

undercurrent

The Private, Exclusive Guide for Serious Divers

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CoCo View Resort, Roatan, Honduras

Forty years old, and still no better outpost for Caribbean diving

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Dear Fellow Diver:

After a week of diving at CoCoView, I now know why so many divers are proud to call themselves "CoCo Nuts" and return to this dive resort time after time. The explanation begins in the "Front Yard," the nickname for the house reef, which remains fine diving since the resort opened up 40 years ago.

You start with a leisurely walk from the cafeteria doorstep along a well-worn sandy trail to the water, then take an underwater path through gradually sloping eelgrass beds. About 50 yards out, a small free-standing dock in five feet of water is handy for holding a camera or checking gear. Fifty yards more and you reach the edge of a sloping sand wall. Going down in 80-degree water, I scared off a southern stingray as I kicked over to purple-tipped and corkscrew anemones protecting pistol shrimp, which emanated a sharp pistol-like "pop" when provoked by a tickle. One corkscrew anemone held Pedersen cleaner shrimp willing to give a manicure. Then a small eagle ray swam past while my dive buddy checked out a six-foot swimming moray eel -- and this was just in the first couple minutes.

A few feet farther down, I could see the looming shadow of the Prince Albert, a 140-foot tanker/tramp freighter sitting at 65 feet since 1985. Now encrusted with corals and anemones (purple-tipped and pale varieties), the wreck



The Rooms on Stilts at CoCo View



is home to schools of Creole and yellow cleaner wrasse, four-eyed butterflyfish, parrotfish, French and queen angels, and a school of Bermuda chub. A five-foot barracuda hung off the bow. In the ship's open hold, a huge green moray lay so docile I thought it was dead. When I got within arm's reach, I noticed its gills were barely moving. On return from exploring the holds, it was gone. I dropped down to watch a scurrying smooth box crab, a strange creature that looks like half a colander with legs coming out the sides. Above, I was surprised to see my buddy following a cruising

eagle ray. Great image.

We had arrived at the Roatan airport in the early afternoon, moved quickly through customs, boarded a bus for a half-hour drive, then went aboard a shuttle boat for a quick ride through a mangrove-lined lagoon to the resort. The first question asked on arrival was "How many of you have been here before?" Those who raised their hands were promptly dismissed and ran off to get into the water, less than an hour after passing through customs. Newbies were required to take a checkout dive with an instructor, then listen to an introductory talk explaining that the maximum depth was 130 feet and dive times were an hour, a limit that is largely a courtesy to divers waiting up top (I only made one dive out of 20 that lasted less than an hour). This orientation to the geography of the Front Yard is important, because when the boat is returning to the resort after dives, divers may jump in a few hundred yards from shore to mosey back underwater.

CoCo View is situated on a large sandbar just off the coast of Roatan Island, about midway down the second-largest barrier reef in the world. Now in its 40th year, CoCo View is a well-maintained "seasoned" resort, with 29 rooms adjacent to or over the water on pilings. All have a small fridge, air conditioning (I didn't need it for 80-degree nights in April), a large jug of water, a coffeemaker and coffee, showers with reliable hot water (solar heated), a hammock for snoozing, and good daily maid service. One can also rent a three-bedroom villa or private homes down the narrow beach.

Staffed with excellent and polished divemasters accustomed to giving personal attention to scores of divers weekly, the dive operation is well organized. Upon returning from a dive, I walked out the back of my assigned boat onto the dock, and after a few steps, I was in my boat's storage and drying shed, with drying racks, rinse tanks for cameras and suits, and my own locker. Leave your checked cylinder at your locker, and you'll find it set up on the boat in the morning. Tanks were aluminum 80s (and 60s and 100s), and the rental equipment was fairly new.

I dived with four excellent divemasters -- Gringo, Robert, Raul and Manny -- who kicked along slowly and found plenty of interesting critters. Some of the divemasters have been there 20 years and seemed to be very happy with their jobs, still willing to go the extra mile to satisfy customers. Many repeat divers request their favorite divemasters upon return.

Speaking of repeat divers, an older solo diver on my boat kept to himself, although he was polite and friendly. He rolled off the boat alone on each dive and disappeared for an hour. I learned that, for some years now, he arrives from his Texas home, stays the week and makes about 20 dives, goes home, then returns two weeks later. That CoCo View gives a free week to anyone who has paid for nine is a bit of incentive. I heard he has made 700 dives here, but it seems like much more to me. He said he returns because the diving is easy and the reefs are different on every dive. Now there is a true CoCo Nut.

A Tragic Accident Brings a Reminder for Safe Travel

The traffic on Roatan's main road is notoriously heavy and dangerous. On the return drive to CoCo View after the shark dive, our lane of a two-lane highway was stopped for construction, but traffic in the other lane was moving fast. A nine-year-old boy darted into that traffic and was struck by a fast-moving motorcycle. What was so striking, sitting in our minibus and looking out the large windshield, was we all saw it coming a few seconds before the impact and started screaming. We jumped out to lend assistance, but it was chaos. I'm a cardiologist, not a trauma specialist, but I knew the child was probably dying. I tried to keep people from moving his neck around, but a local woman suddenly scooped up the child and ran off to the hospital, a block or two away.

The next morning I asked my divemaster, Gringo, for an update, and he said, "He's all right now, he went

home from the hospital," which was his way of saying it was all over. I'm worried that my dive buddy, who was right there in the middle of the incident, may get PTSD out of this.

I write about this incident just to reiterate what Divers Alert Network says about divers being far more likely to get injured from motor vehicle or boating incidents than we are from diving. Motor vehicle travel in developing countries can be far more dangerous than in the U.S. The roads themselves are more dangerous. Drivers and pedestrians don't make the same decisions they would in the U.S., so you can't predict what they will do.

Pay careful attention if you are a pedestrian, and think twice about renting a car, bicycle or motor scooter for an afternoon adventure after diving.

-- D.D.

Divers like him return for dives like Mary's Place, a wall dive featuring a large crack in the reef several meters deep that traverses down to the edge of the wall, where it makes a 90-degree turn and opens on the wall at 90 feet. Essentially, it's a cave dive without a ceiling and with 75- to 100-foot visibility. Along the way, I traveled under large purple sea fans and colorful soft corals. On the deeper parts, stands of black coral stood out. Coming up the wall, I investigated crevices full of graysby groupers and coneys, with stoplight, red-fin and princess parrotfish darting around. Manny pointed out a scorpionfish, while mid-sized Nassau and black groupers lolled around. Half a dozen curious reef squid got in the face of several divers, flashing colors to communicate with their gang.

Each morning, we departed at 8 a.m. for two morning dives, followed by lunch back at the resort, then a 2 p.m. departure for two afternoon dives. We would be back at the drying shed by 4 p.m. Divers are loaded onto four 50-foot dive boats, originally manufactured for the U.S. Navy for diving. Capable of holding 20 divers comfortably, each one has sun coverage, spacious rear dive decks, cutouts in the gunwales for side entries, and twin rear ladders. A unique feature is the interior center well forward of the engine, with a ladder for entry during heavy weather. There's also a smaller similar craft and a 45-foot boat with a 900-horsepower diesel engine to visit remote dive sites. All boats have resuscitation kits, radios (and cell phone service), camera rinse tanks, and gear storage. My boat also had music, usually Spanish rap but sometimes oldies, which got a few divers boogying. Between dives, crew offered snacks, mangos, watermelon and pineapple.

The Front Yard makes for an easy-to-do, shore-based night dive. Channel crabs and octopus, hiding during the day, appeared in droves after sunset. The Prince Albert crawled with night life. (Before leaving on the dive, which essentially starts at the cafeteria doorstep, order dinner, which will be waiting for you on return. You don't even have to get out of your wetsuit, just eat at a water's-edge table.) With the easy 24-hour access, some divers arise as early as 4 a.m. for dawn dives.



