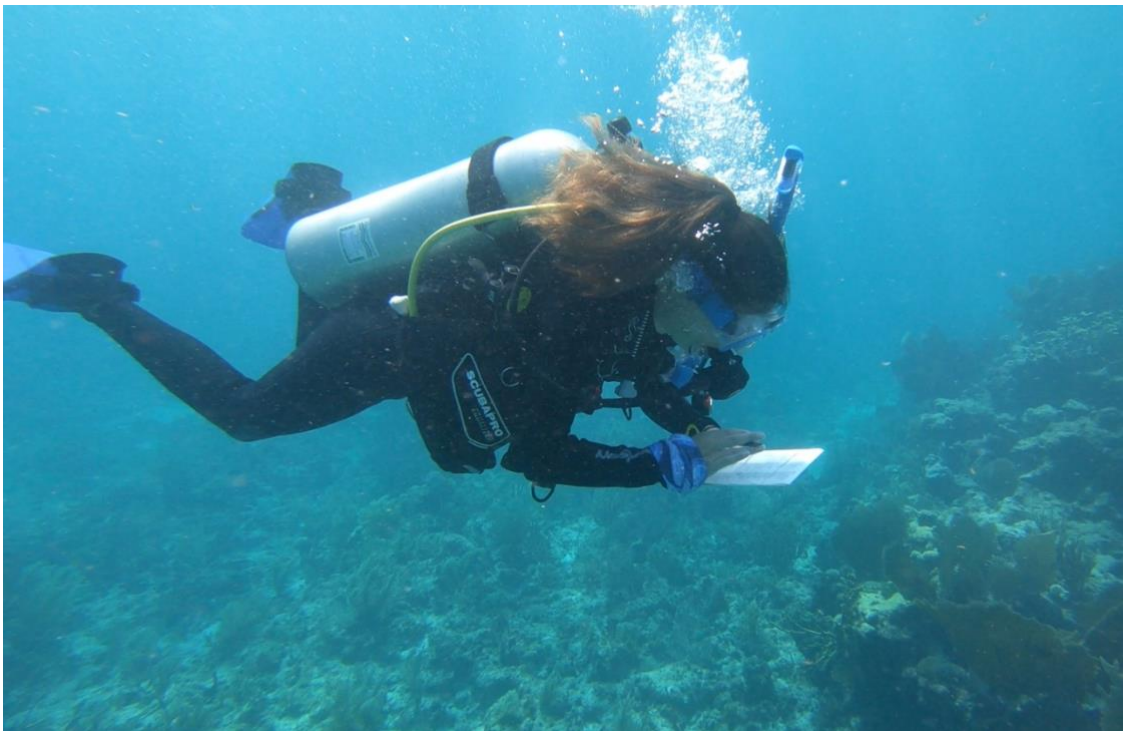




Our World-Underwater Scholarship Society® Dr. Jamie L King Reef Environmental Education Foundation (REEF) Marine Conservation Internship



Mary Quinn, Summer 2021



When I received the news that I had been accepted as the OWUSS Scholar for the Reef Environmental Education Foundation in March of 2020, it was a bittersweet day. I was abroad in South Caicos at the School for Field Studies, and we had just been told that we were going home. There had never been another opportunity that I had been so excited for, and it was made especially exciting by the fact that former REEF and OWUSS intern Ben Farmer was with me when I received that life changing email. I held onto the news of the internship for dear life through all the changes that 2020 and the pandemic brought. I had to make the mildly soul crushing decision to defer a year, as COVID began to spike, especially in Florida, but it turned out to be the best decision that I have ever made. If I had gone to my internship as scheduled, I would have lost any connection to the OWUSS family, and I wouldn't have met the truly incredible people that I met this summer.

