Alien lionfish swarm N.C. coast

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A handful of ravenous, venomous lionfish, a species native to the western Pacific, were spotted off North Carolina in 2000. Turns out they like it here. A lot.

The lionfish population has exploded at a pace unlike anything scientists have ever seen from an invasive fish species in this part of the world. They are appearing in huge numbers from here southward into the Caribbean and are so plentiful that divers off the North Carolina coast routinely find up to 100 on a single shipwreck.

"If you go deeper than 100 feet, they're ubiquitous now," said Paula Whitfield, a researcher with the National Oceanic and Atmospheric Administration in Beaufort. "They're absolutely everywhere."

Little research has been done on lionfish, and researchers at NOAA's Center for Coastal Fisheries and Habitat Research in Beaufort, N.C., are rapidly becoming some of the world's leading experts as they respond to worried fisheries managers. It's feared that the newcomers are making life harder for already struggling popular commercial reef fish such as grouper and snapper by stealing their food, seizing their turf and eating their young.

"They're eating everything," said Lisa A. Mitchell, executive director of Reef Environmental Education Foundation, a Florida nonprofit group that is helping several Caribbean governments deal with the influx of lionfish. "They could wipe out entire reefs."

The odd offshore interloper has joined the growing list of harmful species -- such as zebra mussels in the Great Lakes and the fire ants and Japanese stilt grass that are problems in the Triangle and elsewhere -- spread by global commerce, climate change and misguided humans.

There are so many lionfish off North Carolina already that scientists don't think it's possible to eliminate them, but hope there may be ways to at least control the population. The researchers are joining forces with sport divers and even culinary instructors from Carteret Community College to see if the critters can be kept in check with spears, nets and tartar sauce.

Lionfish, it turns out, have a sweet, white meat similar to the tasty groupers and snappers they are threatening.

Discovery Diving Co. in Beaufort and Olympus Dive Center in Morehead City, N.C., are recruiting sport divers for a series of "lionfish rodeos" during the summer dive season, the first May 18-19. Later ones likely will also involve researchers and representatives of the culinary school, said Debby Boyce, owner of Discovery Dive Shop.

The scientists and divers hope to persuade restaurants in the area to start serving lionfish.

"They taste good, and if we can create a food market for them maybe that will not only help keep them in control but maybe take the pressure off some other species," Boyce said.

With their plumagelike spines and orange stripes, lionfish can be attractive additions to a saltwater aquarium, and it's believed they were introduced on the Atlantic coast after outdoor aquariums in Miami were damaged by Hurricane Andrew in 1992. The warm, north-flowing currents of the Gulf Stream helped them spread north.

In places off North Carolina the population density appears to be several times the norm in their native waters, and it doesn't seem to have peaked, said NOAA researcher James Morris.

"I don't know when they're going to reach (the environment's) carrying capacity," he said.

Morris' work includes the first scientific descriptions of lionfish reproduction, feeding habits on reefs and their interactions with native predators.

From the limited facts that are available, the lionfish seems like an almost perfectly designed invasive species, Mitchell said. It has few if any predators here, reaches sexual maturity rapidly, reproduces in great numbers and has an appearance that doesn't alert its prey to the dangers.

For the first rodeo, divers simply will learn how to gather lionfish, go out and collect them and then dine on the catch. It will also give scientists a chance to study later how quickly lionfish repopulate a given site that is cleared.

Rodeo divers will gently shoo the fish into a net while wearing the kind of puncture-proof gloves worn by workers who handle used hypodermic needles and other medical waste, Boyce said.

The venom is in the ribbonlike flesh along the shaft of the spines, and a simple, safe way to clean them is to hold them with pliers and use wire cutters to snip off the spines.

Then they can be cleaned like a typical fish, Boyce said.

If lionfish are going to be fished commercially, someone needs to find a way to catch them in useful quantities. They're rarely caught on hook

and line. They are fearless, and hold their ground when approached by divers, perhaps because few things in the ocean would attack them, so they can be easily taken with spears, a labor-intensive method. NOAA researchers, though, have developed a promising trap that uses live bait.

In North Carolina, the fish mostly dwell in the warm waters of the Gulf Stream, miles offshore, and are found mostly at depths of 100 feet or more. Elsewhere, though, in place like the Bahamas where the shallows are warm, they can be found right offshore.

Their sting is not known to be fatal, but may lead to paralysis -- a worry for divers at the deep spots where the fish are common here -- and can be painful.

"The first symptom is profuse swearing," Mitchell said.

But there's at least one other good thing about lionfish, she said: "They come with their own toothpicks."

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