

Deep Wall Diving

Bay Islands Beach Resort Roatan, Honduras

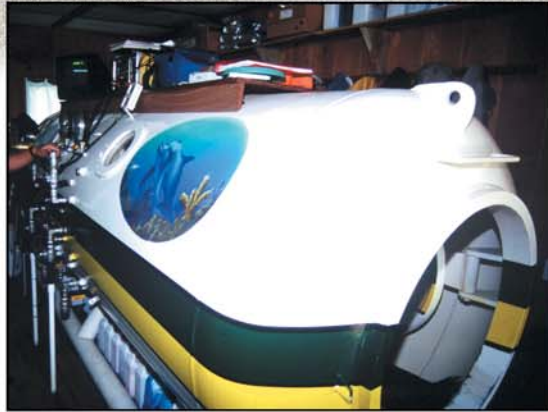
Every October, NAUI Technical Operations and Bay Islands Beach Resort (NAUI Technical Training Center) jointly sponsor two weeks of technical diver training on the island of Roatan, off the coast of Honduras. The setting and facility is idyllic, with helium and oxygen, top side technical diver support, and a 54 inch double lock recompression chamber within a 10 minute boat ride from the deep training sights.

The first week of training was dedicated to technical nitrox, staged decompression, and helitrox (26 % oxygen, 17% helium) training. John Duggan of San Antonio's Duggan Diving conducted this training.

During the second week, attention was placed on deep mixed gas training. The instructors were Tim O'Leary, NAUI Technical Operations and Bruce Wienke, Ph.D., LANL. The deep mixed gas-training week began Saturday night with candidates being briefed on gear configuration, deep stop RGBM tables that had been customized for the week's training, and team assignments. Each team member was required to configure his or her gear the same as those within the entire team. Personal choice was not an option in the team environment. Each dive team was supplied with the customized NAUI RGBM nitrox and trimix tables, by Bruce Wienke, that allowed for the week's exact dive profiles, including repetitive dives, gas mix and switches, NAUI gas management planner, trimix planner, and the trimix team planner.



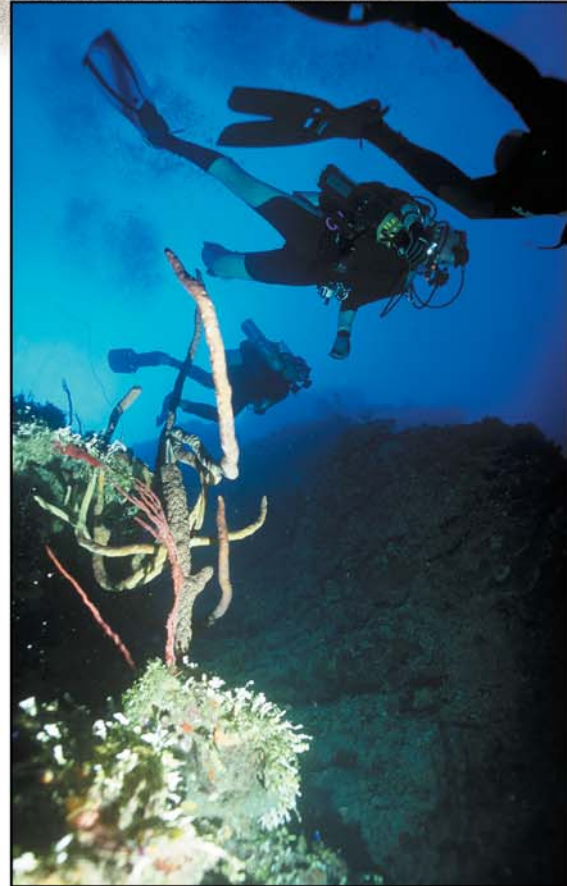
NAUI TECH OPS DEEP TRAINING FACILITY



Above: A fully staffed hyperbaric chamber is operated 24 hours a day. Located just 10 minutes from Bay Island Beach Resort makes this location perfect for advanced and technical training.

Right: Tec students float along the Roatan wall at 200 feet.

