

undercurrent

The Private, Exclusive Guide for Serious Divers

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XTC Dive Center, Xcalak, Mexico

face-to-face with crocodiles in the Yucatan

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Dear Fellow Diver:

My latest trip of a lifetime, in theory, was to be a "close-in quickie." I would fly to Cancun with a group of friends, take a van to the small town of Xcalak, near the Mexico-Belize border, then take a dive boat to Chinchorro Banks to overnight in a fisherman's shack, where we were to snorkel with American crocodiles. I wasn't so sure it would happen, but wow, do I now have the open-jaws pictures to prove it.

The six-hour flight to Cancun was a breeze, but the remaining transit made the day arduous. Having been told to meet the van driver "at the restaurant outside Terminal 3," we found it nearly impossible to get to Terminal 3 with all the construction. When we at last found the outdoor restaurant, we were told by other taxi drivers that our "unofficial" driver was not permitted to park there. They would take us (by taxi, of course) to where he had parked -- \$20 for a three-minute ride. OK, but it seemed like a setup. The five-hour drive south to Xcalak and the XTC Dive Center was comfortable enough, but the farther south we went and the darker it got, the more unsettling it felt to be on Mexican highways and remote roads at night, considering State Department advisories about the dangers of traveling in Mexico outside regular tourist areas.

After pulling into XTC Dive Center at 10:30 p.m., we were greeted by both the dive shop manager and the manager of the Flying Cloud Hotel, where XTC is based. We were to spend the night here, before



An American Croc in Chinchorro Banks



departing in the morning to the islands of Banco Chinchorro, 36 miles into the Gulf of Mexico. I was ushered to my room, where it took a half-hour for the August temperature to drop to 85 degrees, with humidity to match. A single oscillating fan provided the only relief; the breeze outside was light, but enough to carry in the stench of rotting Sargassum seaweed, which extended out from the shoreline for 25 yards. My Spartan room had a nightstand, armoire and a comfortable bed, but that offered no respite from being bathed in so much heat and humidity that I felt like I had returned to my mother's womb. Thanks to a dose of Ambien, I eventually got some shut-eye.

I awoke the next morning to calm seas and that unpleasant smell of rotting Sargassum, which proved more aromatic than the odor rising from the bathroom drains (I was given a drain stopper that held the septic tank smell at bay . . . until I used the facilities). The freshwater shower (rooms on the third floor had little more than a dribble) provided temporary relief from the cloying air. While the minimalist dive shop is labeled a five-star PADI dive center, I'd be pressed to give one star to the resort, though the food was OK. (There is other lodging in Xcalak, but I took XTC's suggestion to lodge at the Flying Cloud because it is adjacent to the dive shop.)

After an eggs-cooked-to-order breakfast, our gear, along with the food, whatever beer and alcohol we divers bought in town, and supplies necessary for our overnight at a Banco Chinchorro's fisherman's hut, was placed on the bottom of a maybe 25-foot dive boat by a small army of divemasters and resort trainees who were enrolled in an apprenticeship program that appeared to be a secondary source for resort income and staffing (the apprentices pay to learn, expecting to find jobs as divemasters elsewhere, though there is no elsewhere in Xcalak). XTC employs many townspeople, including the town's mayor as a boatman. Before our 8 a.m. departure, we were issued rain jackets for a rough crossing, then crashed through waves and wind, both of which flowed against us. The hard fiberglass bench seats caused most of us to end up so sore, we couldn't sit comfortably for the rest of the trip.

Two hours later, we pulled up to a fisherman's shack on stilts, from which we would hopefully mount our snorkeling adventure with the crocodiles. The loose assemblage of wood and plastic under a corrugated metal roof was accessorized by a sleeping room strung with hammocks, a cooking area with a gas stove, a fish cleaning area that doubled as a meeting place, and a storage compartment with a hole in the floor (if you have to ask what it's for, you probably shouldn't do this trip, though there was a questionable-looking compost toilet, which only one of us used). I rinsed off with rainwater from 55-gallon drums, deferring to the drinking water and soft drinks transported with us in a huge ice chest. Food for our stay amounted to snacks and pre-prepared (and quite good) casseroles from the resort.

The islands of Chinchorro Banks are the northern end of the reef that runs south along nearly the entire length of Belize. It's the first point at which



XTC's Dive Boat (with Not-So-Comfy Seats)

galleons from the Old World might strike reefs as they came to pillage the natives. Diving the wrecks would have to come another day, because we had come to go nose-to-nose with the crocs.

The first task was to spearfish lionfish for croc bait. It was a good dive on healthy reefs, with a lot more lionfish than there should be. We returned to the shack with a Zookeeper, which safely contained nearly a dozen culled lionfish. The baiting began, well-advertised by the fishermen who replicated all the sounds and smells of cleaning the day's catch, just to get the crocodiles' attention. As I watched from the relative comfort of the hut, munching on a ham and cheese sandwich, our boatman tied two lionfish to a fishing line and tossed them in a high arc away from the boat, which he had repositioned near the mouth of a mangrove-bordered lagoon. No takers, so he repeated it again, and again and again ... for four hours. At the shack, they repeatedly filled buckets with water and poured it back into the sea, whistling and beating a club against the cutting table -- all normal sounds to tell the crocs that, "Hey, we're just cleaning fish, come and get some like you always do."

Finally, they came. Well, at least one came, a 10-footer in hot pursuit of the boatman, who was driving slowly, a lionfish in tow. As the boat returned to the fishing shack, Mathias, our excellent divemaster, briefed us on how to proceed. He would get into the water first, holding upright a six-foot wooden pole, our only "protection." Two snorkelers would follow, positioning themselves alongside each of his shoulders. Mathias told us to face the crocodile and never drop our faces or bodies down or away from it. The croc might think we were submissive or intimidated, and strike -- and we would be no match.

The short wait for the underwater appearance was electric, and I was nearly overcome with raw adrenaline-fueled excitement. All of a sudden, there she was, snapping at the lionfish, her jaw filled with huge rows of menacing teeth that seemed to extend two feet, all the way to her throat.

New Rules for Lithium-Ion Batteries on Airplanes

Lithium-ion batteries pretty much power everything you use for your underwater photos and videos. Now the Federal Aviation Administration (FAA) has handed down new regulations for how you must carry them when you fly.

Don't pack spare lithium-ion batteries in checked baggage, as the FAA says they "present a risk of both igniting and fueling fires in aircraft cargo/baggage compartments." If they're found during a random search, the batteries may be removed, leaving you in a pickle.

So you must carry them with you, but the FAA is being stricter on how you pack them in your carry-on luggage. It will provide "limited exceptions for passengers...who carry on spare lithium batteries for personal use." "Spare" refers to batteries not installed within a portable electric device like a laptop or tablet. The definition of "limited" is vague, but you may assume that you'll be fine with two to three camera batteries and a

handful of other lithium-ions. Spare batteries' terminals must be "individually protected" to prevent short circuits, and they must be packed so as not to be able to come into contact with other metal objects.

The new rules also stipulate the Watt-hour capacity of batteries you may carry. If you have lithium batteries of 100Wh, you may carry up to three (two spares and one in the device) in your carry-on. If your batteries are over 100Wh but less than 160Wh, you must seek approval from the air carrier to do so. Practically most SLR and still-camera batteries fall well within this limit, but larger video camera batteries may exceed it.

Although these guidelines are currently limited to U.S.-based airlines and flights that depart or land at U.S. airports, it is likely they'll extend to other countries and airlines, too. So check with your airline at the time of booking to ask what their current policy is. And to be well informed before you get to the airport, read the entire FAA document (https://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safes/all_safos/media/2015/SAFO15010.pdf) so that airport bag handlers don't ruin your next dive trip.

