

Z Cam E2 at the Georgia Aquarium

by The Backscatter Team

Our friends at Georgia Aquarium reached out to us about their needs for a new underwater video system as part of their new immersive underwater shark experience. After discussing the needs of the project and narrowing down the choices of professional-quality compact video cameras currently available, the decision was made to perform a field test of the Z Cam E2. Backscatter supplied the camera, Nauticam USA provided the Nauticam NA-E2 housing, and Chris Miller of Georgia Aquarium Dive Program jumped in the tank to start capturing some sample footage. We spoke with Chris about the testing experience and equipment decisions, and what it's like to dive almost every day with some of the most charismatic megafauna found in one place anywhere in the world.

There are many different compact professional quality video cameras on the market right now. Why did Georgia Aquarium choose the Z Cam E2 as the next primary video rig?

Chris: Georgia Aquarium is offering an opportunity for guests to don dive gear and get in

an underwater cage as it travels throughout our new “Sharks, Predators of the Deep” habitat. We always want to capture our guest's experiences, so we reached out to the Backscatter team for some ideas about how best to capture this. The Z Cam E2 was suggested, and we immediately loved it. It offers us the opportunity to have a videographer shoot with the camera, or we can mount it on the side of the habitat and control the camera remotely. The new habitat carries some limitations about getting videographers in the water, so the ability to control the camera remotely is a huge plus for us.

How did you get to be involved with the videography at the Aquarium?

Chris: A few years after I started at the Aquarium I was tasked with upgrading our video system. At the time there were so many options and I had no idea where to start. I reached out to Backscatter to describe what we do, what environment we are working in, and what we were looking to achieve. You guys were very helpful in the decision and helping us pick the best cameras for our situation, and



helping us learn the system. We were very fortunate to attend the Digital Shootout in 2018 and learn so much from the team.

What are some of the unique challenges or experiences you face as a videographer in the aquarium?

Chris: It's amazing being able to dive in an environment with animals from all around the world. We are so fortunate to always have perfect conditions and a multitude of subjects just outside the office. One of the challenges of having so many subjects to shoot is having to pick just one and stick with it. You always feel like you want to get in and capture everything in one shot, but with thousands of animals, it's almost impossible. Multiple dives happen daily, so these animals are very comfortable with divers in the water. You can easily just park yourself in one spot of the habitat and get amazing shots in just one dive.



Your camera gear must spend a lot more time in the water than the average rig. What's it like to manage and maintain the gear?

Chris: We definitely run our gear through the wringer. We have a staff of about 30 videographers with a variety of backgrounds using this gear on a daily basis for hours at a time. Most of the housings and cameras in our equipment locker get close to 300 hours of underwater time logged in their first year of use. For example, the Z Cam E2 will be used to capture multiple cage dives daily and the plan is to have 4 cameras with housings in the water during all experiences. We put a lot of time and energy into training our team to properly maintain and care for these housings, as well



With perfect conditions and a multitude of subjects, the habitats of Georgia Aquarium can seem like a dream come true for an underwater videographer.

Whether topside or underwater, at home base in Atlanta or doing research abroad, the video team is always ready to capture media for everything from Instagram to Animal Planet.



as the optics, lighting, monitors, and everything else involved in the camera systems.

Most housing manufacturers recommend a full overhaul at about 200 hours of use or every 200 dives, so we really go the extra mile in taking care of our gear to make those service intervals stretch out as long as possible. When the inevitable time comes to send in the housings for routine maintenance, it's always easy working with the Backscatter Service team to facilitate the necessary repairs.

What are the requirements of video production for the Aquarium, and what other cameras do you use?

Chris: Our other primary cameras are the Panasonic GH5 and Panasonic LX10. We love the Panasonic GH5 because it's a camera new videographers can easily learn on, but it can also help seasoned videographers grow their skills. Both the Panasonic GH5 and Panasonic LX10 are used daily for our guest programs like the Dive and Swim program in our Ocean Voyager habitat, as well as PR needs.

