



New England Aquarium Dive Club Newsletter

Spring 2020

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Boston Sea Rovers

Join us March 7th and 8th at Boston Sea Rovers, the longest continually running dive show in the world.

Seminars and workshops include over 40 speakers covering topics such as wreck diving, whale encounters, the latest underwater imaging technology, and underwater archaeology.

The Saturday evening film festival is a highlight with a history of premiering speakers and presentations. This year's MC is Erin Quigley, an Adobe ACE certified expert who uses her imaging to inspire awareness and stewardship of our fragile marine environment.

The exhibit hall will offer a wide range of booths from travel destinations to dive shops,

dive gear and, of course, our own New England Aquarium Dive Club booth! Come by and visit us at the show.



Photo by Joy Marzolf

President's Letter

Greetings to all new and returning members of the New England Aquarium Dive Club!

Whether you are a new or experienced diver, curious about diving or new to the area, we have a great repository of dive-related information on our website (www.neadc.org), including links to local dive shops, dive sites and upcoming events in the community, such as scheduled dives, lectures and dive travel.

I would also like to welcome our new and returning NEADC Board Members. I look forward to working with this great group of volunteers on our dive calendar and events. This hardworking group of divers spend many hours throughout the year arranging amazing guest speakers for our monthly

General Meetings, coordinating boat and shore dives, organizing wonderful community events, including the Great Annual Fish Count (7/25/20) and Tropical Fish Rescue (9/12/20), and providing relevant information and resources to the community.

In preparation for the dive season, don't hesitate to reach out to our Board Members for any questions related to the Club and diving.

Best Fishes and Happy Diving!

Uma Mirani, NEADC President

2020 Dive Season

The 2020 Dive Season will see some changes for the NEADC.

Victoria Gunning will be your new Shore Dive Coordinator and I'm hoping she will breathe new life into the position I held for many years. I have moved into the Environmental Affairs position, but I will still be conducting the Annual New England Aquarium Dive Club Dry Dive.

The NEADC has had a long standing tradition of running the "Dry Dive" each Spring. We take a tour of the Cape Ann area going from dive site to dive site referencing Jerry Shine's book "A Shore Diving Guide to New England." We talk about the sites, where to park and what you might see. We follow up each stop with a beach clean-up until the truck is full. This is a full-day event and will include stops for lunch and dinner at local restaurants. This year the Dry Dive will be on Saturday, April 18th.

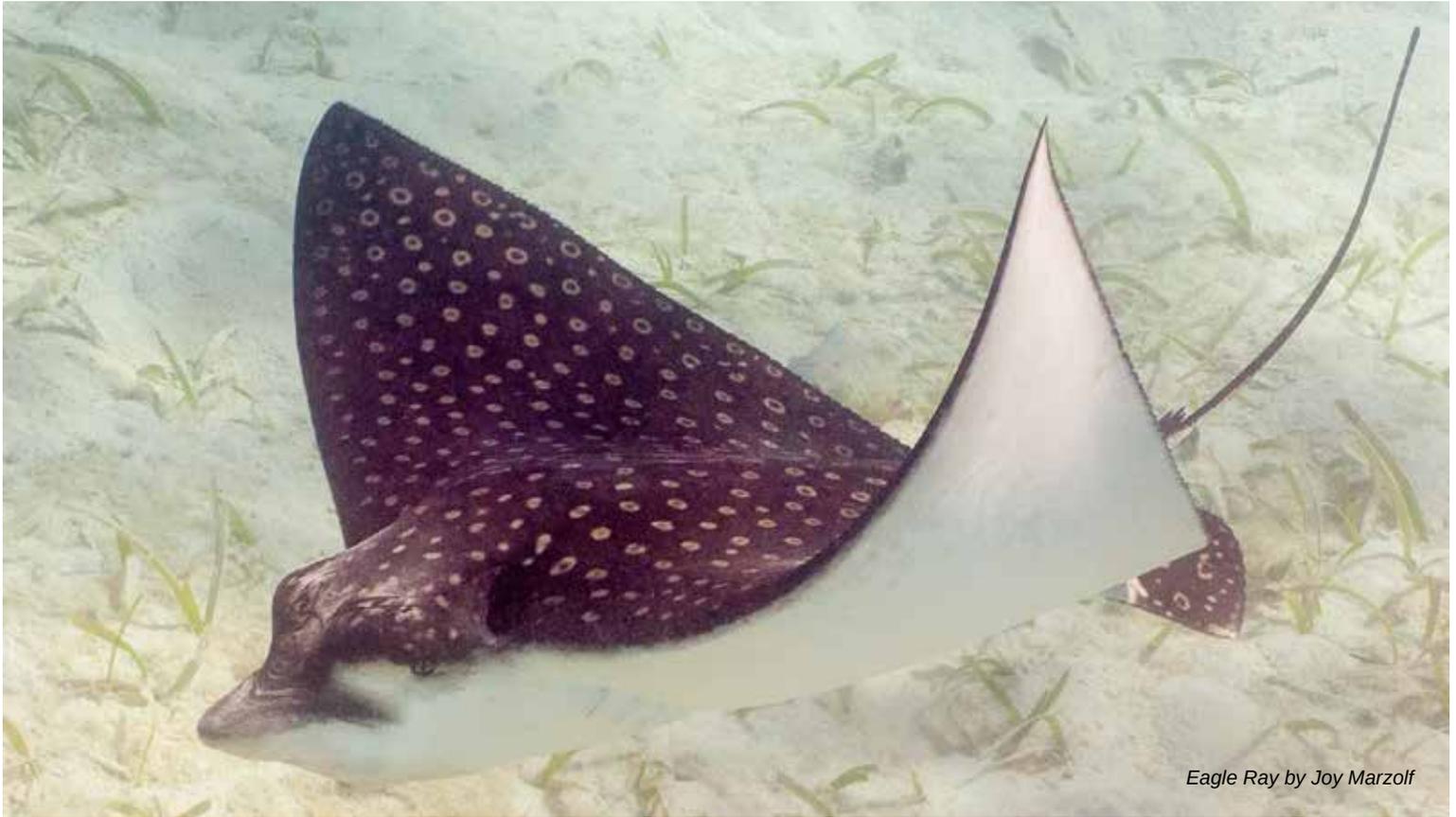
The Dry Dive has been very popular from year-to-year, and since the ocean always needs cleaning, I will be planning a second Dry Dive at the end of the season. You don't need to be an NEADC Member to come out and help clean. Everyone is welcome!