XTC Dive Center, Xcalak

Diving (experienced)	★★★★
Diving (beginner)	★★★★
Snorkeling	★★★★★
Accommodations	★
Food	★★★
Service and Attitude	★★★★
Money's Worth	★★★★

★ = poor ★★★★★ = excellent
Caribbean Scale

The three of us stayed in a 15-foot-square area of white sand in three feet of water, while the croc stayed on a seagrass bank about a foot higher, only three feet away from us. The guides' lionfish casts were spot-on, causing the croc to turn repeatedly and open her jaws straight at us. Amazingly, I felt excited and safe, not nervous or fearful. For 25 years, I had been practicing my composure for the day I would be eye-to-eye with a "salty." (It's crazy, I know.) Everyone's turn in the water seemed to last mere seconds, and we rotated snorkelers again and again. The photo and video opportunities were perfect.

Toward the end of the first hour, I heard one of the deck hands call out, "Heads up, here comes another." A larger croc, 11 feet and much heavier, moseyed in. Her first action was to establish her dominance over the smaller croc by attempting to bite her in two, but the smaller one, with a powerful swipe of her tail, went airborne, leaping from the water to escape the other. She then took up a position 50 feet away, while her buddy came in to see what smelled so edible.

To watch the new arrival, we changed shifts in the water several times. She was bolder and more confident than the first, but to me, no more menacing than a shark. For the most part, she remained still, looking at us. In fact, she seemed curious and more interested in inspecting us than gobbling up the bait, which at times she just played with. Mathias said the crocs much prefer grouper, but lionfish are the only creatures they may legally harvest. When the second croc slipped off the bank and onto the sand, where we were positioned, Mathias would simply intercept her with his pole and guide her back to the grass. (He had told us he recognized these crocs from previous trips and knew their behaviors, so I felt confident in him.)

After dinner -- excellent enchilada-style chicken and vegetarian casseroles and a green bean-casserole, finished with store-bought cookies -- three of us slept in hammocks in the fisherman's hut, two opted for air mattresses on the deck under the stars, and one slept on the boat. It was breezy and comfortable, but a brief rainstorm drove those outside to seek shelter under the roof. When the rain stopped, so did the breeze, allowing mosquitoes to feast on us the rest of the night -- even the 30-percent DEET bug spray was little help.

After breakfast -- egg, bacon and cheese casseroles, fresh fruit, granola and yogurt -- we repeated our lionfish hunt at a different dive site. Afterward, the crew spent four hours in a valiant baiting effort, but the crocodiles stayed home. Oddly, I was only mildly disappointed, still riding the amazing high of my encounters the day before. Late afternoon, the crew cleaned up and loaded the boat for our return to Xcalak. Still sporting bruised bums, we stood or lay on the deck or seats to avoid additional trauma to our battered backsides. With following seas, we returned in 90 minutes.

The next day, my buddies and I dived two very good, close-in sites, loaded with the "regulars" that inhabit these Mexican



Fishermen's Shack at Chinchorro Banks

Security Concerns for Diving in Malaysia

A report from the Malaysian news website AsiaOne says that security officers there are concerned for diver safety because some resort operators on Sabah's east coast (Sipadan, Mabul, etc.) are reluctant to work with them on preventing more kidnappings. Last year, seven gunmen raided the Singamata Adventures and Reef Resort, a five-star PADI resort in Semporna, and seized a 29-year-old Chinese tourist and a 40-year-old Filipino resort worker. The thugs are members of Abu Sayyaf, a group that seeks ransom kidnappings to raise money for weapons and fund terror attacks in the Philippines.

"There are some dive and resort operators who refuse to allow our personnel to hop on board boats ferrying divers with their tourists just because they do not want to lose money giving free rides to our personnel," says Commander Datuk Abdul Rashid Harun. He said they recently made it compulsory to have at least one security personnel on board each tourist boat, especially those going for diving activities. This rule was put into place after the latest kidnapping attempt in Semporna, when security forces noticed two boats with four suspects on board approaching a tourist vessel on a diving activity. "Luckily, there were two uniformed men inside the vessel guarding the divers, prompting the four masked suspects to back off and flee," Harun says.

If I had a trip scheduled to this part of Malaysia, I certainly wouldn't cancel it, but if I were planning a trip I would most likely head elsewhere. I go on dive trips to have fun, not to worry, even in the slightest, about security.

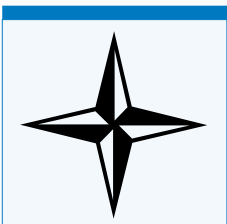
waters -- a large number of groupers, angelfish, butterflyfish, squirrelfish, green morays, barracuda and large lobsters. I was surprised how healthy the coral appeared. I finned through swim-throughs, as well as a one-way tunnel loaded with clouds of silversides. I twice encountered schools of three dozen tarpon, averaging five feet, and even a skittish manatee, the first the dive crew had seen in months. Our dives were 60 minutes long, 45 to 60 feet in depth with mild currents, 85-degree water and 40-foot visibility. Two divemaster trainees practiced hovering over us and keeping all divers in sight.

Upon our return, the dive center's staff collected and rinsed our gear, while we enjoyed delicious chips, dips and drinks in the bar. The restaurant's limited menu offers tasty food, such as burgers and grilled chicken sandwiches, and they would most likely try to accommodate dietary restrictions, but only if informed in advance. This is not a crowded place. We bunked uncomfortably for the night once again, then hit the road for Cancun the next morning.

The amazing encounters at Banco Chinchorro left all of us eager to share our feelings at being in the water with these magnificent animals. The very chance to swim with them easily negated the tedium of the long transits and the restless nights at the fisherman's shack and the resort. We're eager to return for another go. The response I get when I show my photos and tell my stories reinforces the fact that this was, indeed, a trip of a lifetime.

-- A.T.H.

Our undercover diver's bio: A.T.H. says, "I am a terminally mature adult diver who struggles with the reality that, apparently, I've not been everywhere and done everything as I had earlier imagined, but wow, where I have dived and what I have seen! I'm the dive coordinator for a fun group of like-minded adults, mostly underwater photographers, who have short bucket lists and realize that whining about delayed flights and overweight fees is futile."



Divers Compass: The croc-diving package, with scuba dives and transportation, ran me \$1,050 . . . While I brought my own gear, XTC has adequate rental gear, including a BCD, regulator and computer for \$25 a day . . . English is widely spoken . . . My group ponied up 10 percent of the trip cost to be divided among all staff, and we passed out a few individual tips . . .

Two of our group stayed at the Casa Carolina, and while there was no air-conditioning, the resort was much nicer; Costa de Cocos and Playa Son Risa are better hotels, but you may need to arrange transportation . . . Xcalak is a mix of sleepy fishing village locals, expats and random 20-something adventurers from around the world; there is no phone/cell service, and Internet service is patchy . . . Website - www.xtcdivecenter.com

Cuan Law, British Virgin Islands

first-class trimaran and service, but the diving . . .

Dear Fellow Diver:

Right off the bat, I knew that a liveaboard trimaran that carries two Hobie cats, a kayak and water skis served a more diverse crowd than dedicated divers. I also recalled that my first dive trip to the British Virgin Islands produced gentle, if unspectacular, reef diving. Nevertheless, when a June group trip came along that allowed me to bring a few friends and family members who didn't dive, I signed up. After all, I can find an underwater subject for my camera anywhere, and the 105-foot Cuan Law sustains a fine reputation, having been in operation for nearly 30 years in these waters. Why not give it a go?

After overnighting in San Juan, Puerto Rico, the Seaborne Airways flight to Tortola was aboard a Saab 340, meaning most carry-ons must be checked on the tarmac. I asked the gate agent for a fragile tag, as my carry-on contained my camera equipment. They handled it with great care, but not so for a friend whose carry-on was not tagged; somehow, the handle on the housing inside his carry-on was broken off.

