

# undercurrent

*The Private, Exclusive Guide for Serious Divers*

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## *Caribbean Explorer II, Lesser Antilles*

*a full dance card in Nevis, Saba, St. Kitts and Statia*

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Dear Fellow Diver:

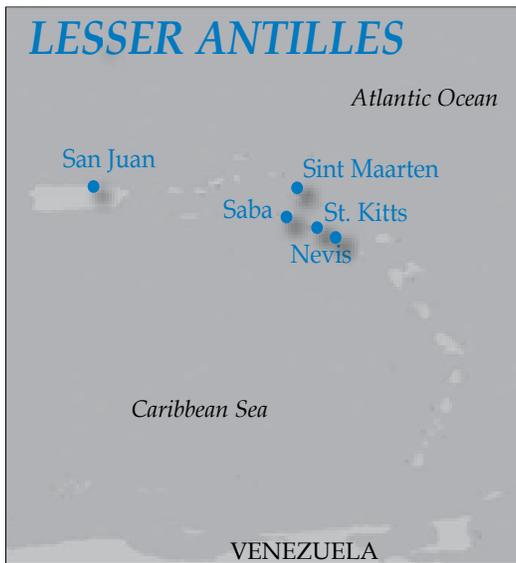
Visibility was good and there was none of the usual current as I finned down into the blue. A dramatic pinnacle gradually appeared, rising from the depths to 85 feet from the surface. My feeling of awe watching the Third Encounter/The Needle emerge from the deep blue never gets old, even though I have made a half-dozen dives here. As I moved closer, the colors of the corals encrusting the pinnacle began to pop out. Sponges and sea fans decorated it, and hundreds of schooling Creole wrasse swirled around the spire. What a welcome to Saba!

Seven nights, five and one-half days of diving and 26 dives were offered by the Caribbean Explorer. For more than a quarter-century, the Caribbean Explorer -- now known as the CEX II -- has been the only liveaboard bringing divers to this northeastern Caribbean region. In addition to St. Kitts and Saba, Nevis has been added to the itinerary, and for my trip, St. Eustatius (Statia) made a reappearance.

CEX II travels weekly between St. Kitts and Sint Maarten, and reverses the course the following week. This was the first time I had begun this trip in St. Kitts, which, with its easy dives, is a good build-up to the deeper dives and currents of Saba. On the first dives around St. Kitts and neighboring Nevis, my depth hovered around 40 feet. By the last days in Saba, only one dive was above 58 feet, and the deepest was 113 feet. Water



*Caribbean Explorer II*



temperature averaged 83 degrees, and air temperatures were in the mid-80s.

Safety is paramount on this vessel, and the expected rules go along with it. For example, do not go to the bow when the boat is running at night. Because of the chop and surface current, we were advised to remove our fins at the hang-line, not the ladders, to avoid injuries; no decompression diving, and return to the boat with 500 psi. Captain Ian recorded our entry and exit times, depth and psi. Nitrox divers were required to analyze and record oxygen percentage (which ran between 28 and 31) and psi. Buddy diving or following a dive guide was required, unless you are solo certified (if not, they'll offer you a course). Crew also conducted a safety drill, which includes the careful checking of lights, whistles and vests.

Monkey Shoals is a two-square-mile reef between St. Kitts and Nevis, which are about two miles apart. It's an impressive fish nursery, with a sandy bottom and grassy areas, and deep, narrow cracks -- lots of places for the tiny creatures to hide. In a crevice, I found a large, well-camouflaged spotted scorpionfish. There were several stingrays, peacock flounders, lobster, shrimp, small crabs, trunkfish, trumpetfish, a ten-inch burrfish and razorfish. At Paradise, volcanic fingers were covered in colorful vegetation, a variety of shrimp hid in recesses, and fire worms abounded. In the sandy areas, garden eels and yellow-headed jawfish showed their heads. A couple of great barracuda cruised by. Old encrusted anchors were partly hidden by sand. At Old Road, a large, feisty moray flashed out of its hole and lunged at the arm of our dive guide, William. Why? Who knows, but maybe it was attracted by his shiny, dangling metal clip tank-banger. No harm done, but a warning to stay alert.