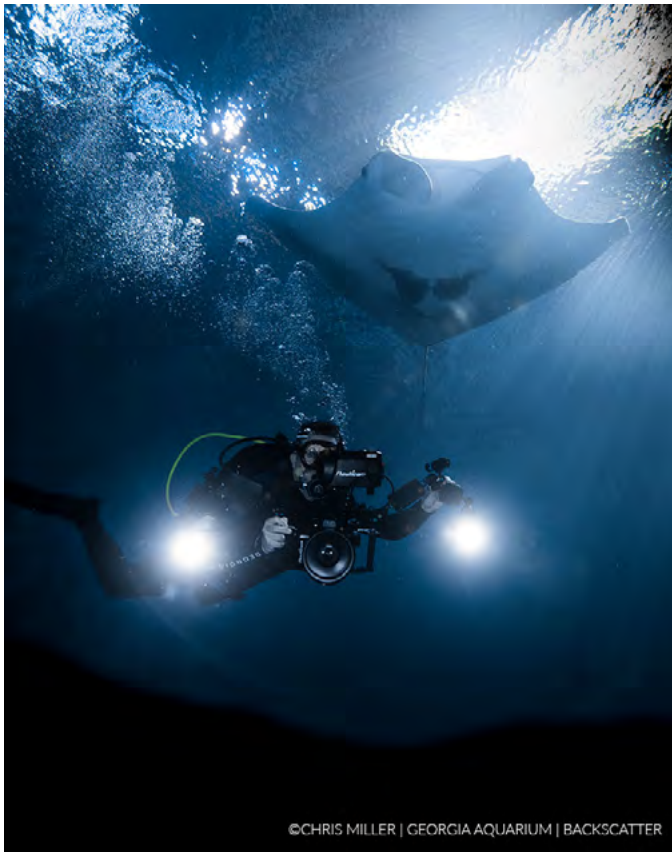
The Aquarium has been fortunate enough to be featured in

a variety of movies, TV shows, and documentaries. Currently, we don't allow any outside videographers to shoot in the water, so in-house staff members shoot most of the underwater footage in these productions with our own gear. We've used this gear to shoot for The Aquarium on Animal planet, we did an underwater live shoot with Good Morning America, we have used it to film a variety of Shark Week spots over the years and tons of local news station spots. We also produce all of our social media and online content in-house as well.

How do you utilize your imaging gear in the field for research and conservation work?

Chris: We do a fair amount of research and conservation trips throughout the year, and this video gear will play a huge part in capturing and documenting those trips so we can highlight the work we do outside our facility.

We have a fairly large Research and Conservation team that travels around the world for various research trips. We travel to places like Florida for manta, coral, & dolphin conservation. We travel up the coast of North Carolina for various shark

