

## Avoiding collisions with right whales

by Katherine Colborn,

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On January 30, 1996, a sailing vessel reported a right whale floating about 30 miles off Blackbeard Island, Ga. After much effort and with the help of state officials and several local shrimpers, the whale was brought to shore behind a 73-foot trawler. It was a large adult male, 47 feet in length. Researchers knew the whale as "Lindsay," #1623, a male who had been seen often over the years participating in courtship groups in the waters south of Nova Scotia. The whale's skull had been shattered, some of its vertebrae crushed, and its ribs broken. It had been killed, almost instantly, by a large ship.

At one time, several thousand right whales lived in the North Atlantic Ocean. Today, only about 300 live there. The species is faced with the very real threat of extinction. Human-related mortality, including that caused by collisions with ships, is keeping the population small. Scientists, conservationists, and mariners in both the United States and Canada are working to address the threat of ship strikes, but they need help and collaboration from the marine shipping community. The shipping industry has made a number of important contributions to reducing ship strikes, but the threat lingers.

Ship strikes kill more right whales than any other documented source of human-related mortality. Best estimates indicate that an average of about two deaths or serious injuries per year result from collisions with ships, and since 1991 about one-half of all recorded right whale deaths have been attributed to ship strikes. This may represent only a fraction of the total number of whales killed by ships, as many deaths may go undocumented if whales drift out to sea. Fatal collisions with ships may be contributing to the right whale's ultimate demise, but they can be prevented if mariners take precautionary steps (see sidebar).

While ships may hit individuals of any large whale species, right whales are especially susceptible. No other species

sustains such a large percentage of deaths due to ship strikes. Their behavior undoubtedly contributes to this vulnerability. They live close to shore, in waters with heavy ship traffic. Their feeding and calving areas and migratory corridors are crossed by shipping routes. Right whales also spend much of their time at the surface, feeding, resting, mating and nursing. Occasionally groups of a dozen or more individuals can be found at the surface, and groups of 40 animals are not unheard of when mating is at a peak. Particularly vulnerable are calves, which remain near the surface due to their undeveloped diving capabilities. At the surface, right whales appear focused on what they are doing, may not be able to hear approaching ships, and may make little effort to move from the path of oncoming ships. Therefore, one cannot assume that whales will avoid a ship. Mariners may have difficulty seeing right whales because of their dark color and low profile in the water. In some cases, ships may hit right whales without ever knowing a collision occurred.

Right whales are protected in U.S. waters under the Endangered Species Act and the Marine Mammal Protection Act, and in Canadian waters by Marine Mammal Regulations pursuant to the Canadian Fisheries Act. The United States and Canada have taken several steps to reduce the likelihood of ship strikes. The National Marine Fisheries Service (NMFS) has designated three right whale "critical habitats" along the east coast of the United States: Cape Cod Bay, the Great South Channel, and the waters off the coast of Georgia and Florida from Altamaha Sound, Ga., to Sebastian Inlet, Fla. These areas are essential to the survival of right whales because of their importance as seasonal feeding and nursery areas. The Gerry E. Studds Stellwagen Bank National Marine Sanctuary, which includes Stellwagen Bank and Jeffreys Ledge, has also been federally designated due to its importance to right whales. In Canada, three whale conservation areas have been provincially designated: the Bay of Fundy, Brown's Bank south of Nova Scotia, and the Roseway Basin south of Halifax. In the United States, the boundaries of these habitats are

marked on regional nautical charts to alert mariners of the potential occurrence of right whales. Mariners should be particularly alert when transiting these areas, and it is recommended that a trained lookout be posted.

Even when not in designated "critical habitat" or "whale conservation" areas, mariners should be on the lookout for right whales. While more common in critical habitats, right whales occur along the entire eastern seaboard of the United States and Canada. The population migrates seasonally from calving grounds in the southeast to feeding and mating areas in the northeast. From December through March, right whale calves are born off the coasts of Georgia and Florida. In March and April, the whales and their calves migrate northward, often swimming within 20 miles of the coast. The whales then move from feeding ground to feeding ground in the northeast, following their prey—copepod plankton and krill. Right whales occur seasonally in Cape Cod Bay (peak season: January through April); the Great South Channel (peak season: April through June); Stellwagen Bank (peak season: July through September); Jeffreys Ledge (peak season: July through mid-December); the Bay of Fundy (peak season: June through December); and Brown's Bank and the Roseway Basin (peak season: August through September).