On a dusk dive at Nevis, Devil's Cave provided many caverns and swim-throughs. Sea fans and colorful corals framed the exit of one, revealing large numbers of blue and brown chromis and black durgon. I illuminated good-sized Spanish lobsters in the dark recesses; nurse sharks rested and large lionfish lurked under ledges. Oddly, the leisurely pace William set abruptly changed, as he suddenly made a beeline opposite from where he had been pointing out an eagle ray. I followed him, uncertain of his logic, and rapidly burning air. I heard the boat come closer, but William passed it by, making a long loop. Still following, I figured he had either gone nuts or wanted to show us something amazing. And then, he was at the surface, shining his light as a path. After a safety stop, I climbed aboard. It had been a great dive until the roundabouts to the boat. Turns out William's pressure gauge had malfunctioned, rendering it useless. I did some finger-wagging when he and I discussed it after dinner.

This was the first liveaboard and night diving experience for two enthusiastic California couples, one of whom had fewer than 50 dives (the nondiver in the other pair entertained herself by reading). The three remaining divers, including me, had been aboard several times. A computer tech consultant was an avid photographer. Greg Holt, of Scuba Radio fame, was aboard, minus his entourage of mermaids, but he had his mike and recorder. His animated storytelling brightened many a meal. Several guests enjoyed an interview with him, as did the crew. CEXII owner Clay McCardell was aboard (he also has Explorer Ventures liveaboards in the Turks & Caicos, Bahamas, Galapagos and the Maldives). Highly approachable, with a good sense of humor, he contributed to the friendly atmosphere. Fleet engineer Keith Smith was aboard, too, working with Brett, the CEXII relief engineer.

At 115 feet long, CEXII is a compact aluminum vessel, with two reverse osmosis water makers. There was some rocking in a heavy chop. A comfortable sundeck, dining area, galley and crew quarters are on the upper deck. The dining room has open-air, wrap-around windows with zip-sides. No AC, but fans provided relief when needed. The guides gave their detailed briefings, with hand-drawn charts, in the dining room.

Nine double cabins are on the main and lower decks, with a variety of configurations: bunk with queen bottom, queen or side-by-side singles. My air-conditioned cabin was almost too chilly, but there was a blanket handy. A large table for cameras was on the dive deck, and lots of charging stations were available. There was ample space to hang wetsuits, with a large container of chemically-treated water for wetsuits and boots, and others for cameras and masks. Two hot showers had takers after every dive. I found the boat neat, orderly and clean; after my August trip she was scheduled for a down week of cosmetic work, such as scraping and repainting the railings.

The crew of five (everyone is a dive instructor) joined us for meals, establishing a real family feel. Captain Ian Mariott has been with the Explorer Ventures organization for 14 years. Hailing from England, he has a delightful, dry sense of humor and is hands-on in every respect -- briefing us on the islands, bussing the tables and keeping an eagle eye on the dive deck for entries and exits. I suspect that dive guide Dave, another Englishman whose alias is "Tuna," could handle any mishap underwater, including wrestling a shark if necessary. Soft-spoken, he had some innovative suggestions as to where to carry my Nautilus Lifeline (I opted for my BCD pocket). William, a closet writer who has been on the boat eight months, drew excellent dive site maps and is attentive to the preferences of divers underwater. Coming with a lot of professional dive experience in Vietnam, Borneo and St. Thomas, it was Ashley's first week on board. Not only is she a bright, sunny gal, she dived slowly at the back of the group, where I like to be, and was a superb spotter of critters.