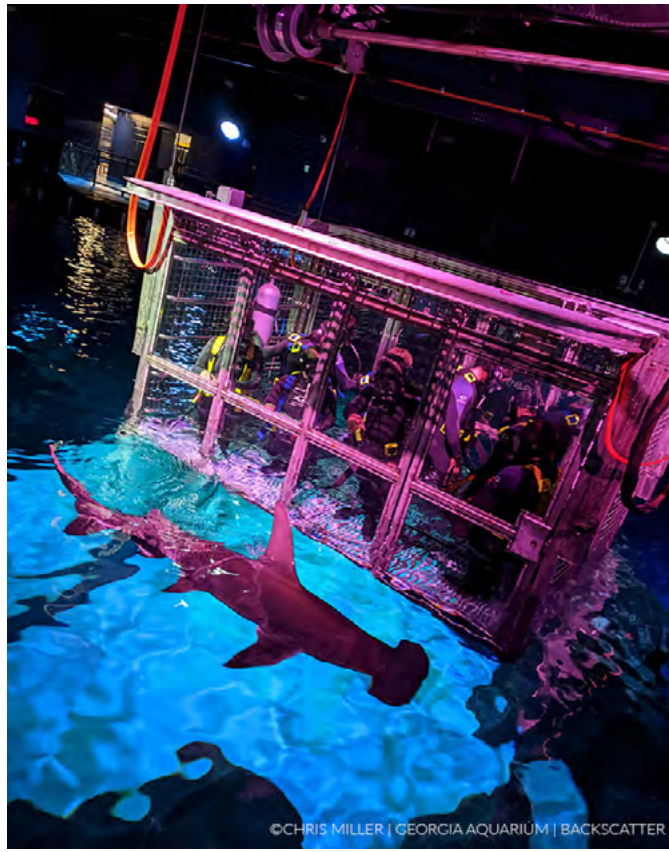


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The video team spends plenty of time learning how to maintain the gear as well as how to use it.

research. Teams have been sent to the Bahamas and other locations in the Caribbean for shark and coral conservation.

The larger, more extensive trips involve St. Helena, Indonesia, & the Galapagos for whale sharks. Each trip has a unique set of goals, capturing footage and assets from these trips is usually on the list. There is usually a videographer sent on these trips to capture as much underwater and topside assets as we can. This footage is important for the Research team to review, and to showcase



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The Z Cam E2 proved to be the right tool for the job when it comes to capturing the guest experience in the new Sharks, Predators of the Deep habitat.

the important research and conservation work we do globally to promote the preservation of aquatic species.

It was a blast hosting you at the Digital Shootout in 2018 and watching your skills develop. What was that experience like?

Chris: My colleague Chris Duncan and I had both been shooting for a while, but we were still very new into shooting in the grand scheme of things. We both were wanting to take our abilities

to the next level, both for ourselves and to train the shooters we have at Georgia Aquarium.

While following the Digital Shootout for years before, I knew this was the best opportunity to learn in real environments from Industry professionals.

Duncan and I had no idea what to expect but showed up ready to take every opportunity we could to learn from the pros. It did not disappoint. The ability to go out and shoot in the morning, then sit in seminars in the afternoon to review footage and learn how to hone in our skills was amazing.

Each evening, everyone got together to review and critique videos and images. Getting so much feedback from so many established shooters was priceless. The Digital Shootout helped step up our knowledge and abilities as well as build relationships with this crew. We've continued to build off these skills and these friendships for years.

What other exciting things are going on right now with Georgia Aquarium?

Chris: Our latest gallery and expansion, Sharks! Predators of the Deep is now open! Guests can see sharks like hammerheads and sand tiger sharks in one of the largest shark exhibits in the world. Guests can even participate in two different animal interactions in the new gallery.

Our shark and ray immersion experience gets guests in the water with zebra sharks and stingrays while you learn about these amazing animals. For the more daring, our shark cage dive takes guests underwater with the hammerheads, sand tigers, and other sharks in the main exhibit. No scuba certification required!

If you can't visit us just yet, Georgia Aquarium has virtual offerings on its website like guided tours, field trips, and webcams. You can even



Take a look at the gorgeous Z Cam E2 test footage captured inside the habitats of Georgia Aquarium.

sign up for our virtual 5K that runs March 13-April 18 and benefits Georgia Aquarium's research and conservation efforts!

Backscatter would like to thank our friends at Georgia Aquarium for their support. Thank you to Nauticam USA for providing the Nauticam NA-E2 underwater housing and optics.

Georgia Aquarium, located in Atlanta, Georgia, non-profit organization that contains more than 11 million gallons of water. Georgia Aquarium is a scientific institution that entertains and educates, features exhibits and programs of the highest standards, and offers engaging and exciting guest experiences that promote the conservation of aquatic biodiversity throughout the world. As a leader in aquatic research and exceptional animal care, we are dedicated to fostering a deeper appreciation for our ocean and the animals that call it home.

The Backscatter Team
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