R.I. fishermen turn to digital tools to help survey of lobster catches

September 02, 2013 11:30 PM

Frieda Squires/The Providence Journal
Lobsterman Al Eagles, Newport, captain of Catherine Ann, measures lobsters using a digital caliper.

By RICHARD SALIT

JOURNAL STAFF WRITER

rsalit@providencejournal.com On Twitter @RichSalit

Thick fog obscures all but the lower towers of the Claiborne Pell Bridge as Al Eagles throttles down the Catherine Ann and drifts up to one of his pink buoys on this August morning.

He's about to do what he's been doing since he was 10 years old: pull on a line until a lobster trap sitting on the bottom is up on the gunwale with the day's catch. Over the years, Eagles, 63,

has gone from a 14-foot skiff and hand-hauled single wooden traps he fished as a boy to a 43-foot boat with a motorized winch to bring aboard sets of 20 plastic pots strung along trawl lines.

All in all, however, the technology hasn't changed a great deal, which is why it's curious to see Eagles pull out a tablet computer and digital calipers when deck hand Mark Clarke places the twitching lobsters out on a table to be measured.

Soon he is pressing buttons to enter information about each lobster he examines, even the ones he throws overboard because they're below the minimum legal size. He records the size and gender of each one, while the tablet, aided by GPS, automatically notes the exact location and depth of the catch.

"I'm sort of computer illiterate," Eagles readily admits. "I just started using a tablet just weeks before this started."

It's all in the name of science … and hopefully bountiful catches in the future.

Eagles is among a dozen New England fishermen who are voluntarily participating in a lobster survey begun by the Commercial Fisheries Research Foundation. The nonprofit group, based in Kingston and founded in 2004 by commercial fishermen, promotes a collaborative approach to fisheries research that involves fishermen.

Fishermen have traditionally been at odds with scientists and regulators. Too often, in their view, their livelihood has been threatened by regulations adopted in response to unreliable population assessments.

But instead of simply criticizing the science and fighting the regulations, the foundation is striving to play a role in better understanding fish populations. And with funding for government research typically on a tight budget, the foundation encourages tapping into the efforts and expertise of the people who are most often on the water and interacting with the resource: fishermen.

"We're playing this interesting role to bridge these two worlds, to get them working together," says Peg Parker, the foundation's executive director. "Collaboration is really difficult to achieve."

This summer, the foundation recruited inshore and offshore lobstermen from Rhode Island, Massachusetts and New Hampshire, to devote some of their time at sea to gathering data on their catch. Six are from the Ocean State.

To keep it from being too onerous, the foundation turned to the kind of technology that is allowing young and old to easily interact with sophisticated devices.

"By utilizing modern technology, the lobstermen's willingness to participate, and the input and guidance from lobster biologists, we hope to solve the data problem in a cost-effective way," Parker says.

As Eagles steams into the East Passage on a blue moon high tide, he steers with one hand on the wheel and uses the other to turn the pages of a notebook. No tablet here, just page after page of hand-scrawled ink notes on his 800 traps and when he last checked on them.

“When I signed up for the program, I was really nervous,” he says. “After the training session, I felt comfortable. The way they set it up was very simple. Even a dinosaur like myself can do it.”

It’s late August and the peak of the season has passed for Eagles. Many lobsters have been migrating down Narragansett Bay and out to sea for weeks, he figures. Eagles has a sense of their progression because he sometimes puts bands on undersized lobsters that he throws back overboard. He and his fellow fishermen will catch the same lobster more than once and, based on information provided by the bands, gauge the direction it’s moving.

So as Clarke, his deck hand, pulls the first trap along a quarter-mile trawl line and empties it on a table, there are only half a dozen lobsters in it. Earlier in the summer, he was typically finding about 20 to 25 lobsters. Also, almost all of these are undersized, many of the keepers already having been caught.

“I’m going to get my tablet out now,” Eagles says.

The 10-inch Google Nexus in a plastic bag to keep it dry and fish-free. He also grabs calipers that measure the distance from the rear of the eye socket to the rear of the carapace and transmits the readout digitally. As he examines the lobster, he narrates the information he’s entering on the tablet and the buttons he’s pressing on its touch screen.

“Eighty-three mm. OK. Female. OK. Now save,” he says. “There, that’s recorded.”

He can also note other characteristics, including whether the lobsters are egg-bearing or exhibiting signs of shell disease, a mysterious ailment that has spread across New England lobster stocks.

He needs to enter data for 100 lobsters or 20 traps, whichever comes first, and then he’s done. He doesn’t have to do it every time he goes fishing, just on three trips each month.

“This does take a little bit of time,” he says. “But the benefits outweigh the efforts.”

Everything goes much faster when he puts the tablet and calipers away. The undersized lobsters are quickly tossed overboard and the traps replenished with scraps of skate, flounder and other fish.

“As soon as I get home at the end of the day, I upload all of the data,” he says.

The data initially goes to the foundation, but eventually it will be added to a database used by scientists to assess lobster stocks.

“The last two years it has been very slow. It’s been the worst two years we’ve ever had,” Eagles says. “Last year we attributed it to warm water, but this year the water is more normal and the catch is still off. We’re hoping some of this research helps answer this.”

One of the reasons the foundation undertook the project was because of lobster population assessments that were deemed to be lacking in sufficient data when reviewed by peer scientists, says David Spencer, a Newport boat owner and the foundation’s president.

More lobstermen were willing to participate than the foundation could support with equipment and stipends.

“That was heartening,” says Spencer, who is also president of the Atlantic Offshore Lobstermen’s Association. “They stepped up and filled a void that has been empty for a long time.”

With lobstermen willing to serve as “primary data collectors,” he says, “over time, we’ll get a much better picture of what the resource is.”

Providence Journal, September 3, 2013