



WILDLIFE AND OFFSHORE DRILLING

The 2010 Gulf of Mexico Disaster: Manatees



MANATEES © JAMES A. SUGAR/NATIONAL GEOGRAPHIC STOCK; OIL RIG © U.S. COAST GUARD

The gentle and curious “sea cow” is one of Florida’s iconic animals, and one of the country’s most imperiled marine creatures, with a population estimated at only 5,000. While manatees reside year-round in the coastal waters of Florida, in warm months they can be found all along the Gulf Coast, and up the Atlantic coast as far as Massachusetts. In addition to the hazards posed by boats, cold weather, habitat loss, discarded fishing gear and red tides, manatees in the Gulf are now faced with a new threat: oil from the BP Deepwater Horizon disaster.

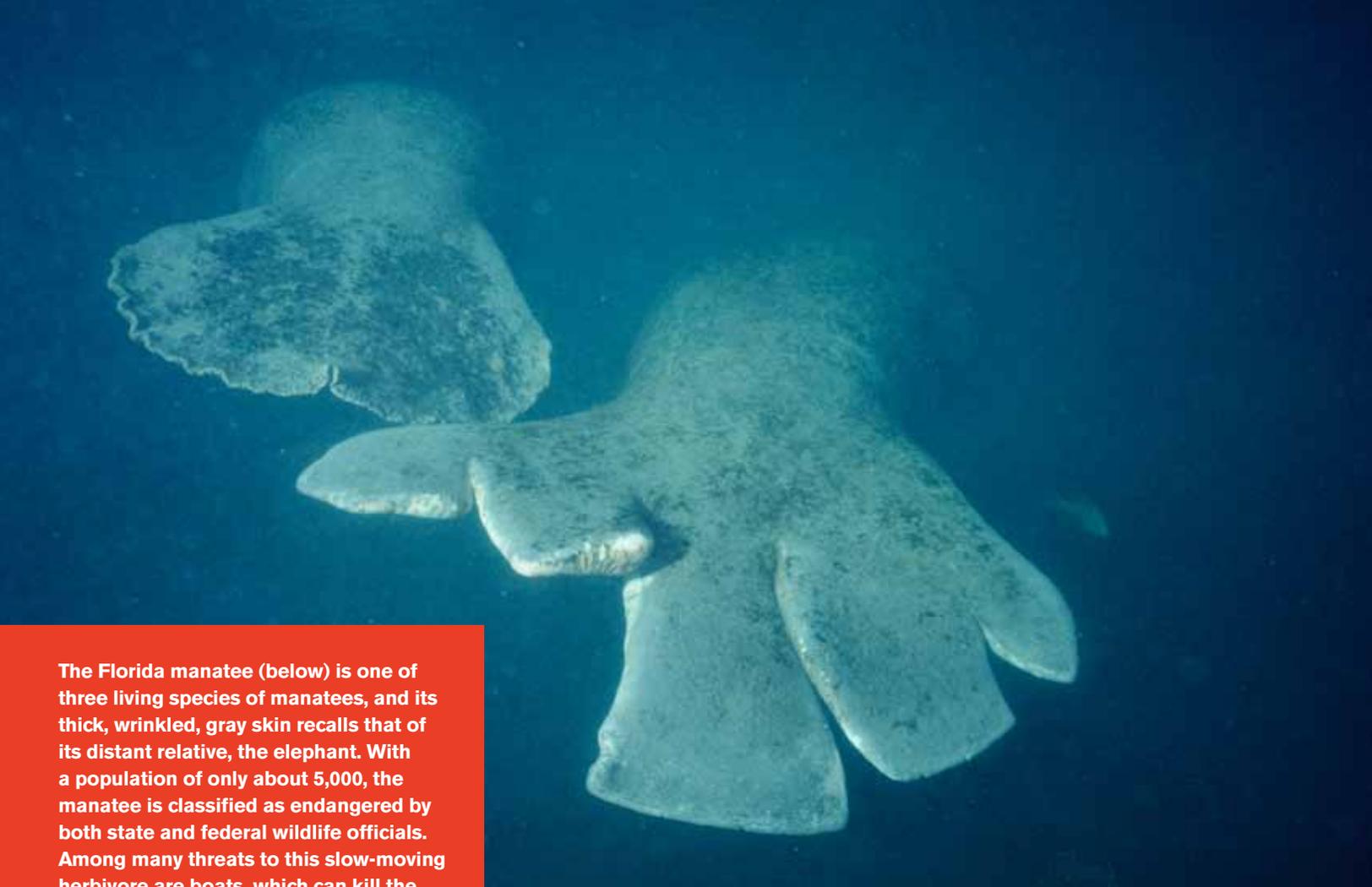
MANATEES IN THE GULF OF MEXICO

Life history and ecology

Florida manatees are large, slow-moving aquatic mammals that graze on vegetation—thus their nickname of “sea cows.” Adults can reach 10 to 12 feet in length and weigh more than 1,500 pounds. They are grayish brown in color and have thick, wrinkled skin. Their front flippers help them steer or sometimes crawl through shallow water. They also have powerful flat tails that help propel them through the water. Despite their small eyes and lack of outer ears, manatees are thought to see and hear well.

The Florida manatee is one of two subspecies of the Antillean manatee and one of three living manatee species. Florida manatees are listed as endangered by the United States and the state of Florida, and they are on the red list of threatened species kept by the World Conservation Union (IUCN).

Although they are primarily found in the estuaries, lagoons, bays and rivers of Florida, when the waters start to warm in early spring, manatees disperse up and down both the Gulf and Atlantic coasts. They stay mostly in shallow intracoastal waterways, lagoons, bays and rivers, but also travel through nearshore waters along the Gulf coast. In



The Florida manatee (below) is one of three living species of manatees, and its thick, wrinkled, gray skin recalls that of its distant relative, the elephant. With a population of only about 5,000, the manatee is classified as endangered by both state and federal wildlife officials. Among many threats to this slow-moving herbivore are boats, which can kill the animals or leave permanent scars on their tails (above) or backs.



warm months, manatees frequently travel up through the Big Bend region of Florida to the Panhandle and beyond. Manatees are repeatedly sighted in coastal Alabama, Mississippi and Louisiana in summer.

