

SeaTrek FATHOMS Inaugural Summer Program

BY ANGELA COWAN



FATHOMS 1 group on the Brewers Bay Cave Hike in Tortola, BVI.

It was last October. I got the call from my boss, Captain Monk Daniel, director of operations for SeaTrek Ltd. He said that the pieces were finally in place and the timing was right, "Let's make this science boat happen." The SeaTrek "science boat" had been unofficially in the works for over five years; now the time had come to make it a reality. I had no idea how much time, effort, and teamwork would be required as we pursued this new endeavor. The stakes were high, but so were the excitement and the potential.

As SeaTrek's director of marine science, it was my job to get the ball rolling. I enlisted the help and creativity of other SeaTrek staff, including Chance Ruder, a biologist and dive instructor. Chance had started with SeaTrek as a student in 2007 and was one of the first people to recognize the need for a more intensive, project-based marine science program. In Chance's words, "I thought that a boat dedicated to science could accomplish some really neat projects. Living on a boat in the Caribbean for three weeks surrounded by other aspiring scientists sounded like paradise." Within a week we had a program name, objectives, and description. It was time to make the official announcement:

SeaTrek BVI is proud to present our newest program, Focused Adventure Through Hands On Marine Science. FATHOMS combines marine science, community service, and cultural studies in the Caribbean's British Virgin Islands. During the 21-day voyage, students live aboard a 43-foot sailing catamaran that serves as their mobile research station, affording them countless opportunities to study and experience the ecology and dynamics of the living marine laboratory that surrounds them.

The FATHOMS program would incorporate the same high-quality scuba, sailing, and marine science training provided by SeaTrek's main programs in the British Virgin Islands (BVI) and exploratory programs in the Bahamas and Hawaii. In addition, the content and itinerary for FATHOMS would be unique and centered on marine science, community service, and cultural interaction. This would afford FATHOMS students the opportunity to learn about the marine environment and culture of the Virgin Islands in an authentic, hands-on manner. The FATHOMS curriculum was designed to present multidisciplinary marine science concepts and equip the students with the tools necessary to investigate, better understand, and impact the world around them by applying the scientific method to a variety of experiences, including labs, field studies, and community service projects. Students would also evaluate human impacts and conservation strategies, especially those relevant to the Caribbean and BVI.

We also wanted collaborators. One organization came to mind immediately. The Jost Van Dykes Preservation Society (JVDPS) is a BVI not-for-profit organization

Rather than bombard you with more of my own ramblings about what a wonderful time our students had and how much they learned, here are a few of their words about our inaugural summer of SeaTrek FATHOMS.

"FATHOMS was a wonderful learning experience that tied together previous knowledge from school and used it in the real world. This fantastic experience gave me an opportunity to use that knowledge in multiple community service projects. FATHOMS was unforgettable."

Jennifer Havens from Issaquah, WA, age 15

.....

"It was a great experience to make a special connection to the BVI—to go beyond being a tourist. It was really cool to learn from BVI students and community members and get to know them better. We started to see how the reef is not just a tourist resource. It is important for their culture and livelihood. As tourists we are a part of the problem that threatens the reef and other coastal resources in the BVI. But if we learn more about our impact, we can change our behavior and be part of the solution."

Maya Aurichio from Evanston, IL, age 16

.....

"The ocean is like a book with a beautiful cover, and FATHOMS allowed me to open it and begin to understand the ocean. We still have a long way to go, though, before we can finish reading the book."

Alexandra Welch from Atherton, CA, age 17



Left: FATHOMS 1 and JVDPS students and SeaTrek staff after diving together and hearing fisherman Adam Turbé's talk. Right: The FATHOMS 2 group on our Virgin Islands National Park hike led by Ranger Laurel Brannick. Left to right: Jenna Smith, Helene Flittie, Kasey Fox, Shelby Munsterman, Aly Yingst, Olivia Post, Krista Ransier, Chad Brewer.

dedicated to the preservation of the island of Jost Van Dyke, including its land, the surrounding sea, its living creatures, and its culture, through conservation, cultivation, education, and research. So I called Susan Zaluski, executive director of the JVDPS, and pitched the idea of establishing a collaboration between our two organizations. Over the next several months we discussed how both of our groups could most benefit from this new program; and we decided to focus on two key areas: (1) establishing a coral reef monitoring program using snorkelers and scuba divers and (2) developing an interpretive trail guide for a popular trail on the east end of Jost Van Dyke.

We also contacted the BVI Conservation and Fisheries Department and the National Parks Trust to develop other collaborative projects, including turtle tagging and monitoring, lionfish marking and removal, and seagrass monitoring. In working with these groups, students would be responsible for collecting and reporting data and helping educate BVI residents and tourists about the marine environment.

