

Fish & Wildlife Conservation Commission

Florida Marine Research Institute

Pursued by humans for more than eight centuries, the northern right whale is the most endangered marine mammal in U.S. waters. Because it swims slowly, floats when dead, and yields large amounts of oil and baleen (whalebone—an elastic, horny substance that was often used in corsets), the northern right whale was easy and profitable to hunt, so it was designated by hunters as the “right” whale to kill. Commercial organizations considered right whales economically extinct by the early 1900s, but whalers in search of other species still occasionally killed right whales. Legislators banned right whale hunting in 1931, and researchers estimate that about 300 right whales exist today.

The shallow waters from Savannah, Georgia, to Port Canaveral, Florida, are the only known calving area of this benign behemoth; therefore, Florida takes a special interest in right whales and in their calving area. Because right whales

RIGHT WHALES

Giants in Jeopardy

continue to be threatened by human-related events such as ship collisions, officials and scientists are pursuing methods to help boat crews avoid right whales, especially in the calving area.

Description

The right whale is one of four species of large whales that lack a dorsal fin; the other three species are the bowhead, the gray, and the sperm whale. A baleen whale (one without teeth), the right whale uses finely fringed plates of baleen to strain tiny animals, such as copepods, from the water. Each plate can be 8-9 feet long. The right whale has broad, short flippers under its chest and a pair of long tail fins, called flukes, that are usually raised high into the air before the whale begins a deep dive.

A right whale has black or dark gray skin and distinctive callous growths, called “callosities,” on its head. White cyamids, also known as whale

AT A glance	Scientific name	<i>Eubalaena glacialis</i>
	Size	To 55 feet, up to 70 tons
	Life expectancy	More than 70 years
	Range	Eastern coast of North America
	Habitat	Coastal waters
	Status	Federally listed as an endangered species
	Estimated population	About 300

Whale art after Howard Hall photo; used with permission.





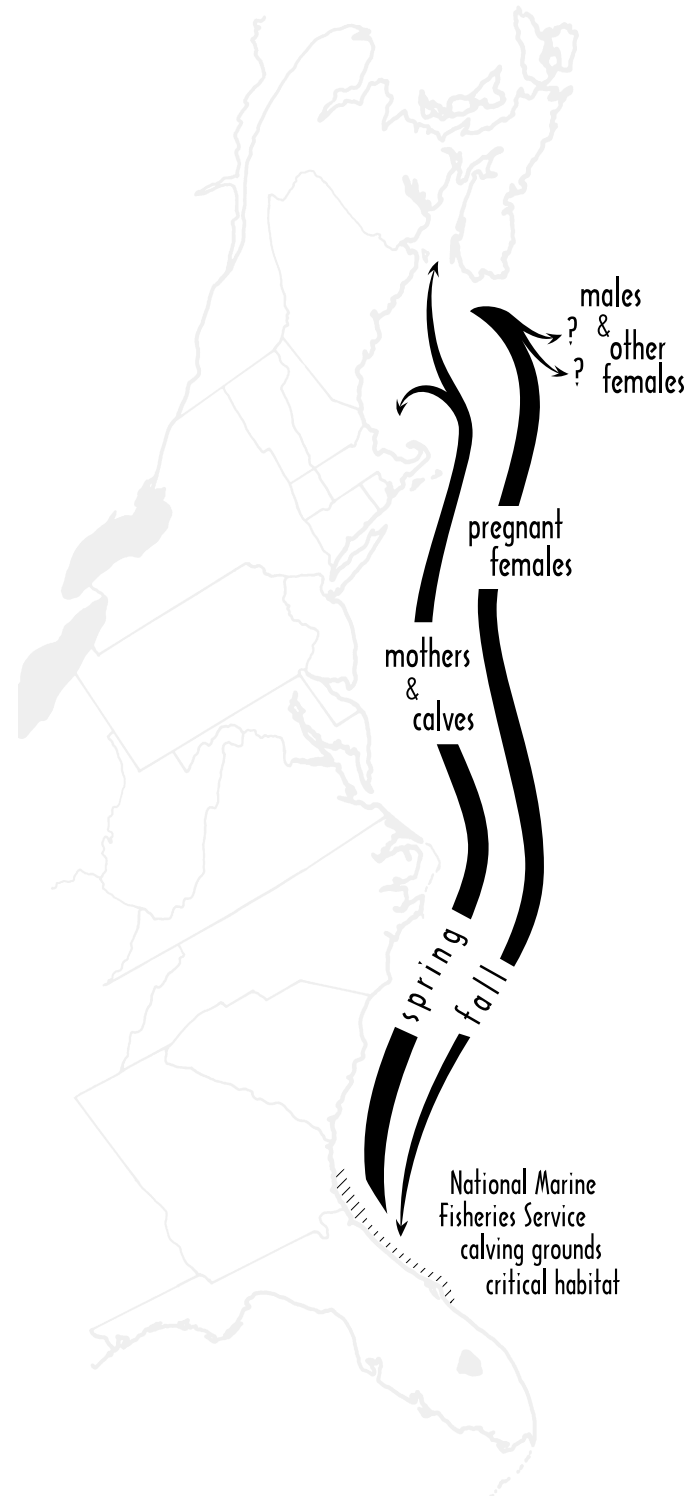
lice, often cover these growths. The largest of these callosities, on the whale's snout, is called the bonnet, and these growths help scientists identify individual right whales. Another characteristic that scientists use to identify right whales in the water is their v-shaped blow. Through two blow holes, right whales inhale and exhale when they surface, and the widely separated blow holes of the right whale produce this distinctive v-shaped blow, reminiscent of a geyser, that sometimes shoots as high as 16 feet in the air.