For years, right whales were considered the "right" whale to hunt (thus the species' common name). Their coastal distribution, slow swimming speeds and the fact that they float when dead made right whales the ideal target for whalers. By the 19th century, uncontrolled hunting brought the species to the brink of extinction. Since 1935, right whales have been protected from hunting internationally, first by the League of Nations and now by the International Whaling Commission.

Even though right whales have been protected for over 60 years, their numbers have not increased substantially. The population is believed to be stable or increasing slightly, and its growth rate is lower than that of most other large whale species. Low growth rate and low abundance contribute to the right whales' precarious status, and hu-

man-related mortality appears to be slowing recovery. Because right whales are critically endangered, the loss of any individual, particularly calves or reproducing females, has serious consequences for the recovery of the species.

Threats to right whales include ship strikes, entanglement in fishing gear and habitat degradation. Natural causes of death cannot be controlled, but reducing the number of human-caused deaths is essential to this species' recovery. In particular, some ship strikes may be preventable. Based in part on recommendations from the shipping industry, precautionary measures for avoiding whales have been developed. These precautionary measures, along with information about right whales, can be

provide mariners with information on the locations of right whales to reduce the number of ship strikes.

In the southeast United States, right whale surveys are conducted from December through March (the peak calving period). This information, along with sightings from surveys conducted by state biologists and reports from naval vessels and other sources, is coordinated by the Navy's Fleet Area Control and Surveillance Facility in Jacksonville, Fla. The Navy forwards these reports to its vessels and to the Coast Guard for relaying as Broadcast Notice to Mariners (VHF and SSB), and NAVTEX (telex updates).

In the northeast, seasonal (January to June) right whale advisories and

Massachusetts Executive Office of Environmental Affairs and the NMFS (<http://www.nero.nmfs.gov/ro/doc/whale.htm>) and on WhaleNet ([http://whale.wheelock.edu/whalenet-stuff/reportsRW\\_NE/](http://whale.wheelock.edu/whalenet-stuff/reportsRW_NE/)). An NMFS inquiry line also provides right whale sighting faxes to anyone requesting such information (508-281-9278). Although surveillance surveys provide real-time locations of some right whales, the surveys' coverage is not complete: only an estimated 20 to 35 percent of the whales present are sighted, and surveys cannot be flown in bad weather or at night. Until more reliable methods are developed, mariners should take precautions to avoid collisions with whales.

In order to reduce ship disturbance of right whales, U.S. federal regulations have been established to govern vessel approaches. Boats and aircraft must stay a minimum of 500 yards (460 m) away from all right whales, and should not approach them from a head-on direction. If a vessel finds itself within the 500-yard restricted area, it must steer a course away from the whale and immediately leave the area at a slow, safe speed.

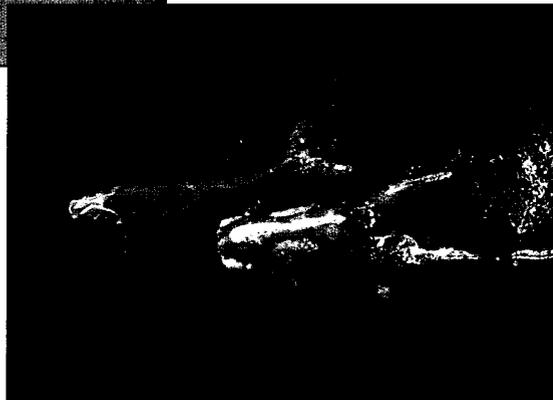
The United States has also submitted a proposal for consideration to the International Maritime Organization (IMO) for a mandatory ship reporting system in right whale-critical habitat. If adopted by the IMO, the system is expected to begin operation in mid-1999 and will require all ships over 300 gross tons to report their location, speed and destination to a shore-based station. In return,

the mariner will receive information about right whales. The system requires reporting only and will affect no other aspect of vessel operation; there will be no cost to the mariner. The goal is to alert mariners to right whale vulnerability and to provide information on avoiding whales.