The Dive Boats

On one dive along the CoCo View wall, I spotted two dozen spawning parrotfish, spiraling upward to about 15 feet, shooting a burst of milky sperm and eggs, then repeating the process. This led to an interesting discussion at the bar with my dive group that evening: Do fish have orgasms?

It is easy to spend five hours a day underwater at this place. My dive club leader cautioned divers more than once about building up excess bottom time. Nitrox is a must, as is keeping a careful eye on your computer. I noticed that the dive staff was pumping 29 to 30 percent, not 32 percent. While one of them first tried to blame it on the heat and humidity, which made no sense, the dive operations manager later confessed they had a mechanical problem, and a repairman was scheduled in a week or two. Presumably they are pumping 32 now.

We dived Pidgeon Caye, a sand bar with a couple of palm trees in the open Caribbean toward Guanaja, an hour's journey. We anchored in five feet of water and walked ashore, where the only residents were a few small lizards. After lunch on the boat, we dived for 80 minutes on this truly pristine reef, with huge pillar corals and 150-foot visibility. Large and plentiful stands of staghorn, elkhorn, brain coral, lettuce corals and all sorts of encrusting coral were the healthiest I've seen in years. And the water was full of animals: eagle rays and stingrays, sergeant majors, dusky and cocoa damsels, schools of blue and brown chromis with indigo hamlets, reticulated filefish, ocean surgeonfish, honeycomb cowfish, horse-eyed jacks and even a cero. But no big stuff, because this area is outside Roatan's marine park.

Most reefs are covered in healthy encrusting corals, staghorn and smaller branching corals that can easily get broken with diver activity. I even saw a small stand of elkhorn near the southwest end of the Front Yard's wall. Soft corals and sea fans, especially purple sea fans, were everywhere. Sandy areas around the resort and on the top of most walls had the usual inhabitants, like stingrays, peacock flounder and even yellow-headed jawfish, where I studied males incubating eggs in their mouths. Glimmering tilefish were frequent, along with trumpetfish, rosy razorfish and various blennies. And I probably encountered more seahorses here than anywhere. On one dive, an aggressive yellow-face pike blenny attacking his image in a mirror became one of my macro photo highlights for the trip.

If you make five dives a day, about the only thing else you have time for is eating. The dining room, serving buffet meals, has ample seating for the resort's 80 guests. Breakfast began at 7 a.m., with scrambled eggs, omelets, pancakes or waffles, toast, sometimes breakfast tacos, always fresh fruit and fruit juice. Lunch could be

Diver Uses Nasal Spray to Clear His Ears While Underwater: Is That Smart?

Ear pain from pressure, known as middle ear barotrauma, is pretty common among divers; it's estimated that more than half of experienced divers suffer it underwater. One man found a novel way to rid himself of symptoms -- and does so while diving. Should we follow his lead?

At a recent Undersea and Hyperbaric Medical Society session, Derek Covington, a professor of anesthesiology, presented the case of a 46-year-old male diver who had started to routinely carry a nasal decongestant spray with him underwater after having difficulty with middle-ear equalization.

He was 200 feet deep during one cave dive and proceeding to the deepest point of a cave passage, at 290 feet, when he again had difficulty with middle-ear equalization. He didn't want to abort the dive, so he decided to self-administer the nasal spray underwater.

This required him to remove his mask, block one nostril and carefully sniff with the other. Despite the inevitable inflow of water, he found he could replace his mask and easily equalize the problematic middle ear. The diver has subsequently followed the same procedure on other dives and reported consistent success.

But Covington doesn't recommend you follow this procedure. He stresses that this maneuver carries many risks, including disorientation, loss of buoyancy, coughing, sneezing, vocal cord spasms, and increased susceptibility to oxygen toxicity of the central nervous system. He recommends following the standard remedy: Stop your descent at the first sign of ear discomfort to allow time for equalizing, safely end the dive if you can't equalize, abstain from further diving if your ears are still feeling the pressure, and use a nasal decongestant or spray (don't put any drops in your ears).

tacos, do-it-yourself fajitas, French fries, and sometimes hamburgers, hot dogs and do-it-yourself salads. Dinner could be anything from potato casseroles and lasagna to steak and chicken dishes, always with as many helpings as you want. On Friday evening, we had a steak and lobster dinner, and lionfish caught during the week by those who wished to hunt them were fried up for all.

Around the full-service bar, on the other side of the dining room, guitarists cranked out Elton John, Bob Marley and Jimmy Buffett songs in the evening. One night, a blues rocker who resides on the island provided several hours of high volume entertainment that even got my dive buddy (who describes herself as a "closet drummer") involved playing drums for one set.

There are other things to do in Roatan for divers and non divers, and many adventurers take zip line tours. The day before flying home, I took an island eco-tour drive, which included climbing into large motorized dugout canoes to visit old fishing villages with stilt houses. The fishing families are remnants of the old Roatan culture that reportedly go back centuries. Our guide said that the canals, cut through the mangrove forests, may be pre-Columbian.

Having only seen a glimpse of a reef shark on our dives, my buddy wanted more, so through CoCo View we signed up for the shark dive offered by Waihuka Adventure Divers out of Coxen Hole. About two miles offshore, with 15 other divers, I traveled down a line to the bottom in 100-foot visibility. Twenty six- to seven-foot Caribbean reef sharks arrived to mingle with us, and I followed the rules of keeping my hands tucked in (no flappers!) and not touching them, even when they brushed against me. Small schools of horse-eyed jacks traveled with them, as did one large black grouper that liked to be stroked. After 10 minutes, we lined up against a coral wall about 30 feet from the bait bucket as the sharks started circling the bucket. As soon as the shark feeder opened the bucket, the grouper snatched a fish and shot away like a rocket. The sharks frenzied for a minute, then slowly dispersed. Afterward, I picked up a tooth one of them had lost.

CoCo View advertises itself as "the world's favorite dive resort" and "the most respected dive operation." While some might see that as advertising hype, I sure don't. For both experienced and beginning divers, CoCo View is surely a contender for those titles, and after 40 years it's still going strong. Put this place on your bucket list.

-- D.D.

Our Undercover Diver's Bio: *"I got my dive certification at the YMCA back in the 1970s, but I didn't do much diving until I moved to Los Angeles in 1990. Then I got recertified and rapidly received certificates for technical diving and rebreathers. I've been doing about 100 openwater dives a year for the last 25 years with a good local dive group, and I've dived all around the world but certainly not everywhere. I presently have more than 1,500 openwater dives under my belt and about 200 technical/ rebreather dives, although I don't do those anymore. I just like to dive."*



Divers Compass: Nonstop flights from Atlanta (less than three hours) and Houston (about two hours) head to Roatan on Saturdays . . . Dive packages run \$1,514 to \$1,775 for seven days, plus 16 percent tax, and include airport transfers, three meals daily, unlimited shore diving, two two-tank boat trips, use of sea kayaks and other amenities . . . Have plenty of US\$1 bills for tipping . . . October through February can have heavy rainstorms; July through October is the most at-risk

CoCoView, Roatan

Diving (Experienced).....	****1/2
Diving (Beginners).....	*****
Snorkeling	****
Accommodations	*****
Food.....	****1/2
Services and attitude	*****
Money's worth.....	*****

*= poor *****= excellent

Caribbean scale

time for hurricanes . . . The U.S. State Department recommends taking a malaria prophylaxis on Roatan if you're staying for longer than a week, but the likelihood of contracting malaria is small . . . CoCo View has an on-site clinic specializing in minor dive-related problems, such as Eustachian tube dysfunction . . . Roatan has a hyperbaric chamber; donate a few bucks for its care of unfortunate divers . . . And donate also to the Marine Park, which is doing a fine job of preserving the flora and fauna . . . Websites: CoCo View Resort -- www.cocoviewresort.com; Waihuka Adventure Divers -- sharkdiveroatan.net

Spirit of Freedom, Cairns, Australia

a cramped, colorless experience on the Great Barrier Reef

Dear Fellow Diver:

After the big coral-bleaching event in the Great Barrier Reef (GBR) a couple of years ago that made worldwide headlines, I decided I needed to visit there soon, and I created a checklist of 10 must-see GBR animals, including dwarf minke whale, potato cod and pygmy seahorse. When I arrived in July for my seven-day excursion, Alice, the Spirit of Freedom's English tour director, checked my C-card and dive history, and asked me what I wanted to do. I shared my checklist, and with no hesitation, she said it was possible to see them all in a week. I saw more than half of the requested fish and critters, but the jam-packed boat, my bare-bones room and poor reef conditions took most of the excitement away.