In Tortola, the Cuan Law sent a taxi to pick us up. Since it was a couple hours before our noon boarding time, we were dropped off at a market in Road Town to pass the time, while our bags were taken to the craft. After our shopping excursion, we were picked up for the short drive to the marina, where the owners, British expats Duncan and Annie Muirhead, and the full crew met us.

The trimaran Cuan Law was designed and built in 1988 by the Muirheads, who reside in Tortola. In his mid-seventies, Duncan has a sincere smile and a pleasant wife about his age and half his size. Annie jumps right in to grab mooring ropes or do anything else that needs doing, and never hesitates to tell Duncan to get moving if need be. It was clear to me they have been working well together for a long time, with Annie at the helm.

Upon arriving aboard, I took my shoes and put them in a basket, only to retrieve them upon departure -- a true "barefoot cruise." Crew members Amy, tall and bubbly, and Florrie, shorter and equally pleasant, showed us our cabins off the main salon. Roomy for liveaboard cabins, they had either a full double bed or two twins, AC, and a head with a shower. Then it was a briefing on policy and procedures, and within an hour after boarding, we were off to the first dive site. All divers, with the exception of those with instructor credentials, met



Cuan Law

guides Jamie or Ben, both full-fledged instructors, on the bottom for a mask clear, regulator removal and hand signal review. While dive-masters or crew were always in the water, divers were free to do their own thing as underwater photographers prefer, some spending as much as 90 minutes in the 80-degree-plus water and nearly filling up their chips.

She was a full boat -- 22 passengers, about 16 whom were beaucoup serious underwater photographers.

That many were a bit overwhelming for even its fine crew. Half the dives were off the mother craft, because, with only one screw, it's not very maneuverable. For the other dives, two dinghies -- each 21 feet long with 115HP outboards -- carried eight divers each to the sites. On any given shuttle, there was between \$50,000 and \$75,000 of photographic hardware lying on the dinghy bottom (or clutched hard by the divers). Every last diver worried about who just might kick his beloved strobe, or how carefully the crew would pick up or put down his dual-strobed Nikon when the diver rolled off or climbed back in. The atmosphere was tense at times, but the crew handled it well. They were probably more used to a GoPro and a SeaLife rig or two, not the 16 professional set-ups on my trip.

Our crew of seven was undoubtedly committed to doing a first-class job. And the boat itself? First class. At one end of the large, beautiful, air-conditioned main salon sat a well-stocked full bar (the rule: The first drink of the day comes after the last dive of the day). With comfortable leather chairs and couches, the salon became the spot for reviewing dive photos, planning the next dive, or just cooling off and avoiding the mid-day sun. Candy bars and chips were there for the taking. In the aft, the video room is well stocked with films, or you can look at your own videos of the day's dive.

Although there is no such thing in my mind as a bad Caribbean dive, the lack of marine life and healthy corals was obvious in comparison to other Caribbean destinations like Turks & Caicos, Curacao or Bonaire. Visibility was compromised by mega suspension, likely due to the winds that blew several weeks longer than normal before we arrived. The result: Wide-angle shots looked like they were shot in a snowstorm. The reefs were OK, but corals were suffering and big fish missing, as they were when I dived here several years ago. Even the night dives were lacking. I see more in Curacao or Cozumel in two or three dives than in a week in BVI. Our best dive, regarding marine life, was the Aquarium, home to many typical reef fish (yellowtails, queen angels, drums, trunkfish, filefish, parrotfish, squirrelfish, durgons, triggerfish, trumpetfish, moray eels and lobster). On some dives, I did encounter turtles and stingrays, but nothing larger. On night dives, squid were abundant. We dived several small wrecks, which provided good background but not a lot of fish action, and, of course, the Rhone, made famous four decades ago in the film The Deep (remember Nick Nolte and Jacqueline Bisset?). It has since pancaked, and, while providing an interesting swim and good photo backgrounds, it had a disappointing lack of marine life. On one dive, the exciting event was photographing a French angel that had swum back and forth in front of me, probably as it does every time divers arrive. I should add that Jamie sported giant free diving fins, and, being that he was in excellent shape, free dives of two minutes or longer were no problem for him.

But wait. Don't let my diving experience cancel the positive aspects, as there were many. I made up for the mediocre diving by enjoying the full Cuan Law experience. The hospitality, accommodations, food, drinks and the crew were top shelf. (A caveat: If you are a single or a couple spending a week on this



boat without a group of friends, the camaraderie may not be what I had. Groups always provide entertainment and give color to a trip. Groups are usually fun, no matter how dull the diving.)

After the first day on the boat, I became aware that most of the crew including Chris, our Aussie captain with a "can do, will do" attitude, were as new to the Cuan Law as we were. Compensating for that was Scott, "the Admiral," who had captained the boat for many years. Whenever new crew comes on, Duncan calls in the Admiral from Miami, where he sells commercial real estate, to ensure everything is done to high standards, the Cuan Law way.

One high standard was obviously the meals, served at mahogany tables on the open back deck. While breakfast and lunches were buffets, dinner was always a sit-down affair served by a crew member (the others joined our tables). Elegant meals were prepared by Sara, a four-star chef with exceptional experience; I would expect her to be working as head chef in a fine European restaurant, but she has partnered with the captain, a lucky man. We had fantastic seafood, excellent steaks (served with stuffed twice-baked potatoes and fresh vegetables), superb chicken and even roast duck, all served with the best wines and finished up with desserts, such as crème brûlée with a raspberry coulis. For breakfast, Sara always offered plenty of fresh fruit, homemade breads, eggs and breakfast meats, and her lunches featured delicious fresh salads, wonderful sandwiches, maybe tacos or a pasta, and her special soups.

Sara had snacks waiting after each dive and before dinner -- meatballs,

Hammerhead on the California Coast: "It Kept Coming At Me"

With the ocean temperatures off the California coast much warmer than usual, creatures normally found farther south are making surprise appearances. Matt Lum, a freediver in Santa Cruz, CA, had an encounter with one while spearfishing on September 22nd, and he shared his story in an e-mail.

I was attacked by a hammerhead while diving Yellow Banks on the back side of Santa Cruz. I had a yellowtail on my stringer, attached to my back, and was fighting with another I had just speared when I got slammed in my left hip, full speed, by a 10-foot hammerhead shark.

When it started twisting its head to rip off flesh, its teeth, fortunately, ended up getting caught in my wetsuit. I punched it in the eyes and head, but it would not be stopped. It kept coming, swinging its head back and forth, with its jaws snapping at me. I guess they don't see well up close, due to their eyes being at the ends of their hammer, and I couldn't understand why it was coming at me instead of the fish.

I shoved everything I could into its mouth -- my fins, my spear shaft -- and grabbed the yellowtail on my shooting line and shoved it into the shark's mouth, just as it was coming at my face. Then I ditched my gun, knowing it was attached to my float, and kicked back to the boat fast, trailing a stream of blood out of my wetsuit. I called my dive buddy back to the boat, threw the anchor on a buoy, jammed over to another friend, diving off a nearby boat with his young son, and got them out of the water.

When we came back to pick up my float, the shark came up with the gun. The shark had swallowed the entire yellowtail, which was on my shooting line, not my shaft. My shooting line was cable, so the shark's teeth didn't cut it, and the line was coming out of its stomach and mouth. I subdued the shark by holding its head while my dive buddy cut the line with cable cutters. Quite a sketchy procedure considering we were on an inflatable boat.

Yes, I thought I was dead, and yes, I'm still in shock. I'm okay, but it could have been so much worse.

Note from Ben: Kudos to Matt for trying to save the shark, not seeking revenge, as some idiots would do.

shrimp or cheese pastries. After a quick nosh, I'd rinse my camera, then join other divers in the salon to download, critique and share our work, often with plenty of oohs and ahs. With many outlets for charging batteries and running iPads, we had no complaints.

