florida, manatees are also protected by the Florida Manatee Sanctuary Act of 1978. Sea World is also involved in saving the manatee. In cooperation with the United States Fish and Wildlife Service and the Florida Department of Natural Resources, Sea World's Animal Rescue and Rehabilitation Team rescues ill, injured, and orphaned manatees and brings them to Sea World. Dedicated animal care specialists and state-of-the-art equipment combine to help the injured manatees recover their strength. Whenever possible, manatees are returned to their natural habitat. More than 35 manatees have been rehabilitated and released by Sea World.