June and July are when dwarf minke whales migrate through the GBR's Ribbon Reefs. Our first dive on the second day was at Steve's Bommie, a pinnacle rising to 15 feet below the surface, where dwarf minkes are often seen. With 90-foot visibility, I watched thousands of bright-colored reef fish swarming around the top of the pinnacle, as well as several types of clownfish, including a real "Nemo," and lots of unicorn tangs. As I made my way back to the boat, it happened: Three minkes were swimming under my buddy and me. We hung on the line in the 74-degree water to watch them circle. The crew asked us to come aboard and drop our gear, but then we could get back in and snorkel with the 16- to 20-foot giants. Dwarf minkes are the smallest of the baleen whales, but compared to my 5' 7" frame, they were huge. The Spirit of Freedom adheres to Australia's strict code of practice, and one requirement is that all divers and snorkelers hold onto a line. The whales seemed to wait patiently for us, and as soon as we were in place on the line, they made some close passes. I could distinguish each one from their different gray and white markings, and noticed some circular scars left from cookie-cutter shark bites. Each one turned to look at me, eye to eye. Exhilarating.

Flying through seven time zones, I arrived in Cairns a couple of days beforehand to acclimate. July is dead winter in Australia, but the weather was perfect -- sunny, low humidity and days in the mid-70s -- in the coastal town of Cairns, from where the Spirit of Freedom leaves every Monday, offering three-, four- and seven-day charters. I was picked up at my hotel by a crew member, and just before noon, 24 of us, all divers from around the world, boarded the 122-foot boat, which holds 25 passengers and a crew of 10. I envisioned packed dive decks and mealtimes, and I was right. Two-thirds of the divers were doing the three-day trip, and because they'd be flying back on a small plane from Lizard Island, it took a long time to weigh their luggage for the 45-pound



Spirit of Freedom

limit. Burgers for lunch weren't served until 3 p.m.

Most divers were assigned a guide for the checkout dive. Because we were the most experienced divers by far -- most on my trip had fewer than 50 dives -- my buddy and I were allowed to go on our own, so we were the first to descend to a site called Caves. The water was a chilly 74 degrees (I wore a 7-mm wetsuit and hood), visibility was only 20 feet, and my mask fogged up because the crew who took care of defogging did a bad job. But I spotted some sea cucumbers, a stingray, and hard and soft corals that were in decent health. The day's late start limited that dive to 35 minutes, then we had to perform a few safety skills at the surface, like orally inflating our BCs, showing our boat-issued GPS units, and inflating a surface marker buoy above water, before we could get on board. Alice, also the lead divemaster, promised the dives would get better as the week went on. I was hopeful, but that was a mistake.



I booked Room 1, the stateroom, one of the largest rooms and in a private area, but I was disappointed as soon as I entered. The queen-sized bed and its two end tables filled the room, leaving little storage space, and there were just four hangers in the closet. The only provision in the small, bare-bones bathroom was a quarter-sized piece of soap. We only got one bath towel each; no hand towels or washcloths. While Room 1 was private, the engine room was next door, making it noisy during crossings, and the galley was above, so I could hear Chef Mateo's footsteps early in the morning. The twin-share or quad rooms were much smaller than mine. Other guests complained of their too-cold rooms, but the A/C could not keep my cabin cool enough.

Otherwise, the boat was in good shape -- rooms were clean, paint was fresh, and nothing was broken, other than the coffeemaker (which upset a few guests, but I adapted by drinking tea). Alice, with her loud, commanding voice, ran things smoothly with the young divemasters, who came from the U.S., Japan, New Zealand and Australia.

On the overcrowded dive deck, there was no way for us all to get geared up at once, so the crew offered "Fin-derella" service. That meant once I had my BC on, I walked down one of the two flights of stairs to the dive platform, and at stair three, a crew member would put fins on my feet and offer to defog my mask. (After the checkout-dive fiasco, I defogged my own.) With 24 divers heading down the stairs, it took a long time for all of us to get into the water. And because most of us arrived from dives simultaneously, a

Can Genetic Engineering Save Coral Reefs?

Global warming is decimating the world's reefs. Watching that happen to Australia's Great Barrier Reef has transformed Madaleine Van Oppen, a coral geneticist at the University of Melbourne, into a leading advocate of something that was considered radical until recently: creating breeds of coral that can withstand warmer water.

Van Oppen and her colleagues are re-engineering corals with techniques as old as the domestication of plants and as new as the latest gene-editing tools. A feature story in *Science* explains how Van Oppen and

the team of researchers she's leading at the National Sea Simulator in Townsville are busy cross-breeding corals in tanks in a rush to find a solution to the annihilation of the world's largest reef system, just 50 miles offshore. Their efforts have helped make Australia, which recently committed AUS\$300 million to coral research and restoration, a global magnet for reef scientists.

Read about Van Oppen's efforts in this most interesting profile at www.sciencemag.org/news/2019/03/researchers-embrace-radical-idea-engineering-coral-cope-climate-change

second backlog of divers formed, waiting to climb the one fin-friendly ladder. Crew took our fins off when we returned and even stored them between dives.

Safety was a top priority. The dive deck had two crew members logging us in when we entered the water, and a lookout person on the sundeck did the same. Before the boat could move, every person had to be physically accounted for. We were given Nautilus Lifelines and required to dive with snorkels, computers and safety sausages. Our depths and times were recorded upon return, along with remaining air (we were required to be back on board with 700 psi). The crew even looked out for the GBR's safety by offering reef-safe sunscreen. There were always a tender and three dive guides in the water on each dive. A couple of the groups requested a guide every time, but my buddy and I always dived without one. Alice had promised to enlist the crew to help me find the animals on my checklist, but when I twice asked for a guide, I was denied because they were busy.

After our 6:30 a.m. "first" breakfast, it was time to give one to the residents at Cod Hole, near Lizard Island. Michelle, the American divemaster, used a site map for the briefing -- depth, current, best way to do the dive, what we might see, depth and time limits -- then gave me directions for finding a pygmy seahorse at 100 feet. As everyone else was shepherded into a circle to watch the giant potato cods get fed fish scraps, we headed to deeper water. Soon, I found the sea fan that the seahorses made their home, including a pink one just a centimeter long. Our return timing was perfect, because the four-foot-long potato cod was just finishing its rounds, and was ready to pose with us for a photo.

I checked off two other must-sees that day. An olive sea snake showed up at Lighthouse Bommie, as did the whales. I was swimming at the surface, holding onto the line, when two whales made a pass six feet beneath me. Then one rose to the surface to breathe -- I could feel the mist of exhaled water vapor land on my hands and hear a whooshing sound as air refilled her lungs. I was close enough to reach out and touch her, but that was against the rules, so I just floated and marveled at her grace and beauty. At Two Towers, I ogled giant clams the size of truck tires, plus a big green sea turtle and a huge anemone colony with dozens of clownfish. I celebrated that day's diving fortune at dinner, an Australian-style barbecue of chicken, pork, and kangaroo, with a variety of pasta dishes, and a cheese platter for dessert.