## **The High-Tech Search for a Dead Diver in a Quarry**

You would think it would be easy to find the body of a dead diver in a relatively small quarry compared to a vast ocean, right? Think again. Consider the search for diver Daren Gray of Spring Hill, TN. After he disappeared while diving a quarry in Pelham, AL, it took six days to find his body. Gray, 49, a very experienced diver with a solo certification, started out on a solo dive with a rebreather on Saturday afternoon, October 25, but he was reported missing two hours later after failing to check in with dive staff.

More than 200 volunteers from 20-plus agencies helped in the search over that week, but their only evidence was a piece of Gray's lift bag in the quarry found on Tuesday afternoon, at 105 feet. The lift bag was on a ledge with about a 45-degree angle, so searchers began looking above and below the area, but visibility was less than five feet in those deep parts of the quarry.

The reason Gray was found was due to a high-tech, sector-scan sonar system on loan from the Georgia Department of Natural Resources. "It gave us the opportunity, or the ability, to basically look at the bottom surfaces of the quarry, some of the areas where we [were] unable to have the visibility to be able to see what was there," Pelham Fire Department Deputy Chief Blair Sides told reporters. "We had technical divers who were basically working just a couple of feet of visibility. This high-tech piece of equipment would just paint a picture of the area."

Searchers used a five-gallon concrete bucket in areas of interest with the sonar system's help. The bucket helped pinpoint the exact locations on the sonar. The first site did not yield a positive result, but the second site led to the discovery. "In just a matter of a few hours, it had a couple of signatures we felt were pretty promising," Sides said. "We put a couple of technical divers in the area and were able to locate the body. We could have not have completed the operation without this piece of equipment."

Authorities say Gray's body, which was found at 72 feet, showed no signs of foul play. They're not sure whether it was diver error or equipment error, so they closed the investigation, calling Gray's death accidental.

Catherine, the new chef (she was previously a dive guide), did herself proud. Breakfasts included combinations of eggs, sausage, bacon, waffles, egg-and-cheese McMuffins and cereals. Lunches included kebabs, couscous, hummus, pizza, hamburgers and quiche, along with a different soup daily. Baby-back ribs were my favorite for dinner, so delicious I ate far more than I needed. I was disappointed when I learned their traditional Thursday Thanksgiving dinner was off the menu, but Catherine came through in style: stroganoff with a to-die-for gravy and chicken in a leek and butter sauce. There were always lots of vegetables and fruit, with pies and cakes accompanied by ice cream for dessert. Cookies, cream cheese rolls, brownies and monkey bread were must-have snacks between dives. And Catherine over-shot the mark on junk calories by serving chocolate-covered (would you believe?) bacon. All beverages, including alcohol, are included in the price, but once you imbibe, diving is done for the day. A few of us enjoyed wine with dinner when not night diving, and maybe a beer or gin and tonic before retiring. After the night dive, hot chocolate laced with one's preference (Bailey's Irish Cream was mine) was offered along with a warm towel. CEXII sure knows how to make dive life comfortable.

Statia was taken off the itinerary in 2010. According to Clay, it was due to a combination of island politics and diver demand. On this trip it was back on the itinerary for four dives, while Clay did some politicking on the island, but to date, Statia remains off the list of dive sites. Diving on that small, steep volcanic island was as good as I remember. Bianet, a young divemaster from Scubaqua, came aboard, as is the rule when diving the marine park. Double Wreck was a slow, easy dive, with low coral outgrowth and sand at 58 feet. A large crab got my attention, as did small turtles, spotted morays, and stingrays. All that remains of the 300-year-old wrecks are two large anchors housing families of tiny blennies. At Ledges, I nearly collided with two huge Caribbean spiny lobsters that plopped down in front of me as I was heading into a swim-through. Winding my way through tall sea plumes, I came head-to-head with a great barracuda. Neither of us gave way for a few moments as we stared at each other, 10 inches apart, then I relented. In front of ledges overgrown with hard and soft coral and sponges, a pair of courting cowfish in their bluish courtship colors gracefully spiraled in the water column.

