

Ryan Patrylak
Divers Alert Network and Our World-Underwater
Scholarship Society
2009 DAN Intern
May-August 2009

I first heard about the Our World-Underwater Scholarship and Internship program from a University of Connecticut (UConn) graduate student and previous Our World-Underwater Scholarship Society (OWUSS) Scholar, Anya Watson. Anya told me about the program and the opportunities it provides. During my senior year at UConn I was looking for internships for the summer and decided to apply for the Divers Alert Network (DAN) internship. The DAN internship would provide me an opportunity to further my diving career through field experience and interactions with dive professionals. I applied, and in March I received the call telling me I also got an internship and that I would be going to Scapa Flow in Scotland.

Prior to the training week I did not have a lot of time to research Scapa Flow except for what my friends told me about it and the little research I was able to do. I spent most of my time finishing up the final papers and presentations for my seven classes, packing up my house, and working.

As a DAN intern I spent 10 weeks collecting Project Dive Exploration (PDE) data as part of the 2009 Project Dive Extravaganza. As the DAN website explains, "Project Dive Exploration is a prospective observational study of the demographics, medical history, depth-time exposure, and medical outcome of a sample of the recreational diving population. PDE seeks to estimate the incidence of decompression sickness (DCS) in population subgroups and to investigate the relationship of DCS probability to depth-time profile and dive and diver characteristics." Using a Sensus Pro dive computer attached to the diver, I was able to collect dive profiles. There were also a medical history and contact information sheets that had to be filled out. This was the hardest part, as most of the divers didn't have a problem having a computer attached to them but did not want to

be bothered to fill out the paperwork. They felt that because they were on holiday they shouldn't have to spend it filling out forms. Fortunately, I met many divers that volunteered last year and had no problem filling everything out. After they were done diving I would download the profiles and then input the contact and medical information before transferring the data to the DAN research team.

My host in Scotland was Bobby Forbes of SULA (Scientific Underwater Logistics and) Diving and the Orkney Hyperbaric Trust. SULA Diving is a scientific and commercial diver company based in the Orkney Islands, Scotland. It is also part of the Orkney Hyperbaric Trust, which runs the only hyperbaric chamber in the Orkneys, Shetland and the North Coast of Scotland. A majority of their activities are focused around marine surveying and administering hyperbaric treatments to injured divers. The employees of SULA Diving are marine biologists and archeologists, trained scientific divers, commercial divers, and hyperbaric chamber technicians.

Prior to the internship I had little interest in wreck diving because my background is biology and I always scuba dived in search of fish and invertebrates. I had only dived two wrecks prior to Scapa Flow, but being able to swim along the hull of a 90 year old battleship or cruiser and seeing the turret guns, deck mounted guns, and conning towers has changed my interest. I began planning dives around parts of the wrecks and went in search of more guns, anchor capstones, boilers, rudders, and torpedo storage containers. The wrecks are relatively intact and have many openings that allow you to swim through the different decks of the ships. For those of us who are interested in biology, the wrecks are biofouled with anemones and hydroids and habitats with several species of crabs, sea stars, eels, schools of fish and the occasional seal.

The first week of the internship was spent at DAN headquarters in Durham, NC with the other DAN interns. The week was packed full of physiological lectures, PDE training and learning all things DAN. Before I knew it the week was over and we were all off to our host locations for the next ten weeks. The plane ride from JFK to Edinburgh was almost eight hours. In that time I managed to watch four and a half movies, watch the sun set in Canada and rise somewhere over the Atlantic. I could not sleep because the anticipation was keeping me up. This would be my first trip to Europe and will most definitely not be the last. I spent the long layover exploring Edinburgh and waiting for the flight to Kirkwall.

I landed in Kirkwall around 7pm where Bobby Forbes, the managing director of SULA Diving, and also my host for the internship, met me. The forty minute drive to Stromness was quiet as I looked out the window at the rolling, treeless hills of Orkney. He dropped me off at my living accommodations, which turned out to be a caravan parked behind an inn at the far end of Stromness. For the next week I explored Stromness and the guys from SULA Diving introduced me to all the skippers. Later that week I was invited out on one of the dive boats to see Scapa Flow and how the dive boats operate. The following week a group of divers from the UK invited me to spend the week with them diving.

Before I came to Scotland a majority of my dives were shallow beach dives and I was nervous about the depth of the wrecks. The group leader has been diving Scapa Flow for nearly 30 years and took me under his wing for the first couple of dives. After that I was no longer nervous and became one of the first ones in the water. During my

time in Scotland I did around 50 dives, all of which were wreck dives, a majority were beyond 100 ft and nearly half were decompression dives. The last couple of weeks I was leading dives on the wrecks, giving dive briefs and swimming through the wrecks.

The Orkneys are full of historic sites, from ancient Neolithic settlements to Viking burial mounds. Most important to me was the scuttled German Fleet. Scapa Flow was the base for the British Grand Fleet during both World Wars. At the end of World War 1, the German High Seas Fleet was moored at Scapa Flow as part of the armistice negotiations. On June 21, 1919 the German Fleet was scuttled by orders of Admiral von Reuter in order to keep the fleet out of the hands of the British. Seventy-four ships were kept at Scapa Flow, fifty-two of which were scuttled, and of those only seven remain. There was extensive salvaging during the 1940's, leaving only the cruisers Köln, Brummer, Dresden, and Karlsruhe, and the battleships Kronprinz Wilhelm, König, Markgraf and the Bayern's turret guns along with a number of salvage sites.

These wrecks make Scapa Flow one of the most popular dive sites in Europe. Thousands of divers come to the Orkneys between April and October to dive the wrecks. A majority of divers come to the Orkneys for a week of diving on one of the many dive boats. Others take classes and dive at the Churchill Barriers. They arrive by ferry Saturday afternoon and begin diving Sunday morning. They dive twice a day for 6 days on various wrecks, using single or double open circuit or closed circuit rebreather. There typically is a surface interval with a minimum of two to three hours. During this time most of the boats drift around Scapa Flow while the divers eat, sleep and fill out dive logs.

Once or twice a week the boats will tie up in Lyness. Lyness is a town on the island of Hoy and during the World Wars acted as a Naval Base and is now home to the Visitor Center and War Memorial Cemetery. The Visitor Center is housed in an old pump house and oil storage container and consists of a war museum, gift shop and café.

This internship has far exceeded my expectations. It provided me with an opportunity of a lifetime. It provided me the opportunity to interact with hundreds of divers from all over the United Kingdom and several from Russia. I am still in touch with several divers and have been extended invitations to return and dive with them again when I find myself back in the UK. I was able to directly observe several DCI treatments at the local hyperbaric chamber, which has expanded my interest to include hyperbaric medicine. I would recommend this to anyone interested in diving and diving medicine.

I would like to thank Divers Alert Network and the Our World-Underwater Scholarship Society for providing me with this opportunity. Also Bobby, Kevin, Dan and Malcolm at SULA Diving for all of their help and support during the internship. I would also like to thank Emily of Radiant Queen Charters and Roy of the Stromness Diving Centre for allowing me to dive off of their boats, and Ben, Liam, and James of Scapa Scuba for all their help. And finally, I thank all of the divers that allowed me to tag along and dive with their groups.