For many divers, five dives a day in these waters would be too much. If you're one of them, or if you have a non-diving partner, there was plenty of time to snorkel, try a Hobie Cat, paddle a kayak, lounge on a float or sunbathe on the massive deck. Due to the winds during my week, the standard position on the sundeck was one hand on the rail and the other on your hat, which became known as "the position," which one often assumed upon arriving on the deck.

It's a fine dive operation, with nitrox readily available. Gear is stowed under benches on the large back deck, wetsuits hung to dry and the crew helped divers suit up. Tank filling began immediately after each dive, so there were never delays. Diving from the mother boat was best started with a giant stride -- a five-foot drop -- or for those who insisted on walking with all their gear on, a few steps down to the swim platform. For dinghy diving, I suited up on deck and stepped into the dinghy in full gear, backrolling in at the dive site and scaling the easy ladder for re-entry.

The BVIs are indeed picturesque and romantic, with 60 rock islands, densely covered with small trees and bushes, some with wild goats and nesting birds. One small island looks exactly like a lion, another like a pair of birds, and "the Baths" are a unique formation, with huge granite boulders, some 75 feet in diameter, pushed up by volcanoes millions of years ago. At the Baths, the crew fixed a BBQ lunch of hot dogs and hamburgers, with salads and fruit, under a beach palapa. Afterward, we climbed to the top of the island, weaving between giant boulders on the way. There we sat in a quaint open-air grill, enjoying a refreshing adult beverage and enjoying the view. Due to the proximity of the islands to each other, the boat only moves a couple of hours per day. Depending on the distance of the move and the direction of the prevailing wind, we would hoist the sails, shut down the engine and enjoy the peacefulness of being under sail.

So while not all divers, especially non-photographers, will find the diving unique, everyone would enjoy the perfect accommodations, great crew, superb food and a wonderful, laid-back week of sailing (though the wind wasn't good for diving) in beautiful groups of islands. With five dives a day, the Cuan Law qualifies as a dedicated dive liveaboard, though the diving falls short. Still, it's a perfect venue for casual divers, newbies, diving families, and divers with non-diving, sun-loving partners. The trip offered plenty of opportunity for snorkeling, including the unique opportunity to snorkel the shallow end of the Rhone. Wreck diving is normally not available to snorkelers, but the Rhone is the exception. Everywhere we anchored offered a snorkeling opportunity and a chance to observe firsthand the marine life of BVI. My non-diving companions were sure happy campers.

--J.P.W.

Our undercover diver's bio: J.P.W. says, "I've made bubbles for more than 50 years, been a professional instructor for 46 years, got engaged to my bride of 35 years underwater in Cozumel, and certified three generations of my family. While I have never dived below the equator, I have dived the River Thames in the U.K., the West

Cuan Law, British Virgin Islands

Diving (<i>experienced</i>)	★★
Diving (<i>beginner</i>)	★★★
Snorkeling	★★★★
Accommodations	★★★★★
Food	★★★★★
Service and Attitude	★★★★★
Money's Worth	★★★★

★ = poor ★★★★★ = excellent

Caribbean Scale

Coast of Scotland, Greece, Red Sea, Thailand, Truk Lagoon, Hawaii, Mexico, Aruba, Turks and Caicos, and the list goes on and on."

Divers Compass: The 2016 rate for a seven-day trip is \$2,795 per person, which includes beer, wines, top-shelf liquor and all the diving . . . Nitrox is \$10 per tank or \$120 for the week, and tanks are aluminum 63s, 80s, or 100s . . . Regulators with pressure and depth gauges rent for \$50 per week and BCs for \$40 per week; both can be rented for \$15 per day, and snorkeling equipment is gratis . . . You can reach Tortola through either San Juan or St. Thomas, although the latter gives you an option of air or ferry boat; though both are U.S. territories, you still must pass through customs, and of course, you need a passport to enter the BVIs . . . My trip required an overnight in San Juan, so after checking into our hotel around 1 p.m., four of us tried the InterContinental Hotel for a quick lunch -- two sandwiches, a beer, an order of chicken wings and a salad cost us \$150! . . . Website - www.cuanlaw.com



No Diver Left Behind: Part II

what works, what doesn't, to get divers back aboard

Some dive boats, even in First World countries, still don't have foolproof systems to count divers before departing dive sites. In Part I, published in the October issue, we shared Undercurrent readers' stories about being left behind and/or near-misses. They also noted dive operators that had good counting systems, and others that needed work. In this issue, it's the dive operators' turn to say what systems work best, which ones don't, and what divers can do on their own to ensure they're not left behind.

So, What Doesn't Work?

Divers Alert Network sells DAN tags, key-chain-like pieces, to individual divers for attaching to their dive gear. It also offers dive operators its Diver ID System free of charge to be used in combination with a diver roll call. Each diver is assigned a numbered tag to attach to his BC, and a dive crew member logs his name and tag number on the roster as each diver enters the water. After the dive, the diver removes his tag and returns it to the board.

Unfortunately, many dive operators don't think the DAN system is adequate. Clay McCardell, president of Explorer Ventures, says, "We've tried systems such as the DAN ID tags, but with limited success, because divers have to remember to take a tag, and then to put it back." He says Explorer boat methods vary from region to region -- log sheets in the Caribbean, head count in the Galapagos -- but it's more based on the diving method used. In the Maldives, a combination of systems is used, since all diving is conducted from the smaller dhoni and we can more effectively count tanks."

Surely, some divers may forget to hang up their tag or to log in (we heard a story where a crew was missing a tag and started a search for a diver, who was asleep on his bunk, tag in his hand), but in any system, the crew must make the final check, as well as the final double check, to ensure everyone is on board. A DAN tag system can work if the crew is vigilant, the boat doesn't move until all tags are accounted for, and the crew then takes a head count. But it can be far slower at identifying missing divers than a system where a crew member hovers at the stern and logs in divers as soon as they exit.

A more advanced system has been implemented by Frank Wasson, who runs Spree Expeditions out of Key West, FL, and says, "I've seen DAN tags (so-called foolproof, but any fool can beat that system), other tag systems, roll call and any number of systems used, but I've seen every one of them fail." His method: You check every diver on the boat as they comes up the ladder. "Then, the captain (because the captain is, after all, the guy or gal whose head will roll if they leave someone behind) takes a separate roster from the check-in board and does a final check. On the *Fling* and the *Spree*, we call this the wellness check. We ask every diver (and we do not allow wives to answer for husbands, or buddies to answer for each other), 'How do you feel?' as we look them in the eye. It's amazing how an eye twitch, a slurred word, or any number of visual cues will tell the captain that s/he has an impending problem. If a diver is asleep, we still demand a look in the eye and a mumbled 'OK.' This gives us two opportunities after every dive to make sure everyone is on board and healthy, or at least as healthy as when they got on the boat the day before. Even a fool can't mess up such a simple procedure if they just do it."

Glen Fritzier, who runs Truth Aquatics in Santa Barbara, CA, describes his "fail safe" method. "It starts by having a roll call and asking each diver his name, then marking it on our waterproof manifest board. After we are ready to weigh anchor, two crew people count tanks and confirm the number. When you think about it, it is very easy and works flawlessly."

"High-tech signaling solutions are not always the answer, because electronics and batteries can fail."

Reader Harvey Cohen (Middlefield, NJ) likes the system used by Mermaid Liveboards in Indonesia. "Every diver has a single tank that stays attached to his or her BCD for the entire trip, and the tank/BCD combo has a tag. If there are 16 divers, the boat doesn't move until there are 16 tagged tank/BCD combos in their slots on the dive deck."