Thursday was switchover day, when the three-day passengers fly back, and the four-day passengers arrive. After the first breakfast, we all were loaded into the inflatable tenders and shuttled ashore to Lizard Island. Alice took us on a walk through the mangroves, then Mateo brought over our second breakfast at 9:30 and we munched croissant sandwiches in the shade of the Marlin Bar, on a stunning white-sand beach. Back at the ship, 18 new guests were going through orientation. Not a quiet corner remained.

Overnight, Captain Rob steamed us out for the rough and bumpy nine-hour, 100-mile crossing to Osprey Reef. At sunrise, two people were sleeping on the dining room benches, and some had gotten seasick in their bunks before they could make it out to fresh air.

I slept through most of it and woke up feeling fine for our first dive, a drift along Blue Marlin Wall. Alice divided us into groups, and each was shuttled out in a tender. We had to step into the inflatables wearing BCs and tanks, but with three-foot seas, the rocking and rolling dinghies made entry challenging. At the reef, six of us back-rolled together into the 76-degree water, but we weren't required to stay together, so my buddy and I began drifting along the steep wall, with lifeless, brown coral. Off in the blue, a couple of reef sharks cruised by. The promised Australian



Room 1, the Stateroom

wintertime visibility of 100 to 300 feet did not occur; it was a hazy 60 feet at best (I'd hate to see it in the summer). I kept my depth around 60 feet, and it was an easy 35-minute drift back to the mothership. Blue Marlin Wall was also the site for our shark feed. The surface current was pretty strong, but luckily I could grab the

For Some Divers, Waiting Only 24 Hours before Flying Is Not Enough Time

Minhaj Qidwai from Frisco, TX, had gone diving while on a Bali vacation in May but failed to follow the standard rule about allowing 24 hours before flying. It was during the second, 13-hour leg of the flight, from South Korea to Dallas, when the symptoms of decompression illness (DCI) began to set in.

"My joints started hurting," Qidwai says. "My elbows, my knees -- everything started aching." He ended up crumpled on the floor at the Dallas-Fort Worth airport (DFW) before being diagnosed and rushed to the hyperbaric center. Fortunately, he made a successful recovery after five hours of recompression.

A few days later, another case of the bends caused a ruckus at DFW when a Denver-bound airplane had to make an emergency landing because diver Mike Altoos was experiencing DCI symptoms. Altoos, 26, was returning from a honeymoon in Cancun, but, as he told CBS Dallas/Fort Worth, "we were only about 20 minutes into the flight when my hands started tingling. I felt nauseous, dizzy, and had trouble breathing. I told the flight attendant, 'I need oxygen right away.'"

Altoos said he had made only three shallow dives, all between 15 and 30 feet deep, and took a 19-hour surface interval before getting on the plane. That he suffered DCI after such benign dives throws into disarray the famous research done by John S. Haldane in 1905, on which decompression theory is still based. Haldane found the body can withstand the pressure at 33 feet almost indefinitely without ill effect -- but he did his empirical research on goats at approximately sea level.

Another possibility is that Altoos suffered from an embolism or emphysema due to a fast breath-holding ascent, which caused air bubbles that then expanded in the reduced pressure of the aircraft cabin. Some on social media hypothesize that he might have misread a rented computer with depth-gauge calibrated in meters rather than feet and gone three times deeper than he believed.

DCI symptoms can be wide-ranging, from fatigue, skin rash, and joint aches to numbness and even complete paralysis. Unusual symptoms occurring within 48 hours after diving should be presumed to be DCI until proven otherwise. The onset of symptoms after 48 hours is unusual, unless an ascent to altitude provokes it. The pressure differences between being at depth and being at the 8,000-foot-altitude equivalent of a pressurized cabin can definitely exacerbate symptoms.

Qidwai and Altoos are not alone in underestimating the effects of flying after diving. Divers Alert Network recommends a minimum of 24 hours between your last dive and a flight. But Marguerite St. Leger-Dowse, a researcher at Diving Diseases Research Healthcare in Plymouth, England, wanted to answer this question: Is a 24-hour interval between diving and flying enough for the consecutive multi-dive diving days that many people typically do on a dive trip? So she and her colleagues conducted a study on the frequency and nature of symptoms in divers who had flown after consecutive multi-dive days.

Through an anonymous online survey, St. Leger-Dowse's team collected data including diver and diving demographics; signs and symptoms of DCI before, during, and after the flight home; details of the person's last two dives, and the length of his or her surface interval before diving. The 316 divers, with a male-female ratio of 69/31 percent and an age range from 17 to 75, recorded a total of 4,356 dives in the weeks preceding their flights. Fifty-four, or 17 percent of them, reported surface intervals of less than 24 hours.

Fifteen of the divers boarded their planes despite feeling DCI-related symptoms beforehand. Another 18 developed DCI-related symptoms -- nine of them during the flight, nine of them afterward. Of those 18 divers, 14 had waited more than 24 hours before flying. And of the 33 total divers who experienced symptoms before, during or after their flights, 11 subsequently sought help and were diagnosed and treated for DCI.

The divers' written comments in the online survey revealed a "lack of understanding of the consequences of altered pressure and gas environments during flight" by divers who had just finished an intense period of consecutive multi-dive days. St. Leger-Dowse's conclusion: Waiting only 24 hours after your last dive to fly home may not be enough time for some divers, particularly in the context of consecutive, multi-dive, multi-day diving.

The problem, of course, is that you don't know whether that applies to you until it's too late. So next time you make one of those types of dive trips, consider adding at least a day, even two, of sightseeing or relaxing on the ground before you board the plane home. Besides having some enjoyment, you'll have a decreased risk of experiencing DCS on that hours-long flight.

-- John Bantin

mooring line, and the current calmed during the dive. Alice placed the divers in a semi-circle, sitting or standing on the coral wall, then a crate of tuna heads was lowered. About 20 sharks came in and sniffed the bait before the crate was opened and the feeding frenzy began. When the sand settled, we swam around the site before ending the dive. After lunch, we headed to the dinghy for another drift dive, and the first person in my group made a misstep just as a big wave passed by. She slammed down hard on the dinghy floor, hitting her head and badly injuring her leg. Crew members got her back on board the mother ship, and the diving resumed.

Every morning, my alarm clock was the sound of Chef Mateo's footsteps overhead as he prepared our 6:30 a.m. wake-up breakfast buffet of fruit, yogurt and cereal. After the first dive, our second breakfast included eggs, pancakes, and tomatoes or mushrooms. After the second dive, the lunchtime buffet offered hamburgers, pizza, pasta dishes, and burritos, as well as fresh fruits and a green salad. Tea time came after the third dive -- a fruit platter and a sweet snack, like macadamia-and-butterscotch bars or chocolate eclairs. Because one of the four dining tables was used to lay out the food, we 25 guests had to pack into three tables, reducing my personal space to zero. For dinner, we had all four tables to choose from because crew members served the meals (there was a lot of wasted food because not everyone had the same tastes). All the drinks -- beer, wine, soft drinks, and bottled water -- cost extra, except at dinner, when one drink was included. The bar worked on the honor system: you take something, you write it down.

The eight dives at once-glorious Osprey Reef, averaging 30 to 40 minutes each, were a huge disappointment. Shark feed aside, I can't believe we crossed over 100 miles of choppy seas for poor visibility, dead coral and a lack of sea life. Plus there were surface current and waves to deal with when getting into and out of the water -- several divers were swept away and had to be picked up by the tender. Many of them marveled at how beautiful everything was -- but that's because most passengers were newbies who didn't have anything to compare it to. If you've been to Southeast Asia, Micronesia or Fiji, you'll find these sites sad, lifeless, and colorless.