Right Lower: Giant Barrel Sponge clinging to the wall at 225 feet.



Sunday began with breakfast, dive briefings, and team equipment checks. Both dives began in the "classroom," a fifty-foot deep coral canyon with a sand floor and swim through on the north end to a 200-foot wall. All divers performed the following drills on a pass/fail basis:

1. Buoyancy control and trim within 10% of midline.
2. Shutdown failed regulator and isolate for catastrophic gas loss (within 15 sec.).
3. Shut off and switch over to redundant regulator (off 15 sec., on 30 sec.).
4. Gas sharing in mid-water column for a distance of 30 ft.
5. Remove and replace stage cylinder (off in 5 sec, on in 10 sec.).
6. Towing a simulated unconscious diver 30 feet and simulating a rescue ascent.
7. Complete gear exchange between team members.
8. Ascend with reel and lift bag and effect drift decompression (hook-up within 45 sec, full deployment within 90 sec.).

From this point on, each day would end with debriefings, gear cleaning, gas mixing, and staging for the next day's diving. It quickly became obvious that this was not going to be a dive vacation. Instead, it was all about long, labor intense days, with breaks only for dive planning, briefings, debriefings, lectures, Q&A sessions, and, of course, the dives themselves.

Monday's dive was on the spectacular "hole in the wall" on the northwest side of Roatan. The dive teams used 14 % oxygen, 24 % helium mixture, while descending to the second keyway at 170 fsw. Then the teams turned west to look up into deep-water barrel sponges and the gothic architecture of this unique diving site. While the





Left: Bay Islands Beach Resort mascot

Above: View of the Bay Island Beach Resort from their private pier.

Right: Dr. Bruce Wenkie poses for a shot beside a Giant Barrel Sponge.



Above: Dr. Bruce Wenkie poses for a shot beside a Giant Barrel Sponge.


divers were beginning their quest of becoming a disciplined underwater team, the technical support team from Bay Island Beach Resort was busy staging extra oxygen at the 20 fsw stop. On ascent, the teams utilized the sand chute for staging decompression from the keyway through "hole in the wall" and on to the thirty-foot stop, which was on a static line.

Tuesday began with a similar dive into "hole in the wall." Divers descended a little deeper than on the previous day. Evaluators kept watch for controlled descent and ascent rates as well as signals, turn pressures, decompression times, and gas management. The afternoon dive was on the "Eagle," a 600-foot wreck sitting at 110 fsw. The teams used a 26% oxygen mix, with 17% helium and 57% nitrogen. This mix has become known as helitrox and may be used in lieu of nitrox, at depths shallower than 150 fsw.

Wednesday's gas mixture was 16% oxygen, with 40% helium so that both oxygen and nitrogen partial pressures would remain low and the dive could be made well within limits to minimize the risk. Divers descended off the wall, near the "classroom" and continued on to a second wall (that began at 190 fsw), searching for the giant barrel sponges that inhabit these deep waters. Curt Bowen, of Advanced Diver Magazine, found several subjects for his camera within the 200-foot range.

The following morning brought higher seas and more fresh water run off from the jungle mountains than was expected. As the divers descended to the deep wall off of the classroom, the currents picked up. After a dazzling ride along the top of the wall, at around 200 fsw, the divers began their ascent to decompress. During the static decompression, the current accelerated to about a knot and a half, carrying the team over a kaleidoscope of coral reef life.

Technical diver training can be an exhilarating series of learning experiences for all participants, but great care must be taken to insure that all potential risks are reduced. The divers must be dedicated, proper decompression tables must be used, and should the need arrive, a recompression chamber needs to be nearby and available.

NAUI Worldwide has a complete array of RGBM phase model tables that include air, nitrox, constant ppO₂, trimix, saturation diving, surface decompression on oxygen, heliox, and altitude tables. For further information contact: 

NAUI Technical Training Operations at 956-761-7986 or nauitec@aol.com.



Below: Divers follow a sand chute upwards as they complete their required decompression stops. This makes for entertaining decompression by allowing divers to look around at the reef as they off gas.