The queen of the volcanic island jewels is Saba, and she announced her presence with increased wind, chop and surge. While the previous days had been mostly sunny, here we had increasing clouds, as well as thunder one day. Man O' War Shoals was really hopping. Frisky sergeant majors were chasing each other along with anything else, while eighteen-inch sand tilefish hovered near the sandy bottom in pairs. Triggerfish, spadefish, a school of blue

## Why Don't Pre-Dive Checklists and North Carolina Mix?

The use of a pre-dive checklist, basically a buddy check of one's gear, weights and air, can reduce the number of mishaps while diving, including injuries and deaths. So why do so few divers use a checklist, especially in North Carolina? Petar DeNoble, vice president of Mission at Divers Alert Network, and his assistant, Shabbar Ranapurwala, wanted to understand why so that they could create a better way to prod divers to do so.

In the summer of 2012, they gave pre-dive checklists to 617 divers to use, but 30 percent of them didn't

even bother. Researchers determined that those who used a checklist were older (over age 35) and had a higher average number of divers per year -- they adhered to the checklist 67 percent more than divers under age 35. The biggest factors for divers who didn't use the checklist were being female, and surprisingly, diving in North Carolina. Those who dived there used the checklist 58 percent less often than those who dived in the Caribbean.

DAN says it will do future studies to understand divers' risk perceptions and promote better use of pre-dive checklists. Looks like its target audience should be cocky young female divers who favor North Carolina.

tang, barracuda and huge lobster were all part of the show.

Cruising over volcanic spurs and winding paths in Ladder Bay, I marveled at smooth juvenile trunkfish the size of peas, bobbing around in a recess. Corals looked like bouquets of yellow daisies. Lettuce leaf slugs were trimmed in light blue, lavender and red. A curious grouper eyed me. In a sandy area discolored with yellowish sulfur and warm to the touch, Tuna buried his dive computer for a couple minutes to check the temperature and when he pulled it out, it read 90 degrees. He warmed his hands over new warm water vents, which he later hypothesized as new activity from the long-dormant volcano on land. On

the night dive, William tried to boil an egg in the hot sand, but when he cracked it against his forehead all he got was a runny egg facial.

On the second dive here, I wanted to repeat the Labyrinth, so Ashley agreed to accompany me due to the no-solo-diving rule. Overhangs revealed more than a dozen lobster, cleaning stations, shrimp, tiny juvenile fish en masse, turtles and a variety of small tropicals.

Essentially all diving is from the mother vessel. Instead of giant-stepping from the side with a five-foot drop, I stepped off the stern; another diver made the same choice due to knee issues. A crew member was always ready to carry my gear down the steep stairs and give a balancing hand while I donned my BCD. The seas were often choppy and a breeze made for surface current, so the strategy is to pull oneself along the granny line to reach the mooring line, then follow it down. One day, the waves knocked me against the vessel, and my fins got tangled in the slack line. I prefer to drop straight down, but most times the dive plan was to use the granny to get to the mooring line.

Rather than join others for the tour of Saba, I elected to dive Tent Reef. William had lost his compass on the previous dive there, and another diver and I wanted a second view of the four-inch red frogfish. Tuna took us out in the chase boat for a drift dive. Several reef sharks joined the parade, and I spotted several juvenile and adult spotted drum, and even a frogfish. And William found his compass. Finding shrimp on coral whips was a treat, as were the dozens of lettuce slugs. And, as on most of the dives, flamingo tongues were munching away.

A dawn dive on the last day! Just one other diver and I got up early to join William. The surface was smooth, visibility was 100 feet and no current. A shark greeted me with close passes, but did not stay around long. A red hind was patiently getting an early-morning mouth cleaning, and goatfish were foraging for breakfast. A nice way to end the week.