After two days at Osprey Reef, the liveaboard made the long, rough crossing back. We were in minke territory for the last day, and on my final dive, an encore at Steve's Bommie, I found the seventh animal on my checklist: a mantis shrimp. Seven out of ten ain't bad, but the overall Spirit of Freedom experience was ho-hum. It would have been better with fewer divers onboard, allowing more space around the dive deck and the three dining tables. (It was too cold and windy on the sundeck to enjoy meals up top.)

If the Great Barrier Reef is on your bucket list, see it by all means, and perhaps your captain will find the beauty. I would give a five-star rating for snorkeling here if the minke whales are out, three stars if they're not. But most of what I saw was dead coral and no color, due to bleaching from periods of extremely hot sea temperatures and cyclone damage. It's sad to think this place, once famous for amazing diving, is now a symbol of what climate change is doing to the oceans. It's even worse to think that our political leaders are doing nothing about it, even denying it exists. This is the price we're paying.

-- L.E.D.

Spirit of Freedom, Australia

Diving (Experienced).....	***1/2
Diving (Beginners).....	**
Snorkeling (5 stars if there's whales)	***
Accommodations	**
Food.....	***1/2
Services and attitude	***1/2
Money's worth.....	***

*= poor *****= excellent

World scale

Our Undercover Diver's Bio: "I got certified to dive in Florida in 1998, and received my instructor credentials in 2000. With over 1,200 dives, I've dived in seven mainland U.S. states, over 20 Caribbean islands, British Columbia, Hawaii and Micronesia. As a cave diver, I make regular trips to the Yucatan Peninsula to dive the stunning cenotes. I enjoy researching new places to dive, and have been my own travel agent for the past decade."



Divers Compass: My seven-day charter, with 26 dives, was \$3,695, double occupancy, plus an \$18 marine park fee, \$125 for Nitrox, and charges for all drinks, including nonalcoholic drinks and bottled water . . . Most tanks were aluminum 80s with valves that could convert from DIN to yoke, plus a few larger-capacity steel tanks and a couple of smaller 63s . . . the rental gear -- Scubapro BCs and Cressi regulators and wetsuits -- was less than a year old . . . seasick medication is a must and is available for purchase; credit cards or cash (Australian dollars) are accepted on board . . . electrical outlets in the cabins are Australian 230V, but there is a charging station with US-style outlets in the forward lounge . . . No deco diving was allowed; the nearest chamber is in Townsville, 280 miles south of Cairns, and if there was a decompression incident, it would take 8 to 12 hours to return to Cairns by boat . . . Website: www.spiritoffreedom.com.au

Beware of False Prophets on Your Dive Trips

instructors and other experts are not always right

Diving instructors often think they know what they're doing. When you learned to dive, you probably put your complete faith in those who taught you. But later, perhaps you realized that being told such things as put extra lead on your belt "because you can always add air to your BC," or screw down the breathing resistance knob on your regulator "because you'll use less air" might not be the best advice.

Even later, with many dives under our belts, it's amazing how often and how easily some of us abdicate responsibility for our own safety to others because "they're the experts, so they'll know best." But do they? Even seasoned veterans, like our senior editor John Bantin, can get it wrong and trust the wrong people.

Do You Know the Way to Sorong?

Bantin remembers a particular dive trip with Tony Backhurst, owner of the British company Scuba Travel, when they were returning from Kri Island to Sorong on a boat driven by a local. "We assumed he knew the route," he says. "Assumption is the mother of all disasters.

"Having done this trip before, I remembered the route involved passing a chain of islands to our right. But we had started off in the poor visibility of a torrential downpour, and once the weather cleared, all we could see was open ocean.

"After three hours and low on fuel, the boat driver finally asked if either of us had a compass. Without knowing where we were, a compass heading wasn't particularly useful. Luckily, we were close enough to land for Tony to pick up a signal and

chart their position on his iPhone. It was alarming to find we had totally missed the Bird's Head Peninsula and were heading out into the wide-open Pacific.

"Despite our protests, the boat driver would not believe it, and continued to head in what he believed to be the right direction. As luck would have it, we came across a fishing boat, and the occupants laughed when we asked which way to Sorong. Against what he thought was his better judgement, our boat driver reluctantly followed the fishing boat, and finally ran out of fuel when we entered Sorong Harbor. It had been a close call, and our local driver was proved to not know best."

A Smart Instructor or Just a Self-Serving Svengali?

As diving gets more complicated, with different breathing gases involved, we divers need to do more courses to fully understand what we're getting into. Again, most of us will put ourselves in the hands of someone who knows better. But they don't always.

As an example, let's use the case of an experienced young diver named Rob, who wanted to progress to ever-more-adventurous dives by using trimix with a closed-circuit rebreather. All the main dive training agencies offer courses on this, but still Rob had to rely on his instructor, Peter, who was certified by the International Association of Nitrox and Technical Divers, but whose interpretation of agency rules may not have been mainstream.

Even when you've completed the course, you may still tend to bow to the knowledge of the one who had taught you when you're out on a dive. Rob may have done this. When he analyzed his gas, he would have known the actual percentage of helium

in it. If Peter told him to enter a different helium percentage into his unit's computer, to the one he'd actually be breathing, Rob may have done so, believing Peter had a convincing argument.

If Peter told Rob to alter the computer's gradient factors in order to remove the helium penalty (helium on-gases quicker but takes longer to off-gas than nitrogen), who was Rob to disagree with the expert?

How Good Are You at Knowing if a Diver Is Drowning?

As we've reported in past stories about drowning divers, people within a few meters of the victim often have no idea it is happening. The most recent unfortunate example came to us in a letter by *Undercurrent* subscriber Bob Latif (London, England), who was on a Sardine Run dive in Port St. Johns, South Africa, last month when a young Korean diver was lost, presumed drowned, while diving from a boat close to his.

"From what I understand, she was relatively inexperienced. I was told she jumped into the water and immediately lost a fin, which was recovered by another diver and passed to her. She was also holding a camera. I presume she neglected to inflate her BC and panicked, failing to drop her camera or the fin to recover her position."

Latif says this incident happened on a day with minimal underwater visibility and a 16-foot swell, and his own divemaster had decided to call the dive due to the rough conditions. But even on a calm day with little swell or currents, it's easy to overlook what a diver in distress looks like at the surface. There is little splashing, and no waving, yelling or calling for help. Except in rare circumstances, drowning people are physiologically unable to call out for help. The respiratory system was designed for breathing. Speech is a secondary or overlaid function -- a person must breathe before he or she can speak.

That's why you need to know the visual signs of a diver in distress. The mouths of drowning people alternately sink below and reappear above the surface of the water, and are not above the surface long enough for the victims to call for help. When their mouths are above the surface, they exhale and inhale quickly before sinking below the surface. A diver at the surface without a regulator in place may be in trouble.

Also, drowning divers and snorkelers cannot wave for help. Nature instinctively forces them to extend their arms laterally and press down on the water's surface, which helps drowning people to leverage their bodies so they can lift their mouths out of the water to breathe.

Francesco A. Pia, Ph.D., a public safety consultant who has done research and training on ways to rescue people in trouble in the water, coined the term "instinctive drowning response" to describe

what people do to avoid actual or perceived suffocation in the water. In an article he wrote for the Coast Guard's *On Scene* magazine, Pia described it like this: "Throughout the instinctive drowning response, drowning people cannot voluntarily control their arm movements. Physiologically, drowning people who are struggling on the surface of the water cannot stop drowning and perform voluntary movements such as waving for help, moving toward a rescuer or reaching out for a piece of rescue equipment.

"From beginning to end of the instinctive drowning response, the bodies of drowning people remain upright in the water, with no evidence of a supporting kick. Unless rescued by a trained lifeguard, these people can only struggle on the surface of the water from 20 to 60 seconds before submersion occurs."

Former helicopter rescue swimmer Mario Vittone lists these visual cues to detect whether a diver or snorkeler is in distress.

