

Right whale gets lassoed

by Rebecca Love, project coordinator, Northeast Consortium
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Photo: Stormy Mayo

It is sunny and calm day in inner Marion Harbor, Massachusetts; a perfect day for catching a whale. Not a real whale, of course, but a life-sized fiberglass model of the North Atlantic right whale tail. The model looks amazingly realistic. So realistic that local residents have called the town's police department. Charlie Bradley, the Marion Harbormaster, pulls alongside our boat. "The phones are ringing off the hook at the police station," he calls out. "People think we got a sick whale in the harbor."

Becky Woodward from the University of Maine uses the tail model to test her net gun system as a possible restraining device for right whales. The gun was adapted from a device used to capture land animals such as moose and deer developed by Coda Enterprises. The net is propelled by a .308 blank cartridge and encircles the flukes. Ideally, the net gun should be fired about 40 feet from the tail. When fully opened, the trapezoid-shaped net is 20 feet across on the top, 14 feet long along the sides, and 10 feet across along the bottom. Woodward is a doctoral candidate studying the biomechanics of whales, but she used to work on a ranch in Montana, which may help explain why she is so adept at lassoing whale tails.

"It's sort of like trying to lasso a bull's horns," she points out. At first, Woodward successfully captured the whale tail one out of four times, but by mounting the gun on a solid boom with adjustable pan and tilt, the trials were much more successful and surprisingly repeatable.

Dr. Paul Brodie, a research scientist and sculptor from Halifax, Nova Scotia, created the right whale tail. The idea of testing restraining techniques and better methods of assessment grew out of a 2001 workshop funded by the Northeast Consortium. The workshop was hosted by researcher Michael Moore of the Woods Hole Oceanographic Institution. The original goal of the workshop was to design a remotely operated robotic device that can "walk" across the surface of a whale's body or entangling ropes, cutting the lines and freeing the animal. But before disentanglement teams can even think about innovative methods of cutting embedded ropes, they must first be able to restrain the whale.



Mayo (left) and Moore contemplate the best angle to approach a whale with a net gun.

Today, Moore, and Stormy Mayo, of the Center for Coastal Studies look on as Woodward tests the net gun prototype. Mayo knows too well the extreme dangers of approaching a distressed whale. Their "power is not to be believed," he says. He recalls a disentanglement

effort where a right whale towed a 40 foot boat in reverse (connected to an anchored inflatable vessel and a float) at about 5 knots.

The tail is modeled after the late right whale Delilah (# 1223). Delilah died from a collision with a ship and washed up on Grand Manan Island in 1992. "She was an old friend of mine," recalls Mayo wistfully. "She gave me more data on feeding ecology." Mayo spends much of his time studying the relationship between whales and their food resource: zooplankton. As the only person officially licensed to remove entangled lines on right whales, Mayo's appraisal on the net gun trials is paramount.

He watches Woodward's efforts intently, adding I believe this could work." But he warns that every entangled animal requires a different strategy, and "it's important to think of this as one of many tools." While disentanglement efforts continue to improve, Mayo stresses that disentanglement is not a solution and that more attention should be spent on the sources of entanglements.