While Caribbean diving doesn't match the Pacific and Indian Oceans for sea life, big fish and beautiful corals, a trip on the Caribbean Explorer II provides plenty of diverse terrain and a chance to see the best of what the Caribbean can offer. And it is better on the wallet and body, given those 24-hour flight days and the hassles of getting to, say, Indonesia. No doubt, I'll be back again another day.

## Caribbean Explorer II

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

★ = poor      ★★★★★ = excellent

Caribbean Scale

-- J.D.



**Divers Compass:** I made my boat reservations directly with Explorer Ventures via its handy live-chat option . . . My willing-to-share single was listed at \$1,895, but the true price is \$2,125, due to \$115 for port and marine park fees, a non-optional \$115 fuel surcharge; add to that \$125 week for nitrox . . . Taxis in St. Kitts and Sint Maarten were \$15 to \$20 per trip . . . My overnight in St. Kitts at Timothy Beach Resort, was \$170, plus a 22 percent hotel tax, and included late checkout; once again, I'm glad I followed my instinct of arriving a day early, because my luggage was delayed . . . Website: [www.explorerverventures.com](http://www.explorerverventures.com)

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## Where to Go Diving -- and When

*seasons change, and so does the weather at dive spots*

If you're traveling overseas for a diving vacation, don't just research one liveaboard versus another, or which Indonesian resort has WiFi. You also need to research prevailing regional conditions -- such as weather, temperatures, and dry and wet seasons -- before deciding where to go and when to go there. *Undercurrent* has a lot information in its Seasonal Dive Planners (see "Plan Your Dive Trip" on the left side of our homepage at [www.undercurrent.org](http://www.undercurrent.org), and click on any destination listed below it). I recently asked our travelin' contributors Bret Gilliam, John Bantin and Maurine Shimlock to give us their notes on seasonal conditions at top dive destinations, and the best times to visit.

### The Carribean and Southern Atlantic

**The Caribbean.** John Bantin prefers to go between January and June, because "I find the weather is more stable and the rain less persistent." Bret Gilliam says his optimal conditions are from late April into September, "because the brisk trade winds abate then, and sea conditions are milder. Also, rates will generally be lower for hotels and resorts, as well as airfares." Of course, you have to consider that hurricane season officially runs from June into late October. Honduras can get wind and rain from December to February. In the Caymans, it lasts through the winter and later, meaning the *Cayman Aggressor* frequently cannot make the crossing to the smaller islands.

**The Bahamas.** The same conditions generally prevail as in the Northeastern Caribbean -- with one exception. "If you want a getaway in winter periods, understand that the Bahamas are in the North Atlantic and can sometimes get quite chilly, both underwater and above," says Gilliam. "I've been in the Abacos in January when night temperatures on land have hit the low 40s -- that's definitely 'sweater weather' for a lot of people." I'll add that one winter only a 7mm Farmer John could keep me warm, though the following summer I dived just in swim trunks. Bantin agrees with the chilly weather, "but I've experienced some of the best diving in the first half of the year." If you choose an area protected by island lee shores or large-scale reefs, you have a much better chance of getting good diving conditions -- Gilliam recommends the Exumas or the Crooked Island archipelago for good diving with excellent protection. "If you're taking a liveaboard, keep in mind that transits can be dicey in winter, depending on your port of embarkation and your route."

**Florida Keys.** They have pretty much the same conditions as the Bahamas, but rough weather has more effect on visibility. Gilliam says most sites are relatively shallow, but corals have declined dramatically. Good operators make an effort to get to good sites, but there are a lot of 'cattle boats' that don't strain themselves. And it can be cold in winter."

### The Pacific

**Hawaii.** Most folks find that these waters require a 3-mm suit most of the year, but winter temps can

drop and a 5-mm (for some divers) is needed to remain comfortable during long dives. October to April -- especially December and January -- bring storms, and lots and lots of rain can fall.

**Guadalupe Island.** This Mexican site is reached from the mainland port of Ensenada and has perhaps the best great white shark diving in the world. Gilliam recommends a late-June to October period for visits, "but even in summer, water temps will rarely get above 70 degrees, so pack at least your 3-mm or 5-mm wetsuit." Some readers have reported temperatures below 60 degrees.