Kay Golding, director of Mermaid Liveboards, says the crew uses a few other checks and balances as well. "While the boat deck crew does monitor tanks back on board, the tour leader, more importantly, monitors every guest's return -- each group dives with a divemaster, who informs the tour leader that all divers are back on board. We also have a checklist of back-on-board guests on a whiteboard on the dive deck. We provide each dive guide with a Nautilus Life Line [the two-way radio/GPS system], and they're also available for rent on board for guests. If they bring their own, we give them our identification code."

Ensure Your Own Safety

While dive operators routinely need to ensure their divers' safety and that they come back alive, it's also up to you, fellow diver, to make sure you're doing all you can to help them out.

Nelson Riollano, assistant manager of operations for the Aggressor and Dancer Fleet, says divers should hold operators accountable for using whatever system they use. "If they're using a verbal roster system, divers should ensure the operator has executed the system as described by the staff during their initial briefing, such as, 'If you say you're going to call my name, then call my name after each dive.'"

The Explorer Venture fleet requires all divers to carry a surface marker buoy of some sort, which they provide to those who don't have one. McCardell says, "The main thing is to never go into the water -- not on a dive, a snorkel, a swim or for any other reason -- without letting one of the dive staff know."

Peter Hughes says divers should listen to the dive briefing -- carefully. Too many divers do not. Also, have your own air horn such as a Dive Alert (make sure it is working) and, nowadays, your

The Lionfish Hunter

Allie ElHage knows what it's like to be stung on his hand by a lionfish while scuba diving. "It felt like someone was pushing a red hot iron up my right arm," says the Sarasota, FL-based entrepreneur. He is the creator of the ZooKeeper, now a must-have accessory for any spear fisherman hunting the lionfish. Nonprofit organizations in Florida, such as Mote Marine Laboratory and the Reef Environmental Education Foundation, have promoted the device while sponsoring lionfish eradication derbies attended by hundreds of divers, chefs and foodies.

ElHage, who grew up in Curaçao, says friends there invited him to dive for lionfish in October 2010. But they were vulnerable to getting stung by spines because they were using a mesh bag and a birdcage to contain the fish they had speared. "So I went to Curaçao's version of Home Depot, walked the aisles and I put a ZooKeeper together," ElHage says.

The first version failed, but many versions later,

the patent-pending ZooKeeper has a funnel that lets divers stuff the fish into a large cylindrical container and a water-displacement mechanism so the fish don't flush out when divers stuff the tube.

"In 2012, I sold about 100 units," ElHage says. "This year, I've sold more than 2,300. Prices range from \$115 to \$210, depending on size. He sells through dive shops, distributing the ZooKeeper through Trident Dive Equipment and Innovative Scuba Concepts.

ElHage tells users that a ZooKeeper doesn't guarantee they won't get stung. Ironically, he was using a ZooKeeper when he was stung. Like most stings that result from diver error, he had stuffed his ZooKeeper beyond the limits, and some venomous spines were sticking out of the tube just enough to sting him. After a tetanus shot and a six-day treatment of steroids, he was ready to dive again.

-- *Jean Gruss*, Florida Business Observer

own Nautilus Life Line, but be sure you know all of its available features before you use it on a dive." The Galapagos Sky provides mandatory surface marker buoys and air horns for free, and it also offers Nautilus Life Lines free of charge (a charge only applies if the diver can't return it at the end of the trip).

Even if you're using the latest, greatest high-tech safety equipment, you might still be left behind, as our regular contributor John Bantin knows from many experiences. "In 1992, as the dive guide, I was abandoned with a full complement of passengers in the waters of Southern Sudan for three hours after our main vessel had a technical problem and the dive tender was used to keep it away from the reefs as it drifted. This happened during the dive, and the boat's crew had no way of telling me what had happened. High-tech signaling solutions are not always the answer because electronics and batteries can fail, and you don't know that they have unless you use them on a regular basis. I always carry a large yellow flag on an extending pole (strapped to my tank) and would feel very vulnerable if I did not have it with me. It has resulted in me being picked up reliably on a number of occasions when diving in strong currents and surfacing a long way from where I hoped I might have been. Divers should take responsibility for themselves and employ the necessary precautions."

Jon Weirick (San Diego, CA) says his dive club takes safety into their own hands when on dive trips. "When we charter boats, there are a number of things we do ourselves and try to have the boats do. One is a roll call after each dive. Most boats are fine doing this, but it amazes me that there are some that won't, even those that have historically left divers behind -- they rely on counting tanks and other methods, or do nothing at all. Getting a vocal affirmative directly from each person seems good to me. Our club has never left anyone behind."

And practice safe sense. If dive conditions don't look good, don't risk it. Skip the dive instead of jumping in and hoping for the best. Ross Goldbaum (Hillsborough, NC) is sheepish when remembering how he and fellow divers put everyone in danger during a stormy dive off Wrightsville Beach, N.C. "Conditions steadily deteriorated on the way to a wreck 15 miles offshore. Halfway there, the skipper asked if we wanted to continue. Foolishly, we all voted to stick it out. At the wreck, there

was heavier current than I had ever experienced, and I had to pull myself down the anchor line to the wreck. My son was my partner, and we ascended halfway up the anchor of the wrong charter boat at the end of the dive, then had to re-descend and find the right anchor because I doubted we could make a surface swim in that current to our boat.

“Once we made it back on board (by now, the waves were six feet), the worried-looking crew alerted us we were a diver short after the final head count. The mate jumped back in and quickly surveyed the wreck without finding her. She had partnered up with another couple, but they lost contact with her and ascended without her. She had drifted off the wreck and discovered the current was too stiff to swim against, so she came up well astern of the boat, missing the trailing lines. She tried to swim for the wreck buoy but missed that, too. At that point, she had no choice but to inflate her BC and float down-current, trusting the skipper would miss her and go looking. That is exactly what happened. It took us almost 30 minutes before we caught up to her. She did not have a safety sausage, but the skipper had evidently been precise in his course down-current because we motored right up to her. She was surprisingly calm when she came on board. Nevertheless, it was a pretty near thing. Without a bag or sausage, she was hard to see in that chop, and we easily could have missed her.

“The experience certainly reinforced an important lessons for me: You are always responsible for your own well-being. The conditions on that dive exceeded my skills. I should have called the dive -- and now, at age 62, I frankly don’t trust my physical ability if I’m placed in difficult conditions, and it would be irresponsible to put my buddy or fellow divers at risk.”

Sure, divers should be responsible for themselves, but when dive conditions are averse, the captain and crew need to shut down a dive that looks like it’s leaning toward being a bad one. Goldbaum agrees now. “At the time, I didn’t think it was unreasonable to leave the choice up to us. But if no one is ultimately responsible for themselves, activities that entail some degree of risk will cease to be financially accessible due to the liability costs.”

Unfortunately, there are still dive crews, both here in the U.S. and abroad, who don’t follow such a procedure, or maybe any procedure. Based on the responses we received, missing divers are still not a thing of the past. Dive operators need to create stringent diver-check methods, and stick to them. We divers need to hold them accountable by checking their methods before going diving with them. And we can help them do their job better by diving safely and responsibly.

Before you jump into the water with any operator, review their system and abide by it. If it falls short, there are many things you can do, which we will review in our next issue.

--Vanessa Richardson

Anything New at the DEMA Show?

photography and technical diving dominate

Despite its name, the annual DEMA trade show, produced by the Diving Equipment & Marketing Association and held two weeks ago in Orlando, FL, has almost turned into a dive travel show, with booths from every possible destination vying for business. While a press release from the Indonesian tourist office describes the remote Raja Ampat as “well-known,” it seems like only yesterday that I made my way to West Papua’s Bird’s Head peninsula and the only dive operation in the region. Now, the Indonesian government is limiting liveaboard licenses in Raja Ampat to 40. How times change.



Suunto Eon Steel

Is the Sport Diver Taking a Back Seat to Tech Diving?