- * Head tilted back with mouth open
- * Head low in the water, with mouth at water level
- * Eyes closed, or glassy and empty, unable to focus
- * Hair over forehead or eyes
- * Not using their legs
- * Hyperventilating or gasping
- * Trying to swim in a particular direction but not making headway
- * Trying to roll over onto their back
- * Appearance of trying to climb an invisible ladder

So if a fellow diver is at the surface, distracted and intent on sorting out some problem with his gear, don't assume he is OK. Sometimes the most common indication that someone is drowning is that she doesn't look as if she is drowning. She may just look as if she is treading water and staring up at the deck. One way to be sure is to ask, "Are you alright?" If she can answer at all, she is probably OK. If she returns a blank stare, you may have less than 30 seconds to get to her.

So keep an ear out for any noise divers make in the water. But also be mindful when it gets too quiet -- if a diver is silent, you need to quickly find out why.

If they did a dive together to 200 feet, and then Peter suggested they do a second that day, Rob would probably agree. After all, his guru was doing the same, so where was the danger? Perhaps it was Rob's idea, but if so, Peter didn't say no.

But as we know now, gurus can get it wrong. The "Rob" in this story is Rob Stewart, the Canadian filmmaker who made *Sharkwater* and died tragically in a diving accident in the Florida Keys in 2017. They were both probably suffering the onset of decompression sickness when they surfaced from the second dive, but when the anchor of their boat got caught, it might have seemed logical to plunge back to the seabed a third time, to retrieve it.

Stewart's family filed a lawsuit, claiming that his rebreather instructor and dive buddy, Peter Sotis, and the company that owned the dive boat were responsible for his death. (We've written a few articles about this, most recently in October 2018.)

Arguments still rage, and different theories abound. Some say it could not have been DCS because Sotis recovered later, after only brief therapeutic oxygen treatment. They say he suffered hypoxia, when the body is deprived of oxygen, but could that be a symptom of explosive DCS?

According to media reports, Sotis convinced Stewart to conduct a series of dives that were too deep for his skill level, and on the final dive, he

came up too fast, paying the ultimate price. Stewart was not under instruction from Sotis at the time, but he might well have been influenced by the fact that Sotis had made many more complex and deeper dives than he had. What we do know is that the guru was recovered to the boat while the follower was left to his own devices -- drowning after having passed out in the water.

Remember, a lot of diving theory is just that. It often forms a set of beliefs that, under some circumstances, can prove to be untenable. Many diving instructors are driven by beliefs, with all sincerity, but they might not be right.

So don't put extra weight on your belt because you can always put air in your BC to compensate. There have been too many cases of new divers drowning because they put their faith in what their instructor told them. And, as stated above, even pros like Rob Stewart do the same. Divers should not be complicit in their own demise.

Don't rely on a solitary guru. Read as many books as you can on the subject. Listen to the opinion of more than one "expert," and ask questions of them if you're uncertain or confused about their instructions. Before or during a dive, it's imperative that any decision you make is an informed one. It's your safety at stake.

-- Ben Davison

Murder, Bombing and Mass Destruction in Sabah

an illegal fishing method becomes a deadly diving hazard

Even though fish bombing is illegal in Malaysia, it has been widespread in the state of Sabah, a popular place for divers, for ages. But the method is getting more attention now, since it was apparently used to deliberately kill divers last month.

Divemaster Ab Zainal Abdu, 30, and Chinese divers Zhao Zheng and Xu Ying Jie, both 26, were diving near the island of Pulau Kalapuan on the afternoon of July 5 when the incident took place. They went out with a boat driver and another dive guide, who later told the police they had dropped the trio off at the dive site at around 2:30 p.m. When they returned an hour later to pick the divers up, they found sea foam around the area (a sign of fish bombing) but no divers, so they called for assistance. When police arrived, they found a lot of dead fish, damage to nearby coral, the divers' equipment,

and finally the diver's bodies, at 20 feet deep, which were sent to the hospital for a post-mortem.

After indications pointed to fish bombing, Sabah police said the deaths were homicide, with Abdu most likely the murder target, and the Chinese divers tragically as collateral damage. The police launched a manhunt, and the next day, they arrested two suspects: the boat driver and the guide who took Abdu and the divers to Pulau Kalapuan, as well as 10 others, including sea gypsies.

Fish bombing, also known as dynamite fishing, is a widespread and severe problem in many tropical coral reef areas around Southeast Asia, as well as in East Africa and Central America. Some fishermen use unexploded grenades left over from previous conflicts, but most make their own explosives from chemicals in fertilizer and other

easy-to-access ingredients, which they place inside beer bottles. The explosions create shock waves that stun or kill fish, causing them to float to the surface or sink to the bottom for easy collection. The bombing also causes massive damage to the coral reefs and marine life -- the nonprofit foundation Reef Check cites studies showing that reef sites blasted more than a decade ago still have little to no signs of recovery. Blast fishers expose themselves to serious injury and possible death, but that apparently isn't much of a hindrance for poverty-stricken people.

The joke among Malaysian dive operators is that those engaged in fish bombing do it openly in daylight, because there is no legal enforcement. One Malaysian dive guide told us about an incident last October while helping two divers look for hawksbill turtles and pygmy seahorses in Tun

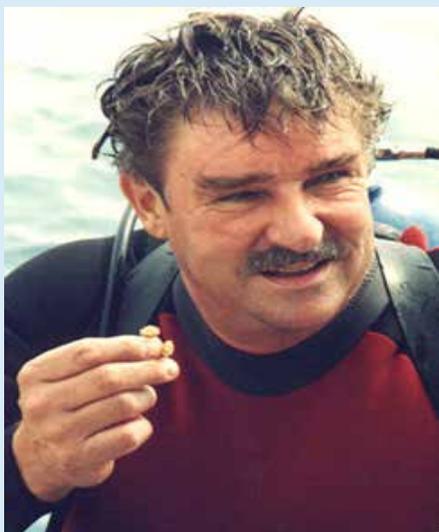
Sakaran Marine Park. He heard loud booms while underwater, and when surfacing, he saw a speedboat with three youths in it. His boat driver headed over so he could remind them fish bombing in the marine park was prohibited, but he was rewarded with threats to light another bomb to be thrown at his boat. He and the boat driver wisely decided to withdraw, then reported the incident when they got back to Semporna, 22 miles away, but no action was taken.

Semporna is the departure point for divers going to Sipadan and staying at the Mabul island resort. Jacques Cousteau described Sipadan as one of the most precious marine ecological places on the planet, but unfortunately now, it's a place where you can hear fish bombing nearly every day, even though the explosives may be detonated two or three miles away from where they're diving.

Farewell to a Top Treasure Hunter

Liked by some and loathed by others, swashbuckler Bob Marx courted controversy throughout his long diving career, combining both treasure hunting and marine archaeology. A sometimes abrasive character, Marx had a resume that read like Indiana Jones and claimed discovery of thousands of wrecks in more than 60 countries. He was best known for excavating the sunken city of Port Royal in Jamaica.

His 1972 discovery of the 17th Century *Nuestra Señora de las Maravillas*, the second richest Spanish galleon lost in the Americas, got him thrown out of the Bahamas for accusing its then prime minister, Lyndon Pindling, on television of criminal activity, including corruption and taking bribes from drug traffickers. In



fact, one of Marx's crew was reported to have stolen two bags of silver coins worth \$30,000 off *Nuestra Señora*, but although Marx was investigated by the police, he was absolved of any blame.

However, he ran into problems with a rival gang of salvagers and was arrested on suspicion of marijuana smuggling by the U.S. Coast Guard. The Bahamas then demanded the return of all the treasure recovered from *Nuestra Señora*, and an international incident ensued when Marx refused, under advice from the American Embassy. When the Bahamas threatened to remove access to missile tracking and military bases on its islands, the U.S. government backed down and withdrew its backing of Marx. Meanwhile, other wreck salvage teams were given free rein to excavate the *Nuestra Señora*, but Marx never revealed the location of the main section of wreckage he'd discovered but had yet to start work on.