I am also looking at combining a Kayak/Clean-Up Dive at some point during the season, so watch the e-blasts and listen in at the General Meetings to get more details or provide feedback.

*Dan Sprague, NEADC
Environmental Affairs Coordinator*



Photos by Dan Sprague



Eagle Ray by Joy Marzolf



Rainbow in the Tropics by Joy Marzolf



Stoplight Parrotfish by Joy Marzolf



Yellowhead Wrasse by Joy Marzolf

Diving Turneffe Atoll

It is encouraging to see healthy elkhorn and staghorn coral in the Caribbean.

Close to the mainland, coral is typically more damaged and under stress. Further off shore and on the far side of the Meso-American reef, diving and snorkeling out of Turneffe Flats Resort on Turneffe Atoll, enables one to explore much healthier areas. From tiny pufferfish and beautiful indigo hamlets to large hawksbill turtles and massive eagle rays, there is something for everyone. Dolphins and manatees can often be seen in the lagoon, while the numerous protected dive sites around the atoll allow for diving in almost any weather condition.

The above water world is also beautiful with turquoise blue waters, wading herons and egrets among the mangroves and so much more. Divers can also visit the Blue Hole, Half Moon Cay and the dive site "Aquarium"



Indigo Hamlet by Joy Marzolf

on one of the dive days. While it is nice to say you dove the Blue Hole, my personal favorite is definitely Aquarium and seeing the baby red footed boobies at the rookery at Half Moon Cay. The nice part about this resort is that it allows for friends/couples where one dives and one snorkels. There is much to see for all and they have experienced dive and snorkel guides. If you have questions or are interested in going, we have been looking at possibly doing an NEADC group trip, please contact Joy at programs@neadc.org.

Joy Marzolf, NEADC Program Director



*Curious fish studying coral planting
by Ren Glover*

Coral Planting in the Keys

I knew I was in trouble when she said, “We’re all going to have perfect buoyancy, right?”

I was a fairly new diver with only 15 dives (a third of them check out dives) under my weight belt. It was November 2019, and she was an intern with the [Coral Restoration Foundation](#) in Key Largo. I ended up there almost by mistake. The year before I had been diving on Pickles reef near Key Largo when I noticed some bits of coral had tags on them. I asked the dive guide, and she told me about the Foundation.

Only three percent of the once-dominant staghorn and elkhorn coral are left.

The Coral Restoration Foundation is the largest coral reef restoration organization in the world, and it happens to be headquartered on Key Largo. I paid them a visit to learn about their work and their volunteer program. I was heartbroken to learn they only accept volunteers who can commit to at least six months. Then I learned about their “dive program” which is a 1-day opportunity to sample their work, and I knew I had to try it.

