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## So You Want to Be a Marine Conservationist: Learning How to Be an Ocean Advocate Through Dive Training, Derbies, and Everything in Between

From mid-May to mid-August, I participated in the 2017 Dr. Jamie L. King Reef Environmental Education Foundation (REEF) Marine Conservation Internship. I mentioned in one of my early blog posts that my internship with REEF stood apart from any of my other jobs and internships; in October, looking back, this still holds true. In the past, I have held positions that require me to focus on completing one large task, with all of my actions directed towards reaching that goal. For example, if I had a project to complete, I would do laboratory work, read from the scientific literature, and carefully plan a PowerPoint presentation. After gaining experience delving deeply into single projects using this formula, I am thankful that I had the chance to switch gears and hold a position with a variety of duties. By giving me responsibility for completing tasks that ranged from making lionfish ceviche to communicating marine conservation issues to the public, my internship with REEF gave me the experience I needed to launch my career in marine conservation, helped me to grow into a stronger and more educated diver, and allowed me to spend a summer giving back my time and resources to the ocean.

Although I helped with a variety of programs and activities that took place around Key Largo and South Florida, the home base of my internship was the REEF office. When the other interns and I met Martha Klitzkie, REEF's Director of Operations, she advised us not to underestimate the importance of office work. "It may seem mundane," she said. "But it's the small things, like sending an email to a REEF member, that allow REEF to have such a big impact." I kept these words on my mind every day I spent in the office; I remembered that each

phone call, each email, each day spent packing for a Lionfish Derby laid the foundation for REEF to have an impact on ocean conservation. Replying to a REEF member with a friendly email encouraged them to spread the word about REEF, submit survey data, or lend monetary support; talking with an interested Keys resident on the phone brought a new face to our Lionfish



Lawrie (foreground) and Marie, two other interns, show off their lionfish headbands. Designing kids' crafts for lionfish derbies was one of our variety of office duties.

Collecting and Handling Workshop; and carefully packed derby supplies made for a smooth and fun-filled derby weekend. With all of these tasks and more, there was never a shortage or a lack of variety of things to do in the office. Our heterogeneous collection of duties gave me a crash course in prioritization, multitasking, and collaborating. REEF strengthened skills – like deciding which job had to be done immediately and which could wait, learning to quickly switch gears when an urgent task arose, and working smartly and effectively with two other people – that I never got to exercise while completing solo

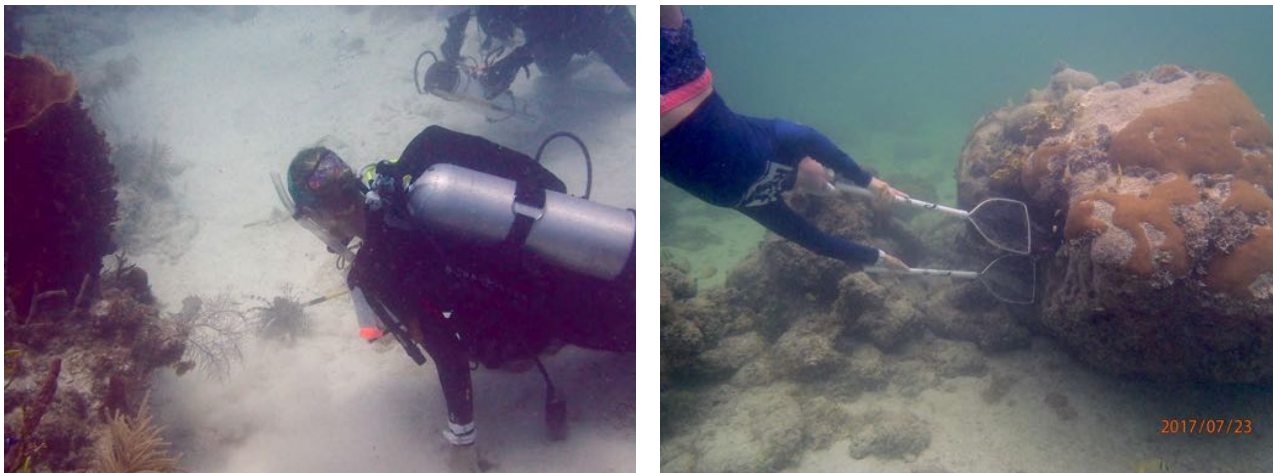
projects. And as a jack-of-all-trades who switched among many tasks and worked closely with my fellow interns, I had the privilege to see, from the ground up, the daily operations of a marine nonprofit. My days working at the REEF office strengthened skills and planted ideas that will help me in my future career, and working towards ocean conservation in these small ways was also gratifying to me personally.

