

CITIZEN-SCIENCE EXPERIENCES EDUCATE AND AMUSE

Playing with Purpose

By **Tiffany Duong** - August 11, 2020

In the Keys, it's no secret that everything revolves around the reef and its health. From local fish at restaurants to weekend trips on the boat, everyone's amusement and livelihood rely on the sea's richness.

As the natural resources have become threatened and scarce, many organizations and nonprofits have taken up the charge of addressing water quality, stemming plastic pollution and restoring coral reefs. Luckily, many of them have also created citizen-science programs, wherein the public can participate in the cutting-edge science underway to restore the environment. More than just a fun day on the water, these experiences allow participants to contribute valuable and much-needed scientific information on a large scale to these organizations and to become invested in protecting the environment too.

"Citizen science is a transformative experience that lasts a lifetime, and one that goes a long way to helping save our precious coral reefs," said Coral Restoration Foundation's J.D. Reinbott.

Here are a few of our favorites:



A diver posing with a sea anemone while conducting a REEF survey in the Solomon Islands. LAURIE FULTON/REEF

REEF Environmental Education Foundation, Key Largo (REEF)

REEF is the grandfather of all citizen-science endeavors in the Upper Keys. They've been inviting divers and snorkelers to complete REEF fish count surveys for 27 years as they enjoy waters around the world. The Fish Survey Projects can change your whole perspective and make diving or snorkeling feel like a scavenger hunt.

"When recreational divers all over the world are in the water recording and sharing information about fish populations, it helps to improve our understanding of what's happening in the ocean, and makes us aware of changes and potential threats," said Amy Lee, REEF's engagement and communications manager. "The data collected by these citizen-scientists can show when there are declines in certain species, or when a species is found somewhere it hasn't been reported before."

As of June 2020, over 16,000 individuals had conducted a REEF survey. About 12,000 surveys are completed each year. To learn more, go to www.REEF.org.



A volunteer diver cleans a coral tree in CRF's Tavernier nursery while a hog fish looks on.
CORAL RESTORATION FOUNDATION/Contributed

Coral Restoration Foundation (CRF)

CRF hosts training and dive programs throughout the Keys by partnering with local dive shops. After a morning training session on corals, the threats they face and CRF's outplanting methodology, citizen-scientists jump on a recreational dive boat to go out to one of CRF's coral tree nurseries. There, they work first hand to grow and maintain corals.

On some trips, participants will also go out to the reefs to outplant corals from the nurseries or to monitor old outplants.

“There is something truly unique about knowing you’re helping give back to the ocean,” said J.D. Reinbott, volunteer coordinator . “It’s also amazing to swim past outplanted coral fragments knowing you were the one who returned them to their ‘home.’ We highly encourage everyone to participate in some form of citizen-science at least once in their lives.”

In 2019, CRF Dive Programs brought out 1,437 individuals who outplanted 4,941 corals onto reefs in the Keys. To sign up, visit www.coralrestoration.org/dive-programs. Also visit www.coralrestoration.org/get-involved to learn more about other opportunities to get involved, including land/water volunteer positions and internships.



A Key Dives customer removes derelict fishing line from an Islamorada reef on a monthly cleanup dive. TIFFANY DUONG/Keys Weekly

Key Dives/I.CARE

Key Dives has been running cleanup dives twice monthly for two years. They’ve **pulled up well over 10,000 pounds of trash** out of the waters around Islamorada through the dedication of their staff and volunteers. They also run coral restoration dives with CRF once a month.

I.CARE is a new coral restoration citizen-science effort being run out of Bud 'N Mary's Fishing Marina, where Key Dives is located. In partnership with Mote, I.CARE will create a whole new coral restoration experience for visitors to get involved with. There will be land-based coral nurseries and outplanting dives.

"I believe there is a level of fulfillment when diving with a purpose that is greater in many respects than just diving for fun. What Key Dives and I.CARE do is give the diver a channel to fulfill that need," said Michael Goldberg, owner of Key Dives and co-founder of I.CARE. "This, of course, works with our main overall goal, which is to improve our ocean and coral reefs."

To sign up, contact Key Dives at info@keydives.com or I.CARE at icareaboutcoral@gmail.com for trip details.



Mote's Stephanie Sirotzke hangs staghorn corals in Mote's in-situ nursery. TIFFANY DUONG/Keys Weekly

Mote Marine Laboratory & Aquarium (Mote)

Mote Marine Laboratory & Aquarium's IC2R3 Facility in Summerland Key has partnered with Captain Hook's Dive Center in Big Pine to put the tools for coral restoration into your hands. Their new "Reef Revival" program allows eco-tourists and citizen-scientists to learn about corals and the threats they face before getting hands-on with fragmenting corals in Mote's in-situ nursery. These corals will be used to restore the reef.

“It’s a win-win-win for all involved — more advocacy and hands-on help for local science-based nonprofits fighting to save the reef, more business for local dive shops (as well as a way to give back), and a unique once-in-a-lifetime experience for visitors,” said Allison Delashmit, Mote’s community relations and communications manager.

To sign up for Reef Revival, contact Captain Hooks Dive Center in Big Pine Key. Visit captainhooks.com/ or call 305-872-9863



FKWW programs train citizens to monitor the water quality in residential canals in the Florida Keys. SHELLY KRUEGER/Contributed

Florida Keys Water Watch (FKWW)

Since 2015, FKWW has raised awareness about the importance of water quality in the Keys by creating a community-based volunteer water quality monitoring program. The program emphasizes the connection between land-use and aquatic health. Volunteers are trained to test the water for dissolved oxygen, salinity, temperature and turbidity. They help provide data in places that aren’t regularly monitored.

“Citizen science is a useful tool that fosters collaboration, transparency, and valuable community partnerships,” said Shelly Krueger, Florida Sea Grant Agent II who runs FKWW trainings.

TIFFANY DUONG

<http://tiffanyduong.com>

Tiff Duong is self-made mermaid who loves all things cheesy (romantic and dairy) and thrives in the 3 am hour. She believes in leaving it all on the field and has never met a (mis)adventure she didn't love.



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