Right on schedule, a year later, I was back in Key Largo to do a coral restoration dive. Before I could dive in, I spent the first half of the day in a classroom filled with a mix of locals and tourists like myself. There was even an astronaut who had trained at nearby Aquarius Reef Base. I expect she was not intimidated by perfect buoyancy.

We learned about the work of the Coral Restoration Foundation and the Florida Reef Tract, the only living coral barrier reef in the continental United States and the world’s third largest coral barrier reef system. Then, we had some hands-on demonstrations of the work we would be doing underwater. To someone like me who’s only ever seen the reef as it is today, it’s hard to fully appreciate what’s been lost. There were divers in the room who had seen the reef in its glory in the 1970’s. Only three percent of the once-dominant staghorn and elkhorn coral are left, and these species are now critically endangered.

The stakes are high. The Florida Reef Tract protects the keys from hurricanes and storm surge while providing critical habitat for fish



and propping up the tourism economy. There are multiple reasons for the die off. Climate change is obviously a threat, but there’s also been a number of other stressors caused by humans from pollution to boat anchors. Mother Nature isn’t helping much either. A breakout of stony coral tissue loss disease cropped up in 2014 and has been taking a toll on the remaining coral.

In the midst of this bleak outlook, there are some signs of hope. The fairly-recent creation of municipal wastewater treatment in the Keys should be helping improve water quality. Researchers are having some luck re-populating the long-spined sea urchin, which supports the coral by removing algae that might otherwise smother it. Most importantly,

organizations like the Coral Restoration Foundation are having success growing coral in the wild.

Since its founding in 2007, the Foundation has planted more than 100,000 critically endangered staghorn and elkhorn. The process starts with “farming” coral by hanging finger-sized fragments of corals to grow on PVC structures they invented called Coral Trees. The Coral Trees are tethered to the ocean floor and buoyed with a subsurface float in offshore nurseries. Each tree holds 60 to 100 coral fragments, and can produce colonies that are large enough to be outplanted in just six to nine months.

Many of these outplanted corals have now grown into thriving colonies. In 2009, the Foundation made history with the first documented case of nursery-raised corals spawning. Since then, there have been successful coral spawning at multiple locations, which is an important step toward the reefs’ natural recovery process.

After the classroom session, we had a quick break to grab some lunch before meeting up at the boat. The next stop was the nursery. The Foundation has seven nurseries, the largest and closest covers an acre-and-a-half. I would have loved to spend more time exploring the nursery, but we had work to do. Staghorn coral isn’t the only thing that likes to grow on trees. It is a lot of work to keep the trees free of organisms that might compete with or damage the coral.

We were sent out in pairs, each with our own coral tree to clean. One of us had a chisel to scrape off whatever was growing on the branches, and the other had a brush to try to gently remove algae growing on the monofilament the coral hangs from without damaging the coral.

Just as I had feared, my buoyancy was far from perfect. There was a current and not much to hang on to, and I was all over the place. Once, when I looked behind me, I noticed my fins were getting tangled in the coral of a nearby tree. I didn’t get a lot of cleaning done, and I started to appreciate the need for longer-term volunteers.

Back on the boat on our way to Pickles, I learned that I was not alone in struggling with buoyancy. Everyone struggled, and yet everyone loved it. If I have one complaint about this whole adventure, it’s that they didn’t tell us we would need gloves until we got in the classroom. You see, in addition to algae, fire coral grows on the trees. I am now well acquainted with what fire coral feels like. It was a magical experience nonetheless.

Once we got to the reef, we were again organized into groups of two, and each group was given seven coral fragments to attach to the dead reef with marine epoxy. The fragments are arranged near each other in a circle so that they will eventually grow into one colony. It’s kind of a puzzle figuring out the best way to place each piece so that you have three solid attachment points and good water flow. At least there was something solid to hold on to as the current pushed us around.

Instead of hiding when the humans arrive, there are several kinds of fish that like to hang out with us as we work. They like to get close because we’re scraping off tasty snacks for them as we clean the coral trees and as we prepare the planting site. We were warned in training that, while we cannot intentionally touch any of the fish, the fish are free to smack us in the face if they like. I’m guessing someone’s had their mask smacked off at least once.

Sometimes, accidentally hitting a fish is unavoidable. Before you can attach the coral, you have to scrape away the layers of algae growing there using a pick/hammer type of tool. As I was wailing away at the coral skeleton, one fish was trying their hardest to get hit. (I missed.) After my partner and I finished our cluster of coral, there was time to swim around and see the clusters of freshly planted and previously planted coral groupings. Just as with every other dive I’ve done, I returned to the surface with a mix of excitement and sadness that it was over.

