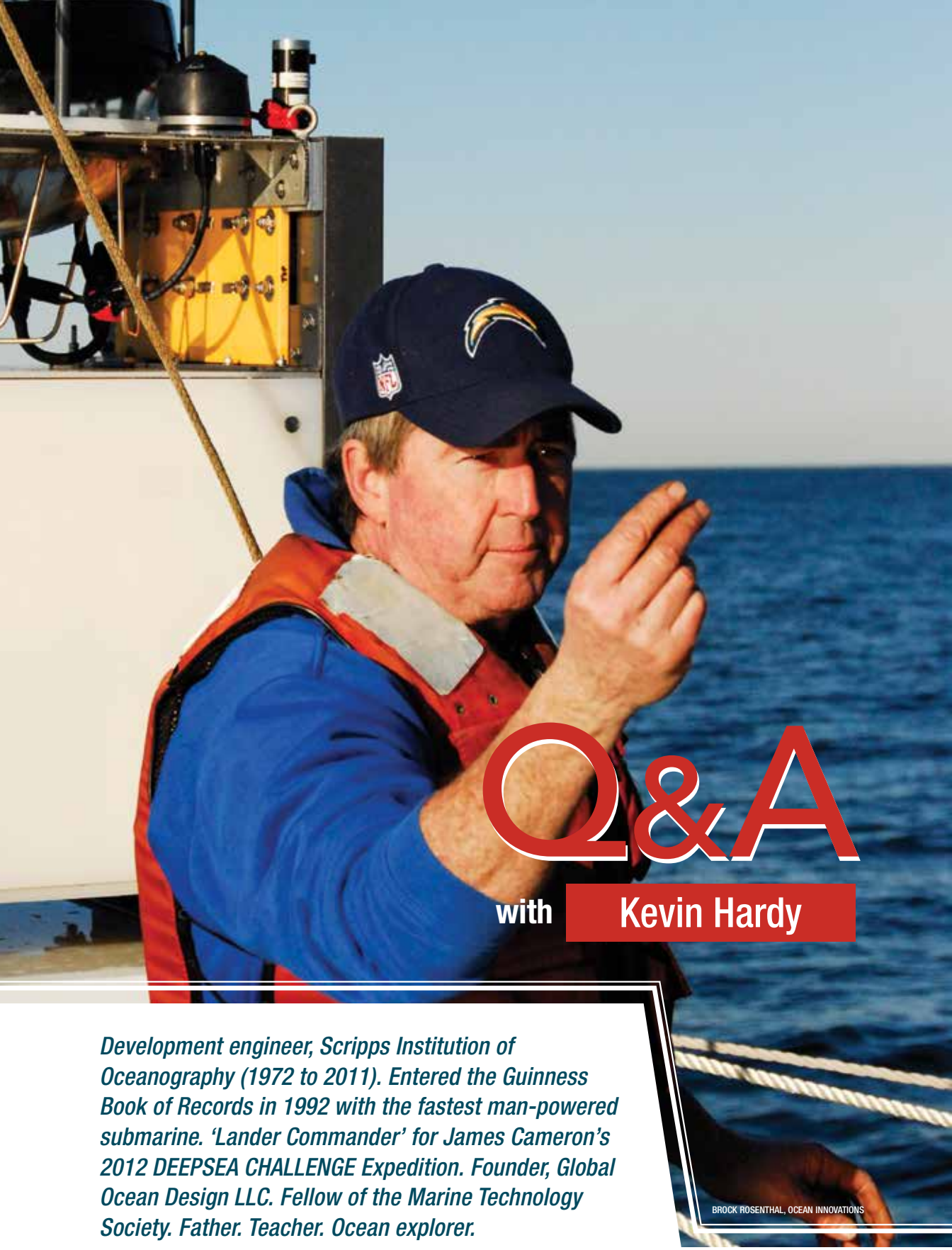

Q&A

with Kevin Hardy

Development engineer, Scripps Institution of Oceanography (1972 to 2011). Entered the Guinness Book of Records in 1992 with the fastest man-powered submarine. 'Lander Commander' for James Cameron's 2012 DEEPSEA CHALLENGE Expedition. Founder, Global Ocean Design LLC. Fellow of the Marine Technology Society. Father. Teacher. Ocean explorer.

BROCK ROSENTHAL, OCEAN INNOVATIONS

Where were you born? Where is home today?
I was born in Buffalo, NY. Today I live in San Diego, CA.

What is your occupation?
I am an engineer, researcher, explorer, teacher, business leader, husband, father, and friend.

Why did you choose this occupation?
It chose me. I was drawn into engineering for exploration and discovery from an early age. I was scuba certified before I could drive a car, and captivated by the 3D world underwater. The sea was filled with strangely familiar animals and plants. Schools of fish were like flocks of birds, and I could fly, too. Because of the buoyant force of water, I could move boulders. It was like having superpowers! But those disappeared when I had to return to the world above.

What is your personal motto?
Vade et Vide. It means "Go and See." It urges taking action on your curiosity, the essence of exploration.

What hobbies do you enjoy when you are not working?
I daydream of new underwater machines, and ponder ways to involve students or young engineers in the adventure. Exploration isn't a unique gift or skill, it's a cultivated habit. You're exploring when you walk around a different block, ask questions of people you've just met, dive into a history book, or take a course online. There's so much to know, and so many ways to crosslink the information.

Who inspires you?
My personal 'Hall of Fame' contains people I try to emulate in the course of how I live my life. JFK for his civic vision; the Beatles for their creativity; former Egyptian President Anwar Sadat for his courage to find a path to peace; Jacques Cousteau for his inventiveness and mastery of storytelling; aerospace engineers Kelly Johnson and Burt Rutan for their breakthrough flying machines. My children and wife continue to inspire me to be a better man.

What has been the highlight of your career so far?
I take a lot of satisfaction in a job well done. I choose goals that are a stretch for me. In 1992, I led a Scripps team that designed and built the world's fastest undersea man-powered vehicle, SubDude, and entered the Guinness Book of Records. This record was challenged 12 times, but never beaten. In 2011, I was recruited by James Cameron to join his DEEPSEA CHALLENGE Expedition. I led the design and construction of unmanned landers that repeatedly dove the ocean trenches of the western Pacific, including the deepest place yet found on planet Earth, the middle pond of the Challenger Deep – 11,150 m.

Why is it important to pass on knowledge such as yours to the next generation?
It's the only way we progress as an industry, society, or species. What makes us human is not the use of tools – it's how we pass on what we know to succeeding generations. One wonderful ocean engineer who taught me a lot was Dr. Frank Snodgrass. He didn't see problems, he saw puzzles, and he puzzled things out. That's a wonderful way to look at things. Meanwhile, the body of knowledge continues to grow across generations in pursuit of a more perfect world.

What role do youth play in the future of our oceans?
All rivers lead to the sea. So everyone everywhere touches the ocean, and the ocean touches them. Everyone can help preserve our seas and our world. I am struck by the wisdom of the words, "No drop of water believes it is responsible for the flood." That said, there's more to explore in our oceans than anyone could get done in several lifetimes. With James Cameron, we made a few deep dives and came up with 68 new species.

What advice would you offer to a young person who is interested in a career in the ocean industry?
Anyone who has a naturally inquisitive and analytical attitude about the natural world, mechanical systems, materials and processes, electronics and seafaring will do well in the marine community. Challenge yourself to learn new things. Get comfortable being outside your comfort zone. Look into the future and imagine who you want to be. Then take deliberate steps to go there. Constantly strive to make the world a better place. Find a challenge worthy of your time and talent.