From tail to head, the length of a right whale can be equal to the height of a five-story building, and it can weigh as much as a fully loaded military transport plane. Their rotund shape has earned them the moniker "tugboat of whales." Although they swim only about four miles per hour, they are remarkably acrobatic, performing underwater turns and pirouettes gracefully and executing near-vertical dives after they breach the water's surface. They also wave their flippers and slap the surface with them.

FAST FACT

Right whale calves weigh one ton—2,000 pounds—at birth, and they grow more than a half inch every day for the first ten months of their lives.

Their massive size likely contributes to the species' slow reproductive rate. A female right whale can begin giving birth at 8 to 12 years of age, but she can reproduce only once every three to five years. A calf usually remains with its mother until it is about one year old and 28 feet long. Scientists have estimated that about 12 births occur every year. Although they noted a record high of 22 births in 1996, researchers recorded only 6 births in 1993, 8 in 1994, and 7 in 1995. These numbers represent a four-year average that is lower than prior numbers. Mothers and their calves are the right whales usually seen in Florida waters.



Range and Distribution

Although it seems impossible to lose sight of animals as large as right whales, much about the



wanderings of these huge animals remains a mystery. Scientists do not know where males and non-pregnant females go during winter months. However, in the mid 1970s, researchers identified Florida and Georgia coastal waters as a calving area. From December through March of each year, pregnant right whales come to the calving area to have their young, and scientists and members of public sighting networks observe them in these waters of the Atlantic Ocean. Calves remain with their mothers for spring and summer travels and are weaned in late fall.

In the late winter and early spring, right whales travel to a feeding and nursery area in Cape Cod Bay, Massachusetts. The summer gathering place for mothers with first-year calves is the Bay of Fundy, just north of the U.S.-Canadian border between Maine and Nova Scotia, whereas the summer place for males and females without calves is at an Atlantic Ocean courtship area in the Roseway Basin south of Nova Scotia. By mid-November, pregnant females head south to the calving area, and other right whales move toward a destination that is still a puzzle to researchers.

FAST FACT

An average of 20 to 35 female and juvenile right whales annually make the journey to the calving area, designated as critical habitat, off Florida and Georgia.

Northern right whales are closely related to southern right whales, which live in coastal waters off South America, Africa, and Australia. However, they are considered a separate species. Southern right whales have increased in numbers since whaling was banned.

Behavior and Threats

Herman Melville, author of *Moby Dick*, warned as early as 1851 that hunting right whales could cause the species to “vanish from the face of the

earth.” However, it was not until the mid-1930s that the League of Nations (the forerunner of the United Nations) persuaded most whaling countries to stop hunting right whales. The International Whaling Commission banned all hunting of right whales in 1949. Even with this international protection, northern right whale populations have not increased, and experts consider right whales the whale species most susceptible to extinction.

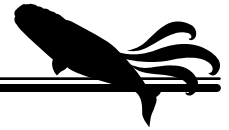
FAST FACT

Between 1804 and 1876, U.S. whalers killed an estimated 193,522 right whales worldwide.

Right whales have only one natural predator: killer whales. However, only 3% of right whales have scars caused by killer whale attacks. This means that shipping—both commercial and military—poses the biggest threat to right whale survival. Although ships are no longer armed with harpoons, some ships, such as tankers and freighters, may be as long as a football field and equipped with propellers that can measure as large as 15 to 30 feet in diameter. These huge blades can shatter right whales’ spines or slice their tails. Collisions with such vessels are responsible for 30% of the right whale deaths documented during the past 15 years in the North Atlantic Ocean.

Unfortunately, right whales usually aren’t wary of boats or people; for example, researchers are sometimes able to maneuver inflatable boats within 100 yards of them. Their placid nature and habit of resting on the surface of the water like giant logs makes them more vulnerable to collisions with ships, and the whales often cannot dive deep enough in the shallow waters they inhabit to avoid being struck.

Survivors of encounters with ships often bear telltale scars that researchers photograph as a means of cataloging individuals. The danger of collision is magnified in the calving area because



of the major port facilities in Georgia at Savannah, Brunswick, and Kings Bay Naval Submarine Base and in Florida at Fernandina Beach, Jacksonville, Mayport Naval Station, and Port Canaveral. Right whales may also be injured as a result of becoming entangled in gill nets or in fixed or discarded fishing gear. Pregnant females and mothers and their sometimes curious young appear to be the most vulnerable to becoming entangled in marine debris.

Future threats to the whales and their habitat, especially feeding areas, include pollution and oil spills that could result from an increase in coastal development and from the proposed offshore leasing for oil and gas drilling. Researchers are also unsure of the effects that noise from increased vessel traffic and drilling could have on the species. Scientists expect that any such disturbances will negatively affect right whales and their habitat.

To manage existing right whales, scientists study the animals' behavior and movements, protect identified habitats, and work to develop regulations that keep people and whales a safe distance apart. Proposed federal rules would require everyone but researchers with permits to stay 500 yards away from right whales. Additionally, coastal waters from south Georgia to Port Canaveral, the Great South Channel east of Cape Cod, and Cape Cod Bay have been designated as critical habitat for right whales.

To protect the whales from boats, scientists have developed a warning system in which ships traveling in the calving area are quickly notified of whale sightings. This information helps captains to steer clear of these huge floating "roadblocks." Researchers have also worked with the port communities in developing guidelines urging mariners to post whale lookouts while in the calving area

and to travel at slower speeds to avoid collisions. Florida Marine Research Institute, along with numerous government and private enterprises, received the Federal 1997 Partnership Award in recognition of the high level of effective cooperation among these partners to reduce the likelihood of collision between ships and whales.

By implementing a plan for the recovery of northern right whales, federal officials seek to increase the right whale population from 300 to 7,000 individuals. Because of the species' extremely slow reproductive rate, more than 150 years may be needed for this goal to be reached.

More immediately, researchers from the Florida Fish & Wildlife Conservation Commission (FWC), along with scientists from the New England Aquarium, Georgia Department of Natural Resources (GDNR), and U.S. Navy, conduct annual aerial surveys of the calving grounds. They record the number, sizes, and estimated ages of any right whales that they see and note the number of ships in the area. In one month during the calving season, researchers observed 310 vessel trips in and out of the Jacksonville port alone. In the winter of 1995-1996, FWC and GDNR researchers broadened their surveys to include water farther offshore of Florida and Georgia, where right whales have been sighted. This information may be used to expand the boundaries of habitat critical to the survival of right whales. During this same winter, scientists documented a record number of more than 90 right whales off the Florida and Georgia coasts. Twenty-two of these whales were expectant mothers. This information is an encouraging sign that future generations of Floridians will be able to witness these awesome marine mammals playing and rearing their young along the state's eastern shore.



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