This trip to the Keys was just a pit stop on my way to Costa Rica where I spent nine days helping with Leatherback turtle research. That was an excellent experience, and the subject for an entirely different article. That trip was booked through [Earthwatch Institute](#). Earthwatch offers a number of other opportunities related to ocean health. Two of them involve coral restoration: one in the Cayman Islands and one at the Great Barrier Reef. As much as I’d love to see Australia, I have trouble justifying the carbon emissions to get there. Carbon offsets barely assuage my guilt from going to Florida. So, I’ll probably do the Caymans. Or maybe I’ll do more sea turtle research in the Bahamas, or try a trip with one of the many other organizations offering volunteer vacations. Regardless, another dive with the Coral Restoration Foundation is definitely on my to-do list.

Ren Glover, NEADC Member



Divers planting coral by Ren Glover

UPCOMING EVENTS

Cape Ann Dry Dive

Saturday, April 18

Driving tour and beach clean-ups of the best dive sites on Cape Ann. This all-day event will include lunch and dinner stops with the club. For more information, email: environmental@neadc.org

World Oceans Day

Sunday, June 7

Drop by the dive club table at the New England Aquarium.

Great Annual Fish Count

Saturday, July 25

Stage Fort Park, Gloucester, MA

Coming back for the 19th year, you can help count fish and win prizes! Each year divers help researchers by surveying fish and invertebrate populations. After the dive, we gather at Stage Fort Park in Gloucester, for raffle prizes and a BBQ!

Tropical Fish Rescue and Club BBQ

Saturday, September 12

Fort Wetherill State Park, Jamestown, RI

Save the date for the annual Tropical Fish Rescue and NEADC BBQ. Help us rescue tropical fish trapped in our cold New England waters and support the Gulf Stream Orphans project!

General Meetings

New England Aquarium Conference Center (first floor of the Harbor Garage)

Meetings are held the third Wednesday of each month. For directions and more info about our meetings, visit our site: neadc.org



Nurse Shark by Dan Sprague

Dan's Annual Grand Bahamas Trip

October 10th - 17th with opportunity to do 15-20 dives.

This trip has been run through the NEADC since 2007, and the 2020 dates are October 10th to the 17th. This happens to be the week of Columbus Day, so you'll be able to save yourself a vacation day to use elsewhere.

The trip fills very quickly. There will be space available for up to 12 divers, and non-divers are always welcome. A \$100.00 deposit will hold a space for you and it is "First Come, First Served." The charge per person for the Resort is \$375.00 for the week and the food budget is \$100.00 pp upfront. Airfare from Boston is about \$600.00 (airport code is FPO and a passport is required).

We spend the week at the beautiful Ocean Reef Yacht Club, home of Grand Bahama Scuba with owners Fred and Melinda Riger. The resort is located on a canal in Freeport with Grand Bahama Scuba and the boat "Good Start" on premise, which allows us to get right out to our favorite dive sites in minutes.

There are opportunities to do 15 to 20 dives over the week including: a couple of dusk and night dives; some shallow reefs from 15 to 45 feet; deep reefs around 55 to 75 feet; shallow wrecks around 40 to 50 feet; and,

deep wrecks from 75 to 110 feet. There is quite a variety and Fred and Melinda always seem to have new surprises for us. Since we fill the boat, it is ours for the week and we can go wherever we choose!

Our group is typically quite diverse in training levels, so this is a good chance for you to step outside your comfort zone and try something you might not typically do (deep night wreck dive anyone?). You can do as much or as little diving as you want during the week, a 10-dive package is \$399.00, but we may do as many as 20 dives. You are responsible for keeping track of your own dives and paying Grand Bahama Scuba directly.

Everything is close to the resort, so no rental car is required. The group goes out to a nearby grocery store the first night and we bring back the food needed for the week. We cook and eat as a group for three evening meals. There is also a bar/restaurant on site. Friday night, the group takes the boat crew out for dinner at a local restaurant.

Contact Dan Sprague for details and to join our Facebook group at: environmental@neadc.org.



Top of the Giant Ocean Tank by Andrew Child

Giant Ocean Tank – an Inside View

“One of the turtles is blind, so you might get bumped. Just slowly swim out of its way.”

One of the perks when you join the New England Aquarium Dive Club is the monthly drawing to dive the Giant Ocean Tank (GOT). Billed as the best Caribbean dive in Boston, it's a truly unforgettable half-hour.

The drawing is held at each General Meeting of the New England Aquarium Dive Club. Since anyone who has dived the GOT in the past 12 months is ineligible, chances are very good that regular attendees will have their name drawn. I was delighted to win the dive in November and took the opportunity to shoot a few panoramas in the GOT.

The guest dive takes place on a Saturday morning with the diver expected an hour ahead of time to sign paperwork, get briefed on the dive, and suit-up for a half-hour that seems to last just a few minutes.

A staff diver acts as guide, host and dive-buddy. The host on my dive was Senior

Aquarist Chris Bauernfeind who, in the course of his briefing, talked me through how to deal with being bumped by a sea turtle, among other relatively mild hazards.

“Guest dives help spread the word and educate the public.”
~Dan Dolan

The GOT is a four-story, 40' wide tank, filled with 200,000 gallons of salt water and dominated by a hand-made coral reef exhibit. Over 800 animals live in the tank and represent dozens of species found in the Caribbean, including moray eels, barracuda, bonnethead sharks, loggerhead and green sea turtles.

Staff diver Dan Dolan has hosted hundreds of guest divers since starting as a volunteer in 1991. He describes his first GOT dive as

probably his most memorable but explains that it is always exhilarating.

“It's something we've always offered the dive club,” remarks Dolan. “It's a great opportunity to dive in a Caribbean environment and is always interesting, whether you've done one or two-thousand dives in the tank.” And, yes, Dolan has logged thousands of tank dives, so he know of what he speaks.

“Hosting is a great opportunity to dive with people from different walks of life,” observes Dolan. “A lot of us started diving because of Cousteau. The younger divers I meet now come from a different perspective. They're motivated by concerns for the environment.”

Whatever your motivation, bring your membership card to the next meeting and toss it into the hat!

Andrew Child, NEADC Newsletter Editor



Chris Bauernfeind in the GOT by Andrew Child

NEW ENGLAND AQUARIUM DIVE CLUB, INC.

Central Wharf, Boston, MA 02110

www.neadc.org

The Dive Club

Begun in 1975, the New England Aquarium Dive Club is one of the world's oldest, largest and most active dive clubs. Our 300+ members range from veteran divers to the newly certified. We share the fun of diving, a love of the sea, a concern for diving safety, and a desire to learn more about the aquatic realm.

To learn more about the Dive Club, stop by one of our monthly meetings. They are held the 3rd Wednesday of every month at 6:30 p.m. at the New England Aquarium Conference Center. See our site for details:

www.neadc.org

Newsletter

The dive club's newsletter features articles about local diving, travel, the environment, education, and topics supporting the New England Aquarium. If you have a dive story, diving tip, underwater photograph or anything else which may be of interest to the local dive community we would love to hear from you!

Send an email pitching your idea to:

newsletter@neadc.org

Critter Corner: Seals

“I don't know why, but I always wave when I see a seal on a dive. Don't wave at anything else but I always wave at seals!” ~Craig McMannus



Photo by Steve Whitford

They are the adorable, sea-puppies of our cold New England waters. Controversial to some – notably commercial fishermen – seals nonetheless seem universally loved by the dive community.

When I asked a group of local divers to describe seal encounters, eyes lit up and almost everyone had a story to share. Craig McMannus feels compelled to wave whenever he comes across seals. Uma Mirani tells of being followed by a curious seal for several minutes, unseen by her at every turn but delighting her dive buddies. Brooks MacArthur takes a pragmatic stand, “I love seeing seals but I'm always looking behind them for the rest of the food chain.”

New England seals are actually four different species. Two of these, Hooded Seals and

Harp Seals, are considered ice seals and are typically seen in our waters only during winter. Seals more commonly encountered by divers are Harbor Seals and Gray Seals.

Harbor Seals are 5' to 6' long and weigh around 285 pounds when fully grown. They have a recognizably dog-like head. The Grays are larger, 7' to 8' and top off at about 800 pounds with more of a horse-like head.

Both species have seen a population revival largely credited to the 1972 Marine Mammal Protection Act. A 2017 study estimated the Cape Cod and Islands seal population at 30-50 thousand.

Divers should note that these animals are Federally protected and that it is unlawful to feed or harass them.

Andrew Child, NEADC Newsletter Editor



Photo by Steve Whitford



Photo by Troy Mayne

THINK BLUE!

Join our NEADC Clean Up Each Dive campaign!

- Pick up trash whenever you can both above and below water
- Bring reusable bottles to events for drink refills
- Pack gear in reusable bags or be sure to secure plastic bags used to carry gear so they don't fly away into the water