Over in Indonesia, the government had long sought the wreck of the Portuguese 400-ton galleon *Flor do Mar*. When they called in Marx in 1992, he located it within three days -- and more than 100 miles away from the ongoing search area.

Marx was born in Pittsburgh, PA. He started what was probably the USA's first diving club (with fellow treasure hunter Mel Fisher), in Los Angeles, and also claimed to have started the world's first dive resort in Cozumel.

After a decade living in Spain, where he scoured the Spanish treasure fleet archives and wrote more than 60 books, he returned to live in the U.S., where he eventually died at his home in Melbourne, FL, this past Fourth of July. He was 85.

Dive instructor Emmanuele Girellie told the *New Straits Times* last month that it's common to hear bombing sounds while diving at Tunku Abdul Rahman Park, a marine area under the jurisdiction of Sabah Parks. "The sudden loud sound scares everyone, even the instructors! When it is closer, we sometimes think one of our O-rings has just blown, until a few seconds later, when we realize that it was due to a fish bombing.

Tourist Suraidah Roslan also told the newspaper she was shaken up when she heard the sound of a fish bomb exploding for the first time, while diving in Kota Belud. Despite the shock, she remained calm due to instructions and assurance from her guide to stay underwater. "There were two or three continuous sounds of explosions. If they [had been closer to us], I think our eardrums would have been damaged."

Charles Mawan, who runs the Blue Fin dive shop in Kudat, told the *New Straits Times* that fish bombing activities have increased since last year. He recalled hearing three or four blasts during each dive. "They drop the fish bomb some four or five kilometers away from diving areas, but [the shock wave] makes our hearts jump each time. When we emerge at the water's surface, the [fish bombers] would be nowhere in sight."

Mawan said that after dive operators in Kudat lodged reports to authorities, there was a significant reduction in fish bombings. Sabah's marine police said 30 arrests were made between January and June.

On the other hand, David McGuire, director of Shark Stewards, a conservation nonprofit that has operations near Pulau Kalapuan, employs people from that island where the deaths occurred. He told *Undercurrent* that Shark Stewards has documented scores of bombings, petitioned the government to enforce the law, and is now working with a group called Stop Fish Bombing (www.stopfishbombing.org). His goal is to help prevent bomb fishing everywhere, saving marine ecosystems and the livelihoods of the communities that rely on them.

Now that murder charges have put a spotlight on fish bombing, Malaysia's Maritime Enforcement Agency has publicly vowed to work closely with Sabah officials, sending them more vessels and helping the police track down the suspects in the deaths of the three divers. A few days after the arrests, officials inspected boats near the Turtle Islands, and the fish market at Sandkatan, looking for fish caught in the bombing style. Hopefully they'll continue their efforts.

--Vanessa Richardson

When That Dive Training Came In Handy

letters from readers about how they handled diving crises

In last month's issue, John Bantin's story "Can You Handle a Crisis Underwater," focused on how well divers are prepared for emergencies, and whether they remember their training so that they can make the right decisions. We asked readers to write in with their stories about how they, or fellow divers, handled crises underwater, and what lessons they learned. We got some good ones -- about buddy checks, monitoring your bubbles, and good types of new training -- that serve as examples for all of us to follow.

Doing Better Buddy Checks From Now On

Dear *Undercurrent*,

A few years ago, when I was relatively inexperienced, my dive buddy and I dove the Blue Heron Bridge in Florida. We set up our gear near the parking area and carried it 50 yards down to the inlet, where we entered the water. All was fine for

about 30 minutes, then my regulator started to get hard to breathe. I checked my computer -- it had 800 psi, then quickly went to zero when I breathed. I went to my buddy, pointed to the computer and grabbed her octopus. We called the dive and surfaced (we were only at around 10 to 15 feet). Later I discovered this was a classic symptom of not having your air on all the way. Needless to say, our buddy checks are much more thorough now.

-- Bill McManus, Bartlett, TN

Thumbs Up for the Diamond Reef Challenge

Hi Ben,

Years ago, I took an scuba course in Lake Tahoe called the Diamond Reef Challenge, which was designed to comprehensively test a buddy team's skills as well as act as a practice venue for

Flesh-Eating Bacteria Strikes in Florida

Just when you thought it was safe to go back in the water in Florida . . .

Last year, it was the red tide; this year, it's necrotizing fasciitis, a skin infection caused by rare bacteria that enters the body through a break in the skin and aggressively attacks muscles and other organs. At least four people who entered the water at beaches along the Gulf Coast in June and July have suffered from it, two of them fatally.

Kylei Brown, a 12-year-old from Indiana, contracted the flesh-eating disease in the calf on her right leg after wading around in the Gulf of Destin. Barry Briggs from Waynesville, OH, nearly lost his foot to the infection while on vacation in Tampa Bay.

But they're luckier than a cancer patient from Memphis who, 12 hours after getting into the water in Okaloosa County, woke up with fever and chills, and died less than two days after leaving the water. Another fatality was Lynn Flemming, 77, who became infected after entering the water at a beach in Manatee County. Her daughter wrote in a Facebook post that Flemming's entire body became septic and she died a week later. (A 56-year-old man also died from it four days after swimming at Magnolia Beach in Texas).

Vibrio bacteria are one group that can cause this infection; one type called *Vibrio vulnificus* is particularly dangerous. The bacterium lives in high salinity, brackish waters with surface temperatures in excess of 55 degrees, and is usually contracted when an open wound comes into contact with coastal saltwater.

Necrotizing fasciitis can quickly develop soon after, and if not treated promptly with antibiotics, the infection can become fatal. People with open wounds and compromised immune systems are particularly at risk.

Katherine Doktor, an infectious disease specialist at Cooper University Hospital in Camden, NJ, recently co-authored a study in the *Annals of Internal Medicine* about the increased incidence of necrotizing fasciitis, and says increasingly warm waters in Maryland's Chesapeake Bay and along the Gulf Coast are spiking cases of severe incidents related to bacterial infections. Warning flags were raised in 2017 with three cases, then two more in 2018 they saw two more. Before that, Doktor's team had only seen one case since 2010.

Mark Maddox at Scubavice Dive Center in Fort Myers told *Undercurrent*, "We have heard [about this], though only from some of the news outlets, with no explanation of where or how people are getting the bacterium. At the moment, none of our customers seem concerned."

The Florida Department of Health said state beaches are open and safe, but people should "use caution when entering an open body of water" and "if you have breaks in the skin, such as cuts or sores, avoid getting in the water."

We suggest that while diving along the Gulf Coast, you take care to protect your epidermis by covering up with a full-length wetsuit and boots, especially if you have any cuts or abrasions where infection could get in.

fundamentals. It takes diving education -- and raises one's awareness of how bad we are as divers -- to a new level.

Using a series of portable, underwater obstacles called Hover Stations, my buddy and I were to stay close together for close to 12 minutes (exhausting) while we performed basic mask clearing, buddy breathing, hand signals, etc., that we supposedly already knew, while hovering in very slow motion (our buoyancy and maneuvering skills sucked) without kicking the artificial reef. A painstakingly simple but brutal concept that was a tell-all about how unprepared my buddy team was, and especially the so-called advanced divers I've seen.

Why this program hasn't been adopted worldwide is telling. I doubt the training organizations want their members or students to know how "shallow" their certification courses are. These

basic survival skills transfer to what Bantin wrote of in terms of being prepared for a crisis. Being aware of our limitations might keep us from making risky decisions.

Taking this course objectively proved to me that mastering the fundamentals takes lots of eye-opening practice, which the dive industry seems only to pay lip service to. If instructors used this in their classes, or at resorts during acclimation dives, more divers would better understand the reasons and know-how of what practice really means.

