Rainbow Reef’s Earth Week events target removal of the invasive lionfish

For Earth Week, Rainbow Reef Dive Center in Key Largo hosted conservation dives and a three-day Eco-Fair bringing together divers, brands and nonprofits for our oceans. Divers took a shot at — and a bite out of — a big problem on local reefs: lionfish.

Although ornate and beautiful, lionfish are considered invasive anywhere outside of their native Indo-Pacific range. They first appeared in the Atlantic through aquarium releases but have spread to the Caribbean and Gulf of Mexico. Conservationists battle to contain their growth and the devastation they cause.

Nate Sterns, Rainbow Reef’s Conservation Coordinator, explained: “Lionfish are an invasive species which means they are not supposed to be here. They moved into the Florida Keys and … they’ve eaten up all the local resources that local wildlife need to survive.”

REEF Environmental Education Foundation, a marine conservation organization focused on education and citizen-science, leads research on and response to lionfish invasions. According to Education and Outreach Program Manager Madalyn “Moose” Mussey, lionfish pose a major threat to local marine ecosystems because of their lack of natural predators and their voracious appetites – eating large quantities of ecologically and economically important species. Lionfish also reproduce year-round. Females can lay up to 50,000 eggs every 2 to 4 days, and the buoyant eggs ride ocean currents to different areas, allowing the fish to spread far, Mussey said.

The magnitude of the devastation from lionfish invasions inspired REEF to enlist public help with population control. Since 2009, REEF’s Lionfish Derbies have trained divers on safe and effective hunting techniques that they are encouraged to use year-round. During non-pandemic times, the fishing tournaments often also include lionfish tastings and workshops that bolster the local commercial market for lionfish and educate the public about the harms they cause. Local chefs prepare the fish in delicious and innovative ways to demonstrate how we can also eat our way out of this problem.

“Using recreational divers and snorkelers has shown to be the most effective method of controlling the invasive lionfish populations,” Mussey said. “We always encourage regular removals of lionfish by recreational divers and snorkelers – the more often it is done, the easier it is to fight the invasion.” She added, “Any lionfish that is removed can make a difference.”

Because of this, Sterns and his Conservation Co-Coordinator Seanna Knight centered Rainbow Reef’s Earth Week activities around REEF’s 8th Annual Florida Keys ‘Locals’ Lionfish Derby.

Knight said, “Divers really are great advocates for the marine environment, and they serve as ambassadors for the ocean. One can assume that individuals who dive do so because they love the ocean and all that it has to offer.”

After a choppy Derby morning, diver Emily Simon showed off her haul – five invasive lionfish. The hunt was “exciting” and “super fun” because she felt like she was “on a mission to save the reef,” she said.

“You swim down to the reef and look for stripes. You’re on a mission to hunt, but it helps local reefs. It’s a great thing,” she said. Her guide on the dives, Rainbow Reef’s David Simon, has “no second thoughts” while hunting lionfish because they are invasive and suggested that “anyone should try” because every effort helps.
“Humans are the only local predators of lionfish,” David added. “There are no natural predators here, so we are the only species that can make a dent in their population.”

At Rainbow Reef’s Eco-Fair, which began on Earth Day, local organizations and businesses raised public awareness about how everyone can make a difference for the planet in their daily life. Featured vendor Randy Klein Gross is the owner and creator of “Lionfish Jewelry.” Gross uses venomous lionfish spines to make statement pieces that encourage conservation conversations. Collecting spines from her own lionfish hunts, Lionfish Derbies and donations, Gross layers color and resin to create around 50 different shapes and styles.

“If a person wears or uses one of my pieces, they will talk about lionfish to others,” Gross said. “I also list the reasons why we have to get rid of lionfish on every package to spread knowledge and awareness.”

For Gross, who is also a scuba instructor, the fight against lionfish is personal. She said, “Having lionfish present on reefs is concerning because they consume about 90% of the reef fish. That is a huge reduction for visiting divers, photographers and fisherman. The next generation may never taste snapper because if the lionfish continue to eat young snapper they will never get to a size that can be caught and eaten.”

Knight concluded, saying, “It is important to raise awareness about the environment not just on Earth Day, but every day. We only have one planet to live on, and humanity as a whole is responsible for helping to protect and conserve it. Every little bit helps.”

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