May 24- the first day of the internship. I had to move from Massachusetts to Key Largo and unfortunately I was graduating from Wheaton College on May 22, giving me less than 48 hours to make the trek down. Luckily my mom agreed to drive with me, and we drove through the night in the longest road trip I have ever taken. Meeting my new friends and coworkers on absolutely no sleep was an interesting experience. It was terrifying to pick up and start a new life with no time to stop and think, just moving straight from my college years to a real career (especially since I left straight from a Massachusetts hospital after dropping a fridge on my leg during move-out and having to get stitches. The tan lines that I got from having to bandage my stiches against the water in the first week of my internship have lasted all the way to this exact moment). Starting new things is never easy, but the moment that I met my roommate, and now best friend, and my housemates/coworkers, I knew I would be alright. All of them were



genuinely welcoming and kind, and through the first two weeks of our internship orientation, the lead interns that also shared the housing with us took it upon themselves to educate us on everything REEF and Key Largo, both work related and not. The biggest surprise that I received during orientation was not the workload or the learning curve that comes with a new job, but the office environment and the relationships that were forged almost immediately. I had been through a few internships before this, and low-level jobs as well, and usually the interns and beginners are at the bottom of the pile. From the start, we were treated like equals, even to the staffed members in the office, and outside of the office we all hung out together as equals. This was new to me. In my previous internships, everyone did their work and went home, or more likely, everyone did their work and then the interns stayed late doing even more work until unreasonable hours. At REEF there was real respect for our time and our experience. And I certainly didn't feel the need to spend time with my past coworkers after the workday had ended, but here I couldn't get enough. The people that I met were so incredible, so fun and friendly, that my internship experience changed from simply a learning and career experience, to finding a real family in the Keys which made it impossible to leave.

The first two weeks of any internship is a learning curve, and I felt that especially with REEF. Since REEF does so many things, the Volunteer Fish Survey Project, the Invasive Species Project, Ocean Explorers Outreach Programs, and Grouper Moon work focusing on the Nassau Grouper, there was a lot to learn. I felt like my hand was going to fall off from all the notes that I took those first weeks. Not to mention the office work that supports all the glamorous outreach programs. One of the first things we got to do was go on an upper Keys scavenger hunt left to us by the previous interns, during which we visited the now-closed Secret

Beach (a tragedy of the summer), an Artist Village complete with a giant lobster which is pictured below, and one of the best cafes in the keys.



Maddie, Hailey and I at the Islamorada giant lobster (photo by Hailey Hiner)

The next critical part of orientation was learning and memorizing the three main education presentations that REEF gives during outreach events. This was an important experience because it was my first time truly receiving constructive criticism from a supervisor. I have received criticism from previous intern supervisors and bosses, of course, but none of it had been constructive and meant to better me as a worker. Although this part of orientation wasn't the most fun, I can honestly say that the way that the presentation learning schedule was set up to have all of us present to each other and rotate through the material, I learned a lot. Not only from the comments that my presentations received but from my fellow interns as well. Florida Keys



Ecology, Fish ID, and Invasive Species talks have now been ingrained into my brain, which helped me get the job I am now at. It also means that I am now full of very specific fun facts. REEF also prepared me with this for the job that I am currently in. I have started working at MarineLab in Key Largo, and so far I absolutely love it, but am trying to learn six presentations, two labs, and a boat talk in a short amount of time. If I hadn't started with REEF and having to learn those three presentations in a time crunch, I would be stressed out. I have a level of confidence now in myself and my ability to work under pressure because I have already done it and succeeded. That gives me peace of mind that I desperately need starting a new job with new supervisors and coworkers.

The main theme of REEF's summer Marine Conservation Internships is education. The other seasonal interns have different themes, and the other seasons are more research based. I hadn't realized that almost all of the summer was going to be outreach events, and at first I was disappointed. I had been fieldwork research focused in college and with every other internship that I had completed, and that is what I had pictured for REEF having gone through all of their programs. All of that was forgotten my first week of summer camp. Summer camp, or Ocean Explorer's Camp as it is named here at REEF, was one of the best experiences of my life. It was so amazing to be able to show kids what I loved about the earth while inspiring them. A large part that I felt I was missing from field work was the feeling that I was making a difference. Even though I know the data I collected through my past work is being used by other nonprofits and my college, it simply can't compare to getting to know people and really know that you have made a difference in a kid's life.

Teaching our camp kids how to seine net in seagrass habitats (Photo by Madeleine Mussey)



I was able to take kids snorkeling on the amazing reef tract that Key Largo has (third longest in the world!), and some of them had never seen one despite living in the Keys for the whole lives. There were other little things as well, like helping our youngest camper, a seven-year-old, get over his fear of the water. Ended our trip begging for more time in the water, even though he had started the boat ride in tears. It was also so exciting to watch the kids learn all about corals in the classroom and then get to experience it first hand. They were so excited to point fish out to me too, and we spent the entire boat ride back talking about the fish they had seen. I didn't get as much time at camp as I wanted to since the time was divided between all

three MCIs, and I found myself missing the kids that I had gotten to know and love during my time off camp in the office.

