OCEAN CAREERS
THE DIVING SAFETY OFFICER
BY ALEX BRYLSKE

Part Two

A Good Diver Is Always Learning!
For most, diving is a means of escape — a recreational endeavor in which one can leave all other concerns behind on the surface. But for some the bug bites too deeply. These are the folks for whom diving as an avocation just isn’t enough, and who are determined to make it a vocation. Last month I painted a broad picture of what I called “ocean careers” to explain the range of opportunities for anyone interested in making the sea the basis for their 9-to-5 world. This article is part of a series that I’ll offer from time to time examining some of the unique opportunities for ocean careers, and how scuba diving can provide a step up to a rewarding and often unique way to make a living.
Virtually everyone reading this article knows that one ocean-based career involving diving is that of a diving instructor. That’s obvious because it’s a scuba instructor who made it possible for you to enjoy the underwater world. If you have a c-card in your wallet, it’s because of the competence and enthusiasm of some individual who taught you not merely how to survive, but also to appreciate the other 70 percent of our planet.

Whether he or she worked part time or full time, teaching diving has long been the admission ticket to a career for countless individuals.

Although teaching diving to would-be recreational divers is the most common career path for scuba instructors, it would be a mistake to assume that it’s the only option. Another path followed by a very small minority is one that combines one’s interest in diving with science; and one way to accomplish this is by becoming what’s termed a “diving safety officer.”

**The Evolution of Scientific Diving**

The advent of scuba has been a boon to many scientific disciplines. The most obvious is marine biology...
and oceanography. The ability to remain underwater for an extended time revolutionized marine sciences — at least those concerned with shallow depths — and opened up much of the world’s continental shelves to firsthand observation. Scuba, in fact, made possible the modern disciplines of coral reef and kelp bed ecology. Even the social sciences benefited from scuba when archaeologists were no longer constrained by the shoreline to do their work. So, by the early 1960s, led by the pioneering work at the Scripps Institution of Oceanography, many universities had robust diving programs that would go on to establish the standard for underwater scientific research.

However, in 1977 an event occurred that required the scientific diving community (and, by the way, recreational diving as well) to organize and take the field to another level. That year the U.S. Occupational Safety and Health Administration (OSHA), responding to safety concerns in the commercial diving field, broadly included scientific diving to be a form of “commercial diving” (no one ever accused bureaucrats of being logical). In response, the scientific diving community, using an organizational structure already in place in the California state university system, founded the American Academy of Underwater Sciences (AAUS). Members of the new academy agreed to operate their research diving programs under strict adherence to a set of rigorous, commonly determined standards, and under the authority of an institutional Dive Control Board. In 1982 a federal court agreed that the AAUS structure was sufficient, and exempted scientific diving from commercial diving regulations. (Under a different agreement, recreational diving got a similar exemption.) Today, more than 100 colleges, universities, research institutions, consulting companies — and even a few programs geared to high school-age kids — are “orga-
As the level of structure and supervision increased within the various scientific diving programs, another AAUS requirement became the creation of a qualified individual to supervise divers and diving operations. This role became the diving safety officer or DSO.

While being a certified scuba instructor is helpful in many ocean careers, when it comes to being a DSO, it’s a requirement. This is because teaching scientific diving — and in many cases entry-level diving — is almost always in the job description. Under AAUS standards at least 100 hours of training are required for full scientific diver certification; and many programs include other training in addition to the general scientific diver course. Larger research programs now include deep, mixed-gas, decompression and cave diving. Rebreathers have also long been part of some scientific diver programs, and both the equipment and training required for this highly specialized diving is light years ahead of recreational scuba training. In addition, DSOs often have other duties, such as teaching loads in other departments, boat operations and maintenance responsibilities, and other risk management duties assigned by their institutions. So, the DSO truly must be a jack-of-all-trades.

I can speak from experience, as I serve as the DOS for the scientific research diving program at Florida Keys Community College, which is in addition to my role as a full-time faculty member in marine science and technology. My duties include teaching a four-credit-hour class, Basic Research Diving, and serving as a nonvoting member of the college’s Dive Control Board, and coordinating all scientific diving activities. Fortunately, unlike many of the DSOs, I don’t have to fill tanks, repair equipment or pilot boats.
A Tale of 3 DSOs

To understand what’s involved in a career option it’s often best to explore how folks who do a particular job got where they are. So, let’s turn attention to three such examples, beginning with my colleague and friend, James Byrne. James is the DSO for The Nature Conservancy. But, like many DSOs, his primary role is the marine science manager for their Florida and Caribbean offices.

Unlike most who were scared out of the water during the summer of 1975 when the movie “Jaws” premiered, James was inspired and determined to, as he says, “be like the scientist in the movie.” His dream started becoming a reality when he graduated in 1992 with a degree in marine science from the University of Miami, earning an AAUS qualification as a scientific diver along the way. Wanting to broaden his skills, James decided to become a scuba instructor. This is when I first met him because I was his instructor trainer. This led to a seven-year stint not in marine science, but in the diving industry where he worked as an instructor and boat captain in Florida, the Caribbean and Hawaii.

It was during this phase of his career, in 1997, that James witnessed the worst coral-bleaching event ever recorded. That year 16 percent of the world’s reefs bleached and 10 percent never recovered. Dead. Kaput. Alarmed and determined to do something, he returned to graduate school, again at his alma mater, for a master’s degree in nature resource management and policy. Afterward, a job with NOAA took him to Guam and then NOAA’s Coastal Services Center in Charleston, South Carolina, where he worked on coral reef management issues.