Manatees are creatures of the tropics and subtropics, and as such have a low tolerance to water temperatures below 68° F. As waters cool in the fall, they will begin to migrate back to their preferred warm-water habitat in Florida such as power plant outfalls, freshwater springs, deep canals and marina basins.

Like all large marine mammals, manatees are slow to mature, reaching reproductive age at an average of about five years. They have a gestation period of about one year and calves stay with their mothers for one to two years. Usually only one calf is born, although twins occur rarely. Other than the cow-calf pairs and mating herds (several males following a female ready to mate) manatees are generally solitary. But it is not unusual for the animals to gather at warm-water sites, freshwater outfalls and foraging areas.

Manatees move freely between fresh and salt water and are opportunistic feeders, grazing on seagrasses, algae and freshwater vegetation, including exotic plant species.

Threats

The most immediate threats to manatees are watercraft-related mortality and injury, and cold-related stress. Although manatees will try to avoid approaching boats, they are often

too slow to get out of the way and many living manatees bear scars from multiple encounters with fast-moving boats.

Other threats to manatees include destruction and degradation of their coastal and freshwater habitat. Loss of habitat in nearshore waters, estuaries, freshwater springs and along rivers, as well as the associated influx of people, eliminates areas manatees use for foraging, resting, mating and rearing young.

Manatees are also affected by outbreaks of toxic algae known as red-tide events. Manatees can be harmed from red tide by breathing in its toxic aerosols at the water's surface, or ingesting the algae along with the aquatic plants they normally eat. Climate change may be exacerbating the occurrences of red tide.

MANATEES AND OIL SPILLS

Little is known about the impact of oil on manatees. In one instance, after a crude oil spill in the Persian Gulf in 1983, 37 dugong (a relative of the manatee) carcasses washed ashore. No post-mortem examination of the carcasses was undertaken, and the exact cause of death was never established.

The impacts of oiled water on manatees would likely be similar to those on small whales and dolphins. The mucous membranes, primarily of the eyes and mouth, could be irritated or become infected. The lungs could become inflamed from breathing volatile vapors. Prolonged exposure to oil could also cause skin lesions and infections. Potential long-term effects from exposure could include organ dysfunction and suppressed immune response.