Snorkeling at Molasses Reef with our campers



Summer camp was also built strategically as a learning experience for the interns, and we were given more freedom than I expected. I was given time slots where I was able to design games and activities, and the game that I ended up inventing which was a mix between freeze tag and a predator/prey food web with hula hoops made it to the permanent camp binder. I am so excited for my best friend, who has moved up to the next education level at REEF, tell me all about the kids playing that game in next year's camp. It's nice to know that even though my Ocean Explorer's experience is over, my legacy lives on in a very strange game. I could say so much more about camp, but a summary of my favorite experiences would be seine netting in seagrass and seeing my first ever seahorse, playing sharks and minnows with my kids during a

break time, and getting experience the reefs that I had been diving all summer through a fresh perspective of pure excitement and wonder.

Our other education programs were mostly broken up into expedition groups, which would come to us for up to a week and learn all of our classes in detail, outreach nights that were mostly pop-up booths and casual conversations with people, and one day presentations with groups. One of the expedition groups we got to host was West Coast Connections, which was a group of kids from all over who wanted to learn about marine science, and ended up being one of the greatest challenges of the summer for me. They had two groups, and the first group was so passionate about what they were learning and so excited to be in the Keys, kayaking and snorkeling with us, that it was a shock when the second group of kids came down and none of them cared at all about marine conservation. I had been lucky up to that point, that I had only given presentations and workshops with students and other groups that were eager to learn, which made them an easy audience.



Kayaking through a mangrove habitat with one of our expedition groups (Photo by David Ehlert)

Through the second WCC group, I was able to hone my presentation skills in front of an apathetic audience which was incredibly difficult and intimidating in the extreme. Standing up in front of a group of students with glazed eyes trying to get them to learn the material was an uphill battle, but it made the outcome even more satisfying. I was sitting with a smaller group of the kids waiting for their chaperones to pick them up, when they started pointing out and IDing fish on the walls of the classroom. I was shocked. I hadn't thought that they had absorbed a single word, that I was simply speaking to myself in front of blank stares, but they had listened and remembered all of it. I was so unbelievably excited in that moment. It made me realize that in education, not everything is going to be huge sparkly breakthroughs like my camp kids at the reef.



Teaching another group fish ID (Photo by Madeleine Brownfield)

Another great part about the educational outreach at REEF is the different venues that we were able to present at. For one expedition group, we were a stop on their nonprofit tours of the

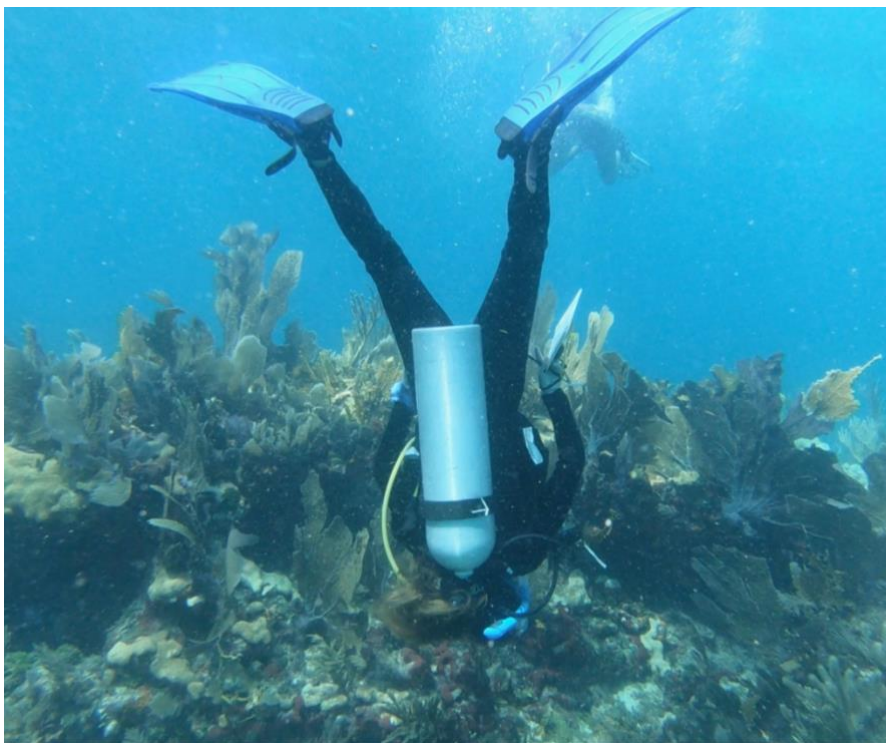
Keys and so we gave the presentation at their rental house after work. It was great to be able to shift between formal education presentations in our learning center and completely casual settings such as that. For one of our presentations, we didn't even have a slideshow. We gave the talk from memory without any picture cues or notes. We also had pop-up events, like one called Rock the Dock. It was a barbecue sponsored by a local bar that gave all the proceeds to REEF. It was far more casual than any other event, given the fact that we weren't even giving a presentation. Most of our education was in the form of a game called Reef Defenders, pictured below, where kids could use nerf guns to shoot lionfish out of the boxes. This was a great learning experience because I had to fit all of the information I wanted to give them into under a minute of talking.



The back of my head helping a future Reef Defender at Rock the Dock (Photo by Madeleine Brownfield)

While most of our weekdays were solely dedicated to educational outreach, expedition groups, and office work, the weekends were for the Volunteer Fish Survey Project. One of the

major perks of being a REEF intern was being able to get onto dive boats for free with any local dive company that had space. The summer was busy for divers since it was the tail end of Covid (pre-Delta variant) and things in the Keys were starting to reopen, so I didn't get out on the water as much as I would have liked to, but we still had some great dives. If we were diving with the local companies, we were required to do a fish survey, which always interested the other divers on the boat. I loved the fish surveys, especially as I started to learn more fish, and the smaller fish as well. When I could hover above a patch of sand about a foot wide and point out three different species of Gobies, I knew I had peaked.



My attempt to befriend a Trumpet Fish on Molasses Reef (Photo by Madeleine Brownfield)

People in the Keys are incredibly interested in marine conservation. Whether it was locals on the dive boats or tourists, people always wanted to know what we were doing with slates and papers. I did love looking official on those boats, and since we were always unguided, it looked



like I knew what I was doing. I definitely didn't. Navigation is not my strong suit. But we would be able to give a short talk on what REEF's mission was and how they could get involved with citizen science. We always say that fish surveys are "Diving That Counts" but being able to tell actual divers on the ocean was a different experience. I was able to tell them how our fish surveys are a way that divers can check in with the ocean and the local reefs that we all love. In the formal VFSP presentations, not all the attendees are snorkelers or divers, and not all of them care to learn their fish. But on dive boats, anyone sitting in those seats listening to us loved the ocean, and it was a great feeling. At first it was hard to talk about the project in front of people since I was still learning it myself, but as I fell more in love with diving with surveys, I could truly express how much I loved to be a part of the REEF community. It is fun to look back from our first survey together to our last survey, pictured below. I learned so much about fish in such a short time. Teaching the Fish ID courses I was able to learn fish species and memory tricks to ID them underwater, but by diving with them I was able to learn their behavior, habitat, and personality for lack of a better word. At REEF we always said that we don't like to give human traits to fish, by calling them friendly or adorable, but it was hard not to when you are in their world. I also learned small things, like not to trust binder clips on slates to hold onto survey paper when the current is strong. Unfortunately, at least three of my surveys are lost to the Atlantic now, but they find their way back to REEF when other divers find them in the ocean. I am officially on team rubber band now when it comes to survey set up. No one told me that building your own survey set up was a rite of passage in the REEF world, but I like that I got to add a personal touch to my slate and also learn important lessons about holding onto materials while diving along the way.

Coming home from our first survey trip with half of our materials left



While most dives were centered around surveys in some capacity, it was also a lot about having the older staff members show us their favorite dive spots. I had always wanted to go wreck diving, but had never had the chance until my supervisor, David Ehlert, offered to take me and one of the lead interns to Spiegel Grove. The Spiegel was a US Navy ship that was purposefully sunk to create a deeper reef in a hardbottom environment. When the ship was originally sunk, REEF had a large part in surveying the fish species that found their way to the wreck and keeping an eye on the biodiversity. Also it is just super cool. As pictured below, there is a US flag that waves in the current. It was a little spooky to see up close, but it is a well-known photo op for divers who come to the Keys. The Spiegel itself has the highest mortality rate of any dive site in the Keys because of how deep it is, and how many divers penetrate the wreck.



A photo op with the famous Spiegel flag (Photo by David Ehlert)

We chose to stay on the deck of the wreck and peek into the doors that we came across, but it was still unbelievably cool. Peering off of the deck was like a different world entirely. The ocean floor seemed so far away, with tiny Nurse and Caribbean Reef Sharks circling below. Everything around us was just pure blue, with no view of the surface or anything to either side of us. It was so different from the other dives that I had done up to that point, which had been high profile reefs with max depths of around 30ft. On the Spiegel, we were 100 ft down in the open ocean and it was absolutely incredible. There is something soothing about being in a blue void, with nothing but ocean stretching around you. I was so distracted by the view that I actually ran into a school of absolutely massive Barracuda who seemed less than impressed by me.

Another great part about diving such a different habitat from our usual dives was the diversity of species that I got to see. I saw my first Tobacco fish, which was exciting, and my first Reef sharks. The size of the fish also varied greatly from the shallow reefs. Even common fish that I usually see on the reefs like Gray Angelfish or Yellowtail Snapper were significantly bigger on the wreck. There is a whole set of wrecks in the Keys, and so far I have been to two of them. My goal before I leave here in December is to dive them all.



Descending to the Spiegel (Photo by David Ehlert)

Another wreck that I was able to dive was the Benwood Wreck, which was one of the best sites to dive at night. I dove it twice at night, both with varying degrees of success. Both times, the animals on the wreck were amazing. I saw a Spotted Moray fully out of his crevice and free-swimming, and more turtles than I could count (apparently the turtles like to sleep on the wreck which is adorable) as well as a local semi-famous octopus. The first dive went off



without a hitch, even though I was a little nervous about night diving. I had only done one night dive previously, and was excited to get back into it. The way that deep water diving is thrilling, night diving feels the same way to me. Although I find Squirrelfish a little unsettling which is a major con to night diving. However, the second dive, my tank slipped out of my bcd and was holding on solely by my safety strap as we were ascending. Since the Benwood was a little deeper than the other sites, we had to do a safety stop, and my buddy, who was also my supervisor and a full time staff, Stacey Henderson, had to grab my tank to keep it from falling out, and hold onto it as we completed our safety stop and then ascended. It was so embarrassing to make such a diving blunder, and it has now become a story around the office. Needless to say I have lived and learned and now triple check how tight my strap is before each dive and between gear swaps.

As sad as I am that my time at REEF is over, the connections that I made are far from gone. I was scared to start a new chapter in my life in the Keys, especially since I had loved the people at REEF so much, but I am constantly reminded that once you are an alumni you are never forgotten. There is a vast alumni network and Intern socials where past interns tell their experience. Not to mention that I am still included in REEF events, like REEF Fest which is coming up, and the Lionfish Derbies. I am honored to be a part of this new group as I move past REEF, and thankful that REEF taught me so much over the summer. I began the internship thinking that I wouldn't want to have a career in education, and ended up finding my dream job here at MarineLab which is all education all the time. A lot of marine conservation is tiring and depressing, like rolling a boulder up a hill again and again. There are a lot of things standing in the way of policy change, and people with different opinions on how we should manage our

oceans, while our resources drain away. Working in education with a team of people, like the people at REEF and my new coworkers at Marinelab, makes me feel like I have some power to make a change. With every child that comes through a course that I get to teach, whether it is in the classroom or out on the ocean, I have made a potential ally for the ocean and for marine conservation. I have always believed that if you can make people love something they will feel more strongly about protecting it, and now I get to wake up and help people fall in love with the ocean every day. I was truly lucky to be a REEF intern and will treasure my memories and my friends from REEF for a long time.



The women of REEF at an outreach event (Photo by Stacey Henderson)



Acknowledgments

A huge thank you to everyone who helped me grow and learn so much this summer. I will always be grateful for this opportunity.

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