DEMA provides a good sounding board for what equipment manufacturers are thinking, and this year, it looks as if they are marketing more products to existing customers rather than to those who might be tempted to take up diving for the first time. For example, a plethora of booths proudly exhibited improved and refined closed-circuit rebreathers, such as the Inspiration Evo, with its modernized handset and display (www.apdiving.com), and an apparent obsession with all aspects of technical diving. Most of them seemed to have given up on providing anything new for the ordinary single-tank leisure diver, because those who adventure into technical diving buy a lot more equipment. Why sell a single regulator to a leisure diver when you can sell four

to a techie?

A decade ago, a Mares executive swore to me that his company would never entertain the techie business segment because it represented such a small percentage of its potential market, but now it has proudly launched the comprehensive XR extended range product line with the headline, “Farther. Deeper. Beyond.” (<https://www.facebook.com/MARESjustaddwater/videos/1063688340322550>)

Dive shop buyers seemed to be lapping it all up, and the shelves of those dive stores still in business next year will almost certainly be full of techie gear. I say “still in business” because dive stores worldwide are in crisis and are closing down at an alarming rate. Could it be that this obsession with deep diving is excluding those who would otherwise take up scuba diving? It’s a question worth considering.

Among the techie products in this Mares range, which includes all manner of metal back-plates, harnesses and wings, is the R2S-VR regulator, which unusually routes its hose vertically downward from the second stage. This in turn puts that hose conveniently under the arm of the user instead of over his shoulder. Although it’s primarily designed for side-mounted or multiple-tank users, I can see its tidy design being adopted by single-tank divers, too. The conveniently angled high-pressure ports put these hoses neatly to one side also. (www.mares.com)

Mostly Cosmetic Improvements

Meanwhile Cressi, a neighbor of Mares in Italy, displayed a sleek and lightweight BCD with integrated weight pockets called the Ultra Light. I wrote a rave review of a similar BCD, the SeaQuest 3D, 20 years ago, but it was soon discontinued because in those days, nobody wanted to buy such a thing. Severe airline charges for overweight baggage have changed the way people think today. (www.cressi.com)

Scubapro, Oceanic Worldwide, Aqua Lung, as well as the brands that are now part of the Huish Outdoors empire (Suunto, Atomic, Bare, Zeagle), exhibited cosmetically improved products, not too dissimilar to last year’s. Oceanic continues to promote its Explorer semi-closed-circuit rebreather to the leisure diver who wants to look like a Stormtrooper from Star Wars, but it otherwise confers little advantage over a simpler, more easily transported and less expensive open-circuit system.

Suunto has responded to the recent research asserting that deep stops might do more harm than good by allowing one to abandon that setting on its top-of-the-line computer, the Eon Steel, when used with nitrox. Suunto also revealed its updated range of computers, suffixed “Novo,” which will soon replace the aging but successful Vyper and its siblings. (www.suunto.com)

The Omnix computer from Liquivision claimed to have a new platform design, and it has a much better “manufactured” appearance than that company’s previous worthy but boxy-looking products. With a brightly colored display, the Omnix features “transflective technology” that increases its legibility in bright ambient light. Not only can it be wirelessly integrated among up to 10 other divers (an advantage for instructors escorting trainees on their first ocean dives), techies can also switch it

Getting Batteries for Old But Reliable Dive Computers

In the last decade, it has been extremely difficult, if not impossible, to get battery replacements for many old but reliable dive computers, forcing users to buy new ones. But no more -- you can now get the batteries replaced in many old brands and models.

Bret Gilliam, once the CEO of Uwaterc until it was sold to Johnson Worldwide Associates in 1997, said that when Uwaterc designed the Aladin Pro in 1995, they estimated the battery lifespan would last the average diver from three to five years, based on 200 dives annually, though in reality the batteries lasted seven to 10 years. They designed it so dive stores could replace the batteries for \$25, but JWA eventually stopped supporting the product.

"JWA initially charged excessive rates, more than \$100 to change the batteries and even stopped its dealers from providing the service," Gilliam says.

"Finally, the only option for a diver was to 'upgrade' to a new model of computer and pay a small fortune for the privilege. But many divers were happy with the original Aladdin Pros and didn't want to switch."

Gilliam, who remains "a passionate user" of the Aladdin Pro Nitrox (he owns 10), searched for alternate support and found Terry Brady, owner of Brass Anchor Scuba Center in Frederick, MD. "He provided superb quick service, changed out the batteries for \$50 each, and had them back to me within five days. This is a guy who understands customer service."

Brady replaces batteries in many models of out-of-date computers, too. You may reach him by calling 301-663-9363 or e-mailing tbrady@fred.net. To see what computers he repairs, check his website at www.brassanchor.com/battery.

between three different nitrox mixes during the same dive. (www.liquivision.com)

If I may digress, over the years, we have seen various systems for alerting other divers to the air-status of individuals, but these have never proved popular. It seems that a diver running low on air prefers to keep this vital information private until the last moment -- who knows why?

Dive System, another Italian manufacturer, introduced an advanced computer, the Ratio iX3M. It not only monitors several divers, it has an LED display on the tank-mounted air-integration transmitter that tells everyone networked what's left in a tank. This also comes with a heads-up display for the user, and is available as a stand-alone product. I wonder how many people are brash enough to buy into that idea?

The all-singing, all-dancing Ratio iX3M also claims to be the first diving computer with integrated GPS navigation, although it was not clear how that would function underwater. Like many current computers, it gives the knowledgeable user a choice of algorithms to use. (www.divesystem.com)

Some Useful Dive Accessories

So what products were relevant to the typical traveling diver? The Scuba Capsule encloses an iPhone and turns it into a useful diving instrument that evidently can be taken down to 660 feet. A downloadable app allows the iPhone to act as a dive computer with a choice of algorithms, comprehensive dive planner and automatic data storage. One must wonder whether the iPhone will eventually drive computer manufacturers out of business. (www.scubacapsule.com)

The more complex Diveroid works with the latest Samsung Galaxies to provide dive computer, camera, compass and automatic logbook functions to recreational no-deco diving depths. When used as a camera underwater, the Galaxy retains essential diving information on the display. But don't expect to make phone calls underwater with either the iPhone or Galaxy. (www.diveroid.com)

The Buddy Watcher, which you wear on your arm, allows fast and soundless communication between buddies, guides and



Scuba Capsule

instructors up to 66 feet apart, using a vibrator and a set of LEDs. It provides a more discreet method of contact than those annoying rattles or banging on your tank. (www.buddy-watcher.com)

If you want to carry out a conversation underwater and spend less than \$50 in doing so, Voice-in-the-Sea showed a selection of solutions that were as simple as two cans and a length of string might be. The basic Toucan model is a soft plastic tube around a couple of feet long, with diaphragms at each end. One diver holds one end to his ear, while the other speaks normally into the mouthpiece at the other end, once purged of water, sort of an underwater ear trumpet. Will this be a one-DEMA-show-only product and sink without a trace? (www.voiceinthesea.com)

There were numerous remotely-operated vehicles, both free-ranging and sea floor-traveling, but the Swedish TTR-SB SeaWolf particularly caught my eye. It carries a GoPro camera and is operated by a diver using a controlling leash, rather like walking the dog. One can control it in shallow water from the surface with an iPhone or from the shore by radio control. (<http://ttrobotix.com/product/seawolf>)

Sharks continue to be the subject of a love-hate relationship with people. Isn't it ironic that companies advocating shark deterrents like NoShark (<http://bluvand.com>) and Shark Shield (<https://shark-shield.com>) were in the convention center booths cheek by jowl with those of dive operators advocating in-your-face shark diving experiences and conservation groups advocating shark protection?

The Busiest Part of the DEMA Show Floor

The underwater photography section of the DEMA show was as busy as ever, with the American company Ikelite (www.ikelite.com) and the Austrian manufacturer Subal (<http://subal.com>) both rising to the recent challenges mounted by Nauticam in Hong Kong with new and vastly improved DSLR camera housings.