Manatees generally feed on seagrasses growing in 3 to 6 feet of water, so if the oil mixes in the water column or settles out in seagrass beds and is ingested, it could cause gastrointestinal harm.

Because manatees have thick skin and a fat layer that protects them, and because they are migratory and therefore can leave an affected area, the direct effects of swimming through oily water may be minimized. Calves do not have such protections—their skin and subcutaneous fat is relatively much thinner—so they are probably at greater risk. In addition, calves can ingest oil if nursing from oil-fouled teats.

WHAT CITIZENS CAN DO

- Never discard fishing line, tackle or other plastic substances that might entangle or be consumed by manatees.
- Reduce the amount of garbage you produce and clean up trash you see on the beach and in other coastal and freshwater habitats.
- Be alert and operate your boat responsibly in waters where manatees may be present. Obey all speed limits.
- Do not disturb manatees.
- Report manatees injured by collisions with boats, or those that appear to be in distress, to your state wildlife agency immediately. (Florida: 888-404-3922; Mississippi: 601-432-2400; Texas: 800-792-1112; Alabama: 866-493-5803; Louisiana: 225-765-2800)
- Report oiled manatees or other wildlife to the Deepwater Horizon wildlife distress hotline immediately: 866-557-1401.





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There is little scientific information about the impacts of oil on manatees. But it is likely that oil would irritate their mucous membranes and oil vapors could inflame their lungs. Prolonged exposure could cause skin lesions, infections and organ dysfunction. Manatee calves, which have thinner skin and less fat, are at greater risk from oil exposure.

- Reduce your use of chemicals such as fertilizers and pesticides that can wash from gardens and lawns into coastal waters, harming plants and animals.
- Urge your elected officials to enact policies that secure coastal areas, springs, rivers and other important manatee habitat from development and improve management policies for coastal and freshwater systems.

WHAT POLICY MAKERS CAN DO

- Ensure that manatees are protected in oil spill cleanup operations.
- Support efforts to reduce immediate threats to manatees from boating impacts and long-term threats from loss of warm-water habitat and seagrass beds.
- Support funding for the U.S. Fish and Wildlife Service to enable a long-overdue revision of manatee critical habitat so that nursery, foraging, resting, traveling and other essential areas are identified and prioritized for conservation.
- Ensure that manatees are protected from human harassment in manatee sanctuaries.
- Impose greater safety and environmental standards and develop comprehensive spill response plans on existing offshore drilling operations.
- Prevent expanded drilling operations off the coast to limit future spill risks.
- Enact comprehensive energy and climate change policies to transition away from harmful oil and fossil fuels.

REFERENCES

- Fertl, D., A.J. Schiro, G.T. Regan, C.A. Beck, N. Adimey, L. Price-May, A. Amos, G.A.J. Worthy, and R. Crossland. 2005. Manatee occurrence in the northern Gulf of Mexico, west of Florida. *Gulf and Caribbean Research* 17: 69-94.
- Impacts of Oil on Marine Mammals and Sea Turtles. NOAA Fisheries Service. http://sero.nmfs.noaa.gov/sf/deepwater_horizon/Marine_mammals_turtles_FACT_SHEET.pdf
- Lefebvre, L. W., T.J. O'Shea, G.B. Rathbun, and R.C. Best . 1989. Distribution, status, and biogeography of the West Indian manatee. In: C.A. Woods (ed.). *Biogeography of the West Indies*. Gainesville, FL: Sandhill Crane Press. p. 567-610.
- Powell, J.A., and G.B. Rathbun. 1984. Distribution and abundance of manatees along the northern coast of the Gulf of Mexico. *Northeast Gulf Science* 7(1): 1:1-28.
- Preen, A. 1989: Technical Report, Dugongs, Volume 1: The status and conservation of dugongs in the Arabian Region, MEPA Coastal and Marine Management Series, Saudi Arabia.
- Worthy, G.A., T.A. Miculka, S.D. Wright. 1999. Manatee response to cold: How cold is too cold? In *Florida Manatees and Warm Water: Proceedings of the Warm Water Workshop*. August 24-25, 1999, Jupiter, Florida. U.S. Fish and Wildlife Service. Jacksonville, Florida.



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