But I didn't spend all of my time indoors. Once during the workweek, all of the interns spent a half-day collecting data for REEF's online marine sightings database by doing REEF fish surveys with the local dive shops. We dove and collected survey data outside of work as well; in an ideal week, we would also do at least a half-day of diving on the weekend and one night dive. I had already learned a good portion of the common Caribbean fish when I studied abroad in Bonaire, but surveying several times a week broadened my fish ID knowledge greatly.



Doing a REEF survey on Molasses Reef. NPS Photo by Shaun Wolfe / OWUSS

Diving with Carlos and Allison Estape – citizen scientists, underwater photographers, and fish ID enthusiasts who are kind enough to take the REEF interns under their wing each semester – also gave me a crash course in Caribbean fish species. They introduced us to species of tiny gobies and blennies that I would usually have swum right past, along with two-hour dives, hamlet mating rituals, and lionfish hunting.



Spearing (above) and netting (right) lionfish.

REEF's connections with local dive shops didn't only allow me to help collect fish survey data – I also was able to focus on becoming a better diver. After leaving Indiana University, I thought that my formal diving education was over, or at least on pause for awhile; gone were the days when I could sign up for a new scuba class with my favorite instructors every semester. But just two months later I was working on my Divemaster in the clear, bright waters of the Florida Keys. I love diving recreationally, but I love being in diving classes more; they keep my skills sharp and guard against complacency and inattentiveness. Doing my DM was the challenge I needed to keep advancing as a diver, and if not for my internship with REEF, it probably would have been years before I completed it. Continuing my diving education, helping to add to the world's largest marine sightings database, and getting to know local divers and fish experts enabled me to grow holistically as a diver while I was in Key Largo; I focused on strengthening my diving knowledge and techniques while also integrating myself into the local dive community and helping to preserve the underwater world.



Topside photos taken before the last two dives of the summer. **Top:** Blue Heron Bridge dive site is near West Palm Beach and is known for having a large variety of fish and invertebrate species. **Bottom:** Alligator Reef is an ideal location to search for spawning hamlet pairs.

As a REEF summer intern, another component of my internship was helping with summer camp and other education programs. As I've mentioned in my blog, I've always been a bit shy around children. Why people half my size intimidate me I've never understood, but

helping out with REEF's day camp gave me a chance to work on my kid skills. I found that, despite some crazy moments (sometimes kids and kayaks are an interesting mix), working with the kids at day camp made for a high-energy and fun week. Like my office duties, it gave me a new vantage point on marine conservation. For campers, seeing a parrotfish while snorkeling was a cause for celebration, and kayaking under a bridge on which people were walking was the best part of the day. Seeing kids' reactions to events like these was like pressing a reset button: all the things about the ocean to which I had become desensitized were fresh and exciting, and I was able to take the time to marvel at them again.



Kids dissect lionfish during a week of summer camp at Postcard Inn, a resort in Islamorada.

Working at summer camp, as well as helping with other education programs, also taught me some broader skills: it strengthened my flexibility, patience, and explaining abilities (I found that having to explain something so that kids get it – and get excited about it – really tests whether or

not you know your stuff). Even if I don't work with children in my future career, these skills and the fresh perspective I gained will be useful in my next steps in life.

Preparing for and working at Lionfish Derbies was a relatively small part of my internship – there were four weekend-long derbies over the course of the summer – but it was one of my favorite intern duties. I first learned about invasive lionfish when I was a freshman in college, so I was excited to be contributing to lionfish eradication efforts four years later. From selling merchandise, to making ceviche, to counting and filleting lionfish, there was never a shortage of things to do at the derbies. And teams didn't just drop off their lionfish and speed away on their boats. There was food, mingling, and, at two of the derbies, bigger events like cooking contests and musical performances. When there seems to be more grim news about the earth each day, it can be hard to find bright spots. Lionfish derbies are a great example of how working to better the environment can be fun and morale boosting. While my current job does not consist of planning large-scale conservation events, I hope to follow this example in any small-scale (and perhaps, in the future, large-scale) conservation efforts I implement in my own life and career. The derbies also gave me a chance to explore Florida and visit other ocean conservation groups; the different cities, venues, and people made each derby a unique experience.