The Japanese manufacturer Acquapazza brightened the trade show floor with a dazzling array of 15 different colored metal housings for the popular Sony RX 100 Mk4 compact camera, with an optional

Voices in the Ocean

Susan Casey's new book, subtitled "A journey into the wild and haunting world of dolphins," is not only an intriguing, sometimes troubling look at the way we humans relate to what is surely our favorite ocean animal, but also how dolphins relate to themselves and us.

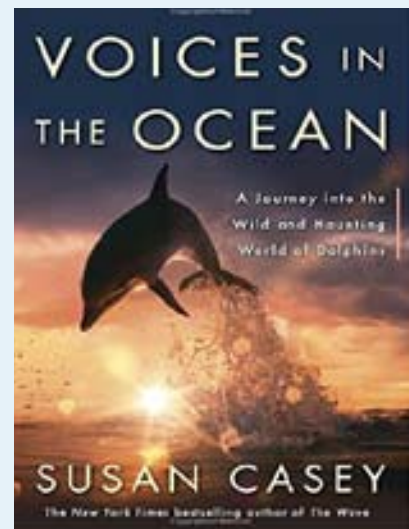
Casey's mission, as she put it, is to capture "the strange, enduring, occasionally tragic and the often wonderful relationship between humans and dolphins," but as *The New York Times* review of her book points out, "Her story quickly takes an odd turn (some might say unsavory). A scientist drops acid with his cetacean charges; a London woman 'marries' a dolphin companion; a persistently aroused male bottle-nose convinces his caretaker to give him regular manual stimulation. And that's not to mention the traffickers (especially in the Solomon Islands and Taiji, Japan), warlords and cult leaders."

But along the way, Casey's interviews with marine biologists and others with an intimate understanding of dolphin behavior provide us with new insights

into dolphin conversations, their families and rearing their young, and their relationship to us. Any diver who reads *Voices in the Ocean* will enhance his or her love for dolphins, while recognizing that we all have a moral responsibility to see that dolphins don't suffer at the hands of callous profiteers.

Go to www.undercurrent.org/UCnow/book-picks.shtml to

order *Voices in the Ocean* from Amazon. *Undercurrent* will get a commission on your purchase -- and anything else you purchase -- and we will donate our profits to important projects dedicated to saving our reefs and oceans.



LCD screen hood for bright conditions. They can work with either M67 or LD (bayonet-fitting) wet lenses. Similarly using Inon dome ports and wet lenses, the APSG-dpQ housing accommodates the Sigmas Quattro range of cameras. Divers suffering pixel envy may be satisfied with the APSO-A72 Acquapazza housing, which is made for the 42.4 megapixel Sony A7 full-frame mirrorless camera. It can be used at an astounding light sensitivity level approaching ISO 41,000. (www.acquapazza.jp/en)

Someone ruefully asked me how many light mounting solutions could a niche market as underwater photography bear, with so many companies offering their versions of the one-inch ball-and-clamp system?

While Fisheye showed some clever electronics with its FIX range of lamps (evidently we don't judge light by Kelvin any more; it's now by the color-rendering index, or Ra), Orcalight demonstrated a 30,000 lumen monster that was only rivalled by Keldan's Swiss-made modular video lights with up to 26,000 lumens output (www.orcalight.co.uk; <http://keldanlights.com>). At the other end of the price range, iTorch offered a range of lamps that complimented its equally impressive range of options for housing iPhone cameras (complete with wide-angle lens options) and even for taking a GoPro to 500 feet deep. (<http://itorch.ca>)

Most impressive, but still in development, by i Torch were the Symbiosis SS-1 and SS-2 underwater photographer's strobes that work in conjunction with -- and were powered by the battery by -- one of the same manufacturer's LED video lights. It might provide an important alternative to those products from Sea & Sea and Inon that monopolize the market. At the same time, iTorch exhibited the prototype of a mini lighting system with two heads mounted on flexible arms, intended for use with a mini point-of-view (POV) camera.

GoPro cameras and the other mini POV clones have come to dominate underwater videography as much as they have every other sporting activity, and various accessories for them were revealed, including a 360-degree system by 360Heroes (www.360heros.com). Backscatter demonstrated its improved and refined Flip4 flip-filter system for the GoPro, to be priced lower than its popular Flip 3.1. (www.flipfilters.com)

The Most Significant New Product on Display?

Strangely enough, it was not intended for scuba divers, but merely for those who want to lie on the surface looking down at the underwater world -- a full-face snorkelling mask.

Several manufacturers offered it, and all but one appeared to be exhibiting the same product, the Aria, made by Ocean Reef (www.oceanreefgroup.com). Allowing one to breathe naturally through the nose, it is designed to eliminate jaw discomfort and mask fogging, as well as water in the snorkel, by circling the air down through a top tube, around the face and back out through an exhaust. Users can even talk while using it, though it cannot be used for breath-hold diving.

The H2O Ninja Mask, an almost identical product, is similarly made from polycarbonate and silicone and has the almost obligatory docking point for a GoPro POV camera. Its Hawaiian manufacturer claims to have already sold 5,000 units. Available in a wide range of pastel colors, it will be a great treat for nondivers and especially kids. (www.h2oninjamask.com)



The Aria

John Bantin is the former technical editor of DIVER magazine in the United Kingdom. For 20 years, he used and reviewed virtually every piece of dive equipment available in the U.K. and the U.S., and made around 300 dives per year for that purpose. He is also a professional underwater photographer, and most recently the author of Shark Bytes, available at www.undercurrent.org

Do Sport Divers Need a Spare Air?

not if they're paying attention

When a sport diver runs out of air, it's mainly because he's not paying attention to his gauge. At a DAN seminar at the recent Diving Equipment & Marketing Association Show (see the previous article), it was clear that in many out-of-air cases, the diver is so focused on another activity, such as spearfishing or photography, that he doesn't check his remaining air.

Of course, no one should run out of air, but some sport divers who worry about such an event carry small pony bottles, such as the Spare Air, a bottle about the size of a child's forearm with a regulator attached, for a backup. It will deliver a few extra breaths, not enough for any sort of unplanned decompression stop, but enough to get you to the surface from maybe 100 feet.

I recently received an email from one of our readers, Daniel Spitzer (Piermont, NY), who was diving in Tobago with Blue Waters Dive'n in February. He wrote, "As I filled my Spare Air from a tank, Wayne Palmer, who runs the dive operation, sauntered over and said, 'We don't use those here, and they're forbidden. They explode, and anyway, divers use them to extend their bottom time dangerously, and we come up here at 600 PSI.'"

Spitzer had emailed Palmer's staff a question about his Spare Air before he arrived, "but they had not told me of this rule! And I won't even begin to describe the hassles involved in bringing the empty thing through TSA security. . . But I left the Spare Air behind on the dock." The dives were to 65 feet and "I would typically return to the boat at 50-plus minutes, with half a fill remaining in my aluminum 80, despite not having my Spare Air available."

Though some divers get added comfort with a Spare Air, we think it just adds bulk and one more potential complication, especially if you're diving with a guide at reasonable depths. While the possibility of the Spare Air exploding underwater is a red herring, the little pony tank may indeed encourage a diver to get dangerously low on air, run out and have to rely on the very limited capacity of the Spare Air to surface.

John Bantin, the former technical editor for *Diver* magazine, said, "I attempted to make an ascent from 100 feet with it and came to the conclusion that it was 'three breaths from death.' If you have one, I suggest you try using it for an ascent while still able to retrieve a good supply from your main tank. Then you can make a decision as to whether it is worth the hassle of regular testing and carrying it in your travels and underwater."