If parents knew about this, I doubt they would ever let their kids dive on their own without proving their skills are truly legit. And what if instructors and divemasters were required to ace this course before they could teach or guide? That would change things. Info about the Diamond Reef Challenge is on its Facebook page (www.facebook.com/diamondreefsystem).

“You Better Take Good Care of My Daughter”

This last letter came to us via Paul Mila, an author of thriller and adventure novels, who was contacted by a fellow diver after hearing Mila doing a TV interview about his nonfiction book, *Bubbles Up*, a personal collection of dive tales. “He sent me this story about an experience he had when forced to buddy up with a stranger on a night dive, and I thought you could put it to good use in *Undercurrent*,” Mila told us.

I was planning on doing a night dive in Cozumel by myself. Everyone else on the boat came with a buddy, including this big guy from Texas with two daughters in their late teens and early 20s. The divemaster said because it was a night dive, we all had to have specific buddies and told the Texan one of his girls had to be my buddy. He objected, but the divemaster prevailed. Just before we went into the water, the Texan barked at me in a big, booming voice, “You better take good care of my daughter.”

About 10 minutes into the dive, an octopus attached itself to the girl’s tank (I had never seen a behavior like that -- he may have been ill). While I tried to pry it off, it started to creep up the tank. She had no idea yet what was happening -- she probably thought her tank was coming loose and I was fixing it. I was trying to pry the octopus off without hurting it, but every time I pried one arm off, it put the other one back on her. It eventually got to her head, and a tentacle came around the front onto her mask. At that, she totally freaked out.

I started grabbing at it with more force, but eventually about half of it was on her face, covering her mask, and the other half on her head. She started to shoot up for the surface, dragging me -- and the offending creature -- with her, but I was able to stop her by grabbing the front of her BC and looking into her face while still yanking at the octopus. The little sucker finally let go (I guess he had had enough of our drama), but we had risen quite a bit, tumbled around a few times, and I could not see the bottom. All I could think of was the Texan’s last words: “You better take good care of my daughter.”

Without a frame of reference, I was not sure which way was up, and had lost track of how deep we were. Then I remembered from my training: Bubbles go up. So still holding onto the front of her BC and maintaining eye contact, I watched our bubbles and started to very slowly follow them up. I knew we had not been deep enough, or had enough bottom time, to worry about decompression sickness, so I just slowly brought both of us to the surface and to the boat.

By the time everyone else got back on board, we were dried off and in our t-shirts. The girl was still upset and noticeably distraught. As her father came off the ladder and saw her, he ran over to me, put his face next to mine and yelled, “What the hell did you do to my daughter?” The girl pulled him away and said, “Daddy, he saved my life.” A bit of an overstatement but, it stopped him in his tracks. She told him the story, after which he shook my hand, apologized and thanked me.

-- Gary Gomola, Portland, CT

Flotsam & Jetsam

Samuel L. Jackson Does Dive Research For a New Documentary. The actor – and certified diver -- recently made a visit with a film crew to The History of Diving Museum in Islamorada, FL, as part of the project to make *Enslaved*, a six-part documentary charting the history of transatlantic slavery through underwater archeology. The museum has an exhibition featuring two slave ships that went down in Florida waters – the *Guerrero*, which lies in pieces near the Florida Keys National Marine Sanctuary, and the *Henrietta Marie*, 35 miles off Key West. *Enslaved* will be narrated by Jackson; its release is being timed to coincide with the 400-year anniversary since the first African was brought to the New World as a slave.

The Most Expensive Day Dive Trip Ever? Subscriber Ken Paff (Detroit, MI) wrote to tell us of his shock to discover that a one-day, three-tank dive trip with Fathom Five Adventures to Ni’ihau, off Kauai, HI, costs nearly \$500 per person. That’s pretty pricey. What’s the most expensive day trip you have ever taken? And was it worth the cost? Write to BenDDavison@undercurrent.org

Cathy Church Charged In Boat Crash. Cayman Islands media reports that the underwater photographer has been formally charged with navigating a vessel so as to cause damage or risk of damage, and committing a reckless and negligent act. Church’s boat crashed into the side of a moored Divetech boat, the distinctive pink *Atatude*, at the *Kittiwake* wreck site on January 8. Witnesses said nobody was at the helm when the collision occurred. No one was injured, but there

were snorkelers in the water. Church, 74, will be summoned to attend court at a later date.

Diving with Great Whites near San Francisco.

Just a three-hour boat ride from the Golden Gate Bridge are the Farallon Islands, home to one of the world's most significant populations of great white sharks. From September 15 to November 30, you can take a day trip on the *Derek M Baylis* to the Gulf of the Farallones National Marine Sanctuary, and for \$825, you can view sharks from a safe shark cage, the same used by the Sanctuary shark researchers. Bear in mind, average water temperatures there top out at 60 degrees, so bring your layers. Email Info2@divediscovery.com for more details.

Asia's Disappearing WWII Shipwrecks. As the price of pre-Atomic Age steel increases, so does the illegal salvaging of metal from shipwrecks around Malaysia and Indonesia. Even poor-quality steel can now bring about \$1.3 million per wreck salvaged. The latest wrecks to disappear are two Dutch submarines sunk by Japanese mines off Malaysia during WWII. Research divers discovered just a few remains of one and a mere impression in the seabed from the other.

Candidate's Campaign Starts with a Diving Death. Pondering whether to enter the U.S. Senate race, Montana Democrat John Mues, a Navy veteran with dive experience, decided to film a campaign ad in June, which included shooting underwater at Canyon Ferry Reservoir, near Helena. During the filming, producer Jesse Hubbell, 40, had equipment problems in the cold water and began struggling. Mues, 45, tried to save him, but Hubbell submerged and his body wasn't recovered until two days later. Mues launched his Senate campaign on July 11.

Hurricane Michael Uncovers an Underwater Forest. Subscriber Carol Cox tells us that after the Category Five-level hurricane hit her hometown of Mexico Beach, FL in October 2018, it pushed

the offshore wreck of a shrimp boat called the *Shady Lady* into an upright position at 95 feet. More astonishing is the multitude of ancient tree trunks revealed when sand was scoured away. Those trunks could be anywhere from 10,000 to 50,000 years old, but because they're not petrified, they'll be eaten away by marine organisms unless the sand covers them again.

No More Plastic Marine Tags in Bonaire. You still have to pay \$45 to dive in the island's Marine Park, but it's going digital -- mostly. Register at your dive shop or before you leave home at www.bonairenaturefee.org, but instead of a plastic tag, you'll get a paper receipt, and you'll be expected to have it on you, if asked. Because paper falls apart underwater, wouldn't metal be a better choice? Maybe just leave it in a dry bag on your boat.

Two Jumbo Jets Sunk for Divers. The first stage in Bahrain's plan to establish the world's largest underwater amusement park happened on June 11, when a Boeing 747 was sunk off the island nation in the Arabian Gulf. Not to be outdone, Turkey sunk an Airbus A330 three days later, placing it 98 feet deep in the Gulf of Saros to boost scuba diving tourism in that northern stretch of the Aegean Sea, between the Gallipoli Peninsula and the Greek border.

Class Ring Found Underwater 59 Years Later. Luke Berube from Orleans, MA has spent 13 years diving with a metal detector in local lakes and ponds, and on June 15, he discovered, buried under five inches of muck, a 1960 men's class ring with the insignia "Gate of Heaven" and the engraved initials "WJW." Through the Facebook page of alumni from the now-demolished Gate of Heaven Catholic high school in South Boston, Berube located the owner. Bill Wadel, now 77 and living in Spotsylvania, VA, realized his high school sweetheart must have lost it swimming, six decades ago. He has now given his class ring to his wife of 50 years.

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