Additional precautionary steps might be taken to avoid collisions with whales. As discussed by the right whale recovery plan implementation team in the southeast region, these may include limiting the time and distance traveled in right



**Left:** A number of living right whales bear propeller scars, but many ship-whale collisions are fatal. Propellers of large ships can slice a whale's flesh, and bones can be crushed by a ship's bow. **Below:** Right whales can be identified by their black color, deeply notched tail flukes, paddle-like flippers and paired blow-holes that produce a distinctive V-shaped blow.



found in regional U.S. Coast Pilots, Notice to Mariners No. 1 and other publications, as well as on charts. (Some charts and Coast Pilots are currently being updated to include right whale information.) Educational materials, videos, and right whale placards are also available from shipping agents, port authorities, port pilots, relevant state agencies, the U.S. Coast Guard and the NMFS. By following the precautionary measures, mariners can significantly contribute to recovery efforts of the northern right whale.

In both the northeast and southeast United States, the NMFS has established regional teams composed of representatives of government agencies, the maritime industry, the scientific community, and private groups to coordinate and oversee right whale protective measures, including efforts to reduce ship strikes. These teams have developed aircraft and some vessel surveys to

sightings are reported to the NMFS Northeast Regional Office in Woods Hole, Mass., and broadcast periodically 24-hours a day by Coast Guard Broadcast Notice to Mariners, NAVTEX, NOAA Weather Radio and Cape Cod Canal Vessel Traffic Control. In addition, the Canadian Coast Guard and Department of Fisheries and Oceans issue right whale advisories for the Bay of Fundy in the months of June through November. Maps of right whale sightings are also posted on Internet web pages maintained by the

## Avoiding a collision

The following is a list of steps mariners can take to avoid collisions with critically endangered right whales.

### When transiting right whale-critical habitat

- As soon as possible prior to entering right whale critical habitat, check U.S. Coast Guard Broadcast Notice to mariners, NAVTEX, NOAA Weather Radio, Cape Cod Canal Vessel Traffic Control, the Bay of Fundy Vessel Traffic Control and other sources for recent right whale sighting reports.
- When entering ports on the U.S. East Coast, refer to Coast Pilot and Notice to Mariners, review right whale identification material describe in those documents and maintain a sharp watch with lookouts familiar with spotting whales. Ask port officials, port pilots and Coast Guard officers for additional information on right whales.
- When planning passages through right whale-critical habitat, attempt to avoid nighttime transits, and whenever practical minimize travel distances through the area.
- When the ability to spot whales is reduced (e.g., night, fog, rain, etc.), mariners should bear in mind that reduced speed may minimize the risk of ship strikes.

### In all coastal and offshore waters along the East Coast of the U.S. and Canada

- If a right whale sighting is reported within 20 nm of a ship's position, post a lookout familiar with spotting whales.
- If a right whale is sighted from the ship or reported along the intended track of a large vessel, mariners should exercise caution and proceed at a slow, safe speed when within a few miles of the sighting location, bearing in mind that reduced speed may minimize the risk of ship strikes.
- Do not assume right whales will move out of your way. Right whales, generally slow moving, seldom travel faster than five or six knots. Consistent with safe navigation, maneuver around observed right whales or recently reported sighting locations. It is illegal to approach closer than 500 yards of any right whale (see 50 CFR 222.32, Chapter 2).
- Any whale accidentally struck, any whale carcass spotted, and any whale entangled in fishing gear should be reported immediately to the U.S. or Canadian Coast Guard, noting the precise location and time of accident or sighting.\*

Right whales can occur anywhere along the East Coast of the U.S. and Canada. Mariners are urged to exercise prudent seamanship in their efforts to avoid right whales.

*\*In the event of a strike or sighting, the following information should be provided to the Coast Guard:*

- |                                     |                              |                         |
|-------------------------------------|------------------------------|-------------------------|
| » location and time of the incident | » speed of the vessel        | » size of the vessel    |
| » water depth                       | » wind speed and direction   | » description of impact |
| » fate of the animal, if known      | » species and size, if known |                         |

whale habitat by taking a perpendicular course into and out of ports in this region; and, when and where possible, slowing vessels (e.g., to less than 15 knots) at night and in other periods of limited visibility. The NMFS is asking that mariners help identify other ways to reduce the threat of ship strikes. If ship operators have suggestions of ways to reduce the possibility of collisions with whales, or if they have questions, they are urged to contact Gregory Silber at the National Marine Fisheries Service, Office of Protected Resources, 1315 East-West Highway, Room 13734, Silver Spring, Md. 20910. •

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Professional Mariner #35  
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