Eager to get back in the field, James took a position with The Nature Conservancy in the Virgin Islands, and helped expand their coral reef programs through much of the Eastern Caribbean. It was there his training as a scuba professional...
helped him start The Nature Conservancy’s first formal scientific diving program. The Caribbean regional office soonafter became a full organizational member of AAUS, and James assumed the role of diving safety officer (a role he still holds today). A short time later The Nature Conservancy’s Hawaii office joined AAUS.

Today, James is a major player in the coral reef conservation community and his success, he says, is in no small measure due to his training and experience as a dive professional. “It’s my diving background, and years spent in the trenches of the dive industry, that has given me a special insight that I couldn’t have gotten any other way.” And the rewards are many, especially, James says, “as I’m able to see the positive impact science can have by actually applying what we learn in the field right away.”

A career as a diving scientist was also the career choice of Erich Bartels, DSO at the Mote Marine Laboratory’s Tropical Research Lab on Summerland Key, Florida. Growing up in Pennsylvania, Erich spent his summer on the Jersey shore, and by age 14 was a devoted surfer. With salt water infused into his blood, he soon became an ocean lifeguard, and by high school knew that whatever he decided to do in life would involve the ocean. This led him initially to study ocean engineering at the Florida Institute of Technology, but he later changed direction, graduating with a degree in biological oceanography. During college he worked as a divemaster on dive charter boats, which quickly honed his diving and supervisory skills.

After graduating Erich spent two years as an intern in Belize and the Bahamas, experiences that taught him an important lesson. “I had no desire to be a Ph.D. researcher, and never had any real desire to go to graduate school,” he says. “My love has always been in the field operational side of science, not in the lab and most definitely not in an office.”

His experience at the research center in the Bahamas would turn out to be more important than he imagined. In 1999 one of the researchers he worked with in the Bahamas became the director of Mote’s new field re-
search station in the Florida Keys, and was looking for someone to run the laboratory’s diving and marine operations. With his extensive field experience, and familiarity with diving and diving operations, Erich was a natural choice. He has been with Mote ever since.

Like most of his colleagues, Erich’s duties include much more than his role as DSO. He also serves as program manager for Mote’s Coral Reef Science and Monitoring Program, and is responsible for all other marine operations. Still, he manages to remain nearly waterlogged, making between 450 and 500 dives annually, and sometimes spending up to seven hours a day underwater. “What really keeps me motivated about my job is the variety; I rarely do the same thing from day to day, let alone week to week,” he says. During any given month Erich can be found diving at Mote’s coral nursery, outplanting corals to nearby reefs or helping to organize and supervise the work of more than 100 scientists who visit Mote’s field station in the Florida Keys each year. “Not a lot of scientists get to experience the range of activities that I’m involved with, and diving is what makes it all possible,” Erich says.

Just as not all recreational diving takes place in warm, tropical water, so too with scientific diving; and there’s no story that better illustrates the career path of a “cold water” DSO than that of the University of Maine’s Christopher Rigaud. Chris started diving around the age of 8 (beating me by about five years). He was lucky enough to have a backyard pool, and could swim and snorkel before he could remember. Like many divers of the day, Chris learned to dive from his dad. Using the rudimentary equipment — sans octopus, SPG (submersible pressure gauge) or other “accessories” — he had to buddy-breathe with his dad because he was too small to fit into the scuba rig. As wearing the tanks wasn’t an option, he freedived and swam around underwater, returning to the tank to breathe when necessary. (This is similar to an exercise we used to teach to student divers in the past called “station breathing.”)

Finally, in high school, Chris made it official. He and his dad finally earned their c-cards.

Chris’ diving career began when he was a college student. He attended Long Island University Southampton College, which had a well-regarded marine science program. While in college he gained quite a bit of experience in Long Island, an experience he credits as the cornerstone of his diving.

While still in college Chris earned his instructor certification, and during the summer of his junior year left Long Island to work as a research diving intern at The
University of Maine, Darling Marine Center. “Although my college coursework provided occasional opportunities to integrate diving, this was my first experience with a formalized scientific diving program. Little did I know I would return to Maine some years later,” he says.

Following college, like many students, Chris was hesitant about continuing on directly into graduate school, so he accepted a job with a company called Sail Caribbean in the British Virgin Islands. There, he taught scuba, marine biology and sailing to high school students. “The rest of the year,” Chris says, “I worked as a research assistant and youth educator at a marine environmental learning center on Long Island.” As a scuba instructor, he developed and supervised the center’s scientific diving program. This is also when he discovered AAUS. While attending an AAUS symposium in Boston, Chris says, “I instantly knew I wanted to be part of that community.” A presentation at the symposium also inspired him to give up the “dive life,” and pursue a master’s degree in marine biology at Texas A&M University-Corpus Christi.

“My three years at A&M seemed brief, but filled with incredible experiences,” Chris says. “In addition to leading a team of research divers for my thesis research, I participated in numerous scientific diving expeditions in the Gulf of Mexico, Florida Keys and Mexico.” Chris also got his first experience as a DSO, serving in an interim role at the University of Texas Marine Sciences Institute. Unlike many DSOs, Chris also received training as a submersible pilot while acting as a scientific diver/diving supervisor.

While finishing his studies, Chris learned of a DSO vacancy back at the University of Maine, where he had interned a few years earlier (an example of why internships can be so valuable). He quickly jumped at the opportunity and, as they say, the rest is history.

In my interview with the DSOs for the article — and many more over the years — I’m always struck by the similarity of attitude. Uniformly, they tell me that success requires being true to yourself. As Chris Rigaud says, “When it comes down to it, you only have to answer to yourself, so ignore the chatter, follow your inner voice, and have the courage of your convictions.” Yet, each also gives credit to mentors, and others who have helped them along the way. Still, the key to success in this or any field is, as Erich Bartels says, “Do what you love and you’ll never have to work a day in your life.” Indeed, that’s what seems to unite all of us who make a living in an ocean career.