Lots of interested guests and participants (above) and lionfish (right) showed up at the Sarasota Derby at Mote Marine lab and Aquarium.

Sarasota is home to beautiful homes, a quaint downtown, and Mote Marine Lab and Aquarium. Like invasive lionfish, I had been hearing about Mote for several years, so it was a treat to get to work with them for the derby. The Fort Lauderdale Derby at Fifteenth Street Fisheries was slightly smaller, but the calmer atmosphere allowed for more interactions with visitors. People at the restaurant wandered over to ask us what kind of event we were hosting, and I spent most of the derby talking to a twelve-year-old boy named Jesse and helping him learn how to make ceviche.



**Left:** the interns pose for a photo after the Fort Lauderdale Derby. **Above:** one of the Fort Lauderdale Derby's biggest catches.

The Key Largo Derby was a blast because it was at Pennekamp State Park, our home turf; we knew most of the people on the teams or passing through, and catching up with them made for a



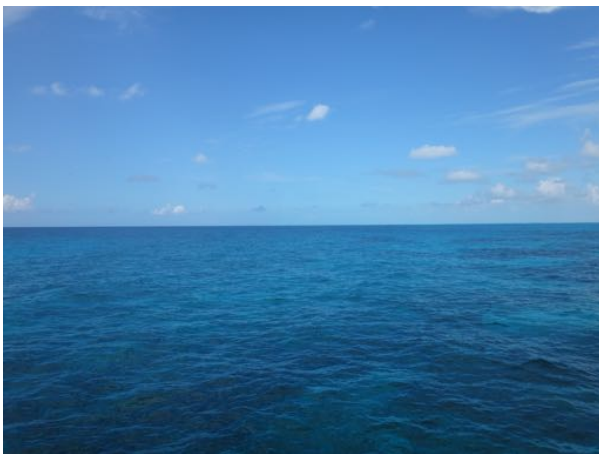
day that felt just as much like a social gathering as a public conservation event. The final derby was in Palm Beach County, and like the Sarasota derby, it was hosted at a conservation center. Loggerhead Marine Life Center rehabilitates sea turtles, and getting to learn about their work (and see baby turtles!) was a wonderful way to end my internship.



**Left:** Measuring a lionfish at the Key Largo Derby. **Above:** Marie (left), Ashley (right), and I sporting our Loggerhead Marine Life Center gear and saying goodbyes after the Palm Beach County Derby.

There are so many parts of this summer that don't fit into the neatly packaged categories I've laid out in this narrative: indulging in Key West's history and Miami's beaches; helping Lad Akins, REEF's Director of Special Projects, try to catch a non-native Humbug Damselfish in Miami Beach Marina; forming strong friendships; visiting Aquarius Research Base; watching baby sea turtles take their first steps towards the sea, a sight I had only ever seen on my television screen. After a research-focused college career, working at REEF was my first complete immersion into marine conservation; it transformed a change in my interests into a certain life course bolstered by experience and connections. In my future jobs, I am certain that I want not only to collect and understand scientific data but also to use that data to effect change

within communities and marine environments – just like I had the chance to do at REEF. Now, I'm working at Qualtrics, a tech company that makes survey software for research and management purposes. The free cereal bar at work is tempting, but I am certain that my time at Qualtrics is limited. In two years or less I plan to head back to graduate school for marine resource management, and the skills I learn working in tech will be used to serve my work in conservation research. REEF cemented my path towards a future working in conservation, provided key skills to guide me on it, and gave me wonderful memories and friends. For now, I'm living quietly in an apartment in Utah County. But I'm keeping dive gear and my survey slate ready.



**Clockwise from top left:** The interns visit the Wynwood Walls neighborhood in Miami; Lad Akins samples the Fish Tale Pale Ale, a special brew for REEF at the Florida Keys Brewing Company; Ashley, Lawrie, and I check out the emergency hyperbaric chamber at Aquarius Research Base; the surface of Molasses Reef on a calm day.