Bret Gilliam, the founder of Technical Diver International, says, "While it has proven to be a reliable bail-out, it's severely limited in life-support time, maybe five to seven breaths from depths deeper than 60 feet." If he's doing a complicated dive, he says, "I'd prefer more capacity."

Bantin says you're better off to "consider your age, weight, and overall health to figure out the right amount of air you need. If you are a big, unfit, older man, you might consider a bigger tank, or even doubles if you are diving alongside a smaller, more fit young woman, for example."

For divers who indeed want an extra independent breathing source because they're doing something other than a guided Caribbean dive, like tackling the wrecks in Truk, Gilliam suggests a cylinder in the 15- to 18-cubic-foot volume to mount on the right side of the primary tank on your back. "This gets it out of your way, and yet the second stage can be routed under the armpit to a fixed point on your chest where it is easily accessible if needed. A cylinder that size is very light and not cumbersome, but it will provide plenty of air to get up from depths of 150 feet or so with a controlled ascent rate, and even allow extra capacity for an unplanned decompression stop."

The Y-valve is popular among European divers. "It allows you to fit two complete regulators to one tank, avoiding regulator failure problems," says Bantin. "I carry a set of Buddy Twinning Bands and Blocks from AP Diving (www.apdiving.com/shop/twinset-cambands.html). They are very lightweight in the luggage, yet allow you to twin up any locally sourced cylinders. (You need two complete regulators to use two independent tanks in this way.)"

Having a serious equipment problem at the end of a dive is highly unlikely. Says Bantin, "In more than two decades of intensive diving, I never suffered any such regulator failure, although I suppose it could happen. Regulators are mainly designed downstream-style so that they fail in the open position and free flow." Every diver should know how to breathe from a free-flowing regulator, and every diver should be able to get to the surface from 60-foot depths with a controlled emergency swimming ascent.

If you still want to tote a Spare Air with you, verify with the resort or liveaboard that it is not prohibited, hoping that, unlike Spitzer, you get a straight answer.

-- Ben Davison

Carl Roessler, Steve Jobs and the "Maddened Attack"

Does the new Universal Pictures film, *Steve Jobs*, rip off an iconic photo of a great white shark? The photographer thinks so, and he has sued.

If you were diving in the '90s, you might remember Carl Roessler, whose excellent See & Sea Travel agency had exclusive representation rights for just about every decent liveaboard anywhere. He paid for monthly full-page ads in the now defunct *Skin Diver* magazine, handled other marketing, and took a 30 percent commission on every booking. Roessler was also one of the world's leading photographers; his first of many books, *Underwater Wilderness*, provided such unique reef photos, it was picked up by Book of the Month Club. One of his 1994 photos -- a great white shark, nose to nose with the camera, mouth wide open -- is now the subject of his lawsuit.

The shot, which Roessler named "Maddened Attack," appears in a scene that shows Jobs, played by Michael Fassbender, interacting with Apple employees on May 6, 1998, as he is preparing to go onstage to introduce the PowerBook G3 and the iMac. It appears in the next scene, displayed on a large screen behind Jobs while he argues with Apple co-founder Steve Wozniak, played by Seth Rogen.

According to the lawsuit, neither of the two scenes occurred in real life. "In the movie, the enormous Maddened Attack shark image, poised above Jobs' small figure, comes to symbolize Jobs's inner demons, his uncontrollable, instinctual viciousness," the lawsuit contends. "The Maddened Attack shark photograph is not a simple prop or background image, but rather, is a key, essential character in the movie's concluding scenes, crystallizing for the audience the moviemakers' answer to the question 'Who is Steve Jobs?'"

Roessler's See & Sea Travel is another story. While he required exclusive representation, as the internet developed in the mid-'90s, liveaboard owners recognized their opportunity to create websites and sell directly to consumers. When Roessler objected, the liveaboards began to bolt, forcing See & Sea into bankruptcy, and leaving many divers who had made down payments or even paid in full high and dry because their payments had yet to be transferred to the boats. Roessler's cash management strategy had caught up with him. The bankruptcy required cash on hand to be distributed pro rata to all debtors, meaning divers who had paid in advance and lost their trips helped finance that debt.

Since then, Roessler has been honored for his contributions to the industry (not for his management foresight). In 2008, he received an award from the Academy of Underwater Arts and Sciences. In 2011, the government of Bonaire awarded him its Lifetime Achievement Award, and in 2013, he was named Diver of the Year at the annual Beneath the Sea Show. Read more about him at www.divexpert.com.



Flotsam & Jetsam

Fire the Copywriter. I recently got an email from *Scuba Diving* magazine with the headline, "Are You a Guerrilla Diver?" It was about the joys of the Cayman Islands. Whoever wrote the headline probably had heard the words, never read them but tossed them in, thinking the term clever. Of course, the proper term is "Gorilla Diver," meaning one who pushes or exceeds the limits, a concept neither *Scuba Diving* nor the Caymans would, heaven forbid, ever dare mention or ever acknowledge, except in error.

Pirates Point to Continue. There will be a memorial for Gladys Howard, Pirates Point's recently deceased owner, at Little Cayman Baptist Church on December 17 at 6 p.m. If you want to participate, email bettyboo@candw.ky On December 18, in celebration of Howard's life, Little Cayman will have a costume parade, starting at Southern Cross Club at 5:30 p.m. and ending at Pirates Point for an open house, with food, a cash bar and dancing until 10 p.m. Also, Pirates Point will keep on trucking. Divemaster Gay Morse tells us that Howard's daughter, Susan, will keep the resort "and let us continue with the hospitality, food and diving we are known for. Of course, no one can replace Gladys, but . . . we get to continue on with our dream. It was definitely a committed relationship between all of us and Gladys that kept the resort so special."

Phi Phi Island Tries to Ban "Try Diving." Officials on the Thai island want to ban the mass-tourism offering, in which people with no dive experience are brought to a shallow reef to walk around and see marine life. "There were companies that just give the tourists rubber clogs to walk on the delicate coral reef and allow them to handle the wildlife," Thon Thamrongnawasawat, a professor at Kasetsart University's Faculty of Fisheries, told the *Phuket Gazette*.

He and other officials had to chase off five "Try Diving" boats moored near a protected reef in Ton Sai Bay earlier this month, but after being ordered off their spots, all five boats moved just 500 meters from the reef. Thon says most of the coral where they were moored was completely destroyed. "Try Diving is really no different from sea-walking, which is illegal in Thailand's national parks," he says, adding that Phi Phi's ban would not apply to those who seriously want to learn to dive through Discover Scuba and openwater courses.

A Prudent Liveboard Choice. In our September article about the Siren Fleet losing five of its eight boats to accidents in six years, we noted how the *Truk Siren* was looted and burned after being washed up on a reef after a typhoon. The *Philippine Siren*, while still sailing, has issues -- it's a traditional Phinisi with sails, but one diver found out after the engine broke down that the crew had never sailed it before. Based on those facts, *Undercurrent* subscriber Harvey Cohen (Middlefield, NJ) was prompted to comment, "I do a lot of liveboard dive trips, and I limit myself to steel hulls with two engines, or one engine and a suit of sails that gets used every week. When I read 'burned to the waterline' and 'dead in the water,' I wonder why anyone would commit to the open sea in such a vessel."

Marine Population Half of What It Was In 1970. Marine mammals, birds, fish and reptiles have declined by 49 percent, according to a report from World Wildlife Fund and the Zoological Society of London. The study, which analyzed more than 1,200 species of marine creatures in the past 45 years, says some species people rely on for food are faring even worse, noting a 74 percent drop in populations of tuna and mackerel. Sea cucumbers, considered a luxury food in Asia, have seen the most significant fall in the past few years -- a 98 percent drop in the Galapagos and a 94 percent drop in the Red Sea. Other faults: the decline of seagrass and mangrove areas, which serve as food sources and nurseries for many species, and carbon dioxide being absorbed into the oceans, making them more acidic.

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