A number of guest lecturers from the Virgin Islands and mainland United States also agreed to share their work and expertise with our students. These included marine scientists, local fishermen, cultural historians, and park rangers. They provided our students with a deeper understanding of the complex issues surrounding marine ecosystem monitoring, conservation, and management.

One of our guest lecturers was Emma Hickerson, research coordinator for the Flower Garden Banks National Marine Sanctuary, who summed up her experience, "What a pleasure it was for me to work directly with keen young students who had a passion for the marine environment! They far surpassed our goals and expectations for the program and allowed us to expand the FATHOMS vision on the go, based on their

abilities and skills. I think the FATHOMS program will give these future stewards of the oceans a terrific kick start into their future endeavors."

Fast forward to June 2011. After months of planning and prepping, our FATHOMS 2011 voyages were underway. We had students joining us for two separate voyages, one starting in mid-June and the other in late July. I was a bit anxious, but I was confident we could execute the program and make it a fun and learning-filled adventure for all of our participants, including the local Jost Van Dyke students who would be joining us.

Ultimately, our goal with the FATHOMS program is to instill in our students a sense of stewardship and inspire them to take what they have learned back home and be advocates for similar issues in their own communities. We will continue our work with the Jost Van Dykes Preservation Society and community so that we can all experience and better understand the marine environment that is so vital to their economy and culture. SeaTrek and JVDPS students worked together on multiple occasions this past summer. They snorkeled and dove together while identifying and cataloguing fish and coral species. They spent time talking about marine conservation issues in the BVI, such as fisheries and invasive species (lionfish, mongoose) management. Most importantly, they spent some time just hanging out and being kids. We were fortunate to have Kenny and Adam Turbé talk to us about how fisheries have changed in the several generations that their family has been fishing in the BVI. Susan Zaluski and her assistant, Lorraine Callwood, presented information and joined us for several of our excursions and field activities. JVD students went turtle tagging with us and successfully caught and tagged three green sea turtles off JVD's east end. Next year we have high hopes of garnering more local interest in the budding program. The collaborations and program goals are what set the FATHOMS program apart and make it truly valuable.



The FATHOMS 1 group at Salt Island with our boat (The Life) in the background. Left to right: Patrick Ross, Lauren Beyer, Maya Aurichio, Emily Walker, Kasey Fox, Rob Spaeth, Alex Welch, Jennifer Havens.

Now, I am once again at my computer and on the phone—signing students up and prepping for SeaTrek FATHOMS 2012. It is time to do it all over again, but with the advantage of having one year under our belt. And most importantly, I have the privilege of using my 2011 FATHOMS students to inspire me. We will keep improving FATHOMS and making it the effective and meaningful program that it should be. We have already made some changes for 2012. We extended the program from 17 to 21 days, adding a few days on the island of St. John, USVI, so that we can take advantage of the Virgin Islands National Park, the Virgin Islands Environmental Research Station, and the rich resources of the island. We are adding new guest lecturers and community service and research projects into the curriculum. We are pursuing official university accreditation so that our participants can earn college credits. And, based on feedback from our 2011 student participants, we are creating a new Advanced FATHOMS so that they can return and delve even deeper into the marine science, community service, and cultural studies projects that they contributed to this past summer.

Our students' enthusiasm and commitment to the goals of the FATHOMS program were completely inspiring. I am most fortunate. It is a privilege to work with such caring and motivated young people—who will likely be the future scientists, conservationists, and environmental managers who will continue this important work. I hope they know just how much I, their "teacher," have learned from them. Special thanks to the Daniel and Ruder families for their continued trust and support, without which FATHOMS would not be possible.

For more information on SeaTrek and FATHOMS, visit the websites <http://www.seatrekbvi.com> and <http://www.seatrekbvi.com/fathoms.php> or contact Captain Monk Daniel at monk@seatrekbvi.com. (All photos by SeaTrek Ltd.)

“If you have any interest in marine science, this is the program for you. FATHOMS offers students a unique opportunity to study the ocean in a life-changing couple of weeks. I learned so much about the ocean, from the life inside it to the factors that are harming it. For example, I never knew how fascinating seagrass beds could be or what their importance was. After exploring them with a little guidance, I became fascinated with that ecology. The program has taught me a great deal about myself, as well. I now know that I want to spend my life researching because the ocean is what I am passionate about.”

Aly Yingst from Harrisburg, PA, age 17

“We got to delve deeper into marine biology and BVI culture, in comparison to other summer diving/sailing/science programs. It was really interesting to learn about something and then go there and learn about it by seeing it for yourself. It makes it so that it will stick in your brain so much better. It was interesting to incorporate learning about marine ecology with the culture and history of the BVI.”

Emily Walker from Lexington, MA, age 17: