

Acoustic buoy now detecting rare, endangered whales in New York Bight

November 16 2016



A North Atlantic right whale with its tail flukes above the water's surface. This species was recently detected by Melville, an acoustic buoy designed to listen for whales and deployed by WCS's New York Aquarium and Woods Hole Oceanographic Institution. Credit: Photo taken by Georgia Department of Natural Resources under NOAA permit #15488.

An acoustic buoy recently deployed by the Woods Hole Oceanographic Institution (WHOI) and WCS's (Wildlife Conservation Society) New York Aquarium is making its first near real-time detections of two rare great whale species in the New York Bight, including the highly endangered North Atlantic right whale.

On November 14th, the hi-tech buoy named "Melville" detected the telltale "up call" of the North Atlantic right whale, one of the world's highly endangered whale species that numbers only 500 individual animals. It is the second detection of a North Atlantic right whale made by the buoy since October 26th. The acoustic buoy made another rare find on October 31st with the detection of a sei whale, a species that grows up to 65 feet in length and is rarely observed in New York waters.

North Atlantic right whales are particularly vulnerable to getting hit by ships, so any information on the whereabouts of these animals along the coast is important. Researchers from WCS and WHOI report that the North Atlantic right whale detected on October 26th was outside of the New York Harbor Seasonal Management Area (SMA), one of a series of zones along the eastern seaboard established to protect the slow-swimming whales with boat speed restrictions during their migration periods. Vessel speed restrictions for the mid-Atlantic seasonal management areas—including the SMA in New York Bight—runs between November 1st and April 30th.

"Having the ability to detect North Atlantic right whales and other species rarely seen in New York waters is extremely important given their endangered status," said Dr. Howard Rosenbaum of WCS's Ocean Giants Program and co-lead of the WCS New York Aquarium-WHOI project. "In particular, our ability to detect North Atlantic right whales in this area near the shipping lanes but outside these seasonal management areas will hopefully help with efforts to safeguard this highly endangered species in the New York Bight."

"Ships are a significant hazard to whales in the New York region; the highest incidence of ship struck whales on the U.S. east coast occurs between the New York Bight and Chesapeake Bay. This new technology can help ships avoid lethal encounters with whales by alerting ship captains to the presence of the whales," said WHOI scientist Dr. Mark Baumgartner, developer of the whale detection software for the acoustic buoy and co-lead of the acoustic buoy project.

The North Atlantic right whale grows up to nearly 60 feet in length and is called the "right" whale because the first commercial whalers deemed it the best species to hunt. Consequently, this coastal whale was nearly wiped out by whaling fleets before receiving international protection in the 1930s. Recent research indicates that, despite modest population growth during the 2000's, the species is now in decline and its existence remains threatened by ship strikes and entanglement in fishing gear.

Sei whales are currently listed as "Endangered" on the IUCN's Red List and were also heavily exploited by commercial whaling fleets before becoming protected by federal and international laws. Little is known about this elusive giant, so any data on its presence in New York's coastal waters can help in management decisions. The WCS-New York Aquarium/WHOI research effort has now detected three [whale species](#) in New York Bight: the North Atlantic right whale, the sei whale, and the second largest animal on the planet, the fin whale. The acoustic buoy's most recent detection (made today—November 16th) was a fin whale, one of several detections of fin whales made since the buoy was deployed to its current location 22 miles south of Fire Island on July 23rd.

Information about sounds detected by the buoy, including whale vocalizations, are transmitted by satellite to computers in Baumgartner's laboratory in Woods Hole, Massachusetts. The data are analyzed by Julianne Gurnee of the NOAA Northeast Fisheries Science Center, a

partner in the buoy project, and posted on a public website as well as through WCS's New York Aquarium as part of its Blue York Campaign.

The acoustic work by the WCS-New York Aquarium/WHOI complements previous acoustic research conducted by the Cornell's Bioacoustics Research Program, efforts by New York's Department of Environmental Conservation, along with collaborations with local NGOs such as the Coastal Research and Education Society of Long Island (CRESLI), Gotham Whale, and the Riverhead Foundation for Marine Research and Preservation.

"WCS is known for working to save elephants, tigers, and other threatened species around the world," said Jon Forrest Dohlin, Vice President and Director of WCS's New York Aquarium. "We're also doing important science right here in New York Bight by learning more about the North Atlantic right whale, one of the most endangered [whales](#) on the earth."

Provided by Wildlife Conservation Society

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