**Sea of Cortez.** Water temperatures can get into the mid-80s from late September to mid-November, then gradually decrease into the low 70s and 60s until May or so, then they begin to climb once again. But temperatures vary at depth, and vary north to south; in Cabo San Lucas, where the Sea and the cold Pacific meet, water temperatures can swing wildly.

**Cocos Island.** To experience its awesome diving, the best conditions are June through September for marine life and waves, which other times of the year affect the long crossing from Puntarenas, Costa Rica. "It's nearly a 400-mile transit from the mainland, and it can be a bitch if the seas are up," says Gilliam. "But summer sometimes produces flat, calm seas that make for a nice crossing. No matter when you go, rainfall can be staggering." If they had to choose between Cocos and the Galapagos, both he and Bantin would pick the former. "The hammerhead sharks, mantas, etc., are in similar populations as the Galapagos, but the water is much warmer and the visibility is better," says Gilliam. "I also think you have a superior selection of liveaboard vessels, and far less chance of government interference that can cancel trips. Cocos is probably the best place in the world for reliable encounters with large marine life."

*One winter in the Bahamas, only a 7mm Farmer John could keep me warm. The following summer, I dived just in swim trunks.*

**Fiji.** July to November brings cooler water in the low- to mid-70s, as opposed to the 80-plus-degree water in other months. Two buddies and I scheduled an October trip to Taveuni a few years back, and one buddy found the water too cool for his 3mm, so he called a shop in Nadi to order a 5mm wetsuit, as well as a vest and hood, which was flown over the following day.

**French Polynesia.** Forget Tahiti or Bora Bora. The best diving is in the Tuamotus islands of Rangiroa and Fakarava (see our June 2007 issue for a full report on diving at both sites). The best conditions will be found during their winter (our summer), when there is less rain, less humidity, and more pleasant temperatures.

**Solomon Islands.** Gilliam's best experiences there have been between August and October due to placid seas, comfortable temps, little rain and great visibility. "There's a good reason why excellent liveaboards like the *Bilikiki* shut down from about November to March. And because most flight gateways take you through Sydney and Brisbane, you should take advantage of visiting Australia during its late spring and summer season. "Hey, you're going about 12,000 miles or so . . . stick around a bit and take advantage," Gilliam says.

## **The Indian Ocean**

**Indonesia.** The huge country straddles a vast area. Pulau Weh near Banda Aceh in the West is a long way from the Bird's Head Peninsula of West Papua in the East. Most of the islands form a natural barrier between the Indian Ocean and smaller seas to their north, and throw in the prevailing monsoon cycles, and you have marked differences in conditions. In the northeast, visits to Raja Ampat and further south in the Banda Sea will be best from late December into late March, Gilliam says. "After that, the wind typically reverses, rain and humidity accelerate, and some areas are inaccessible." Don't even think about visiting southern regions like the Komodo Islands until the seasonal change sets in from June to September, he says. "Then you'll usually get calmer seas, markedly dry conditions without the drenching rains, great visibility,

and much warmer water temps. I was at Rinca Island in the lower Komodos in May 2002, and the water temperatures were in the low 50s -- freaking freezing. A month later, I visited again and the temperatures had soared back into the mid-60s, still chilly but bearable. This is due to being in the Indian Ocean, not the South Pacific, and the seasonal effects are more pronounced. Only 10 miles north and back in the Pacific region of the Komodos, you can experience remarkably warmer water and better visibility."

Maurine Shimlock, on the other hand, prefers diving the southern areas of Komodo between December and March, "when the water is warmer and more clear. The northern parts of the park are best dived from June through September for warm water and good visibility." She and Burt Jones, her husband and fellow underwater photographer, regularly run underwater photography trips in the area, and "because guests like to dive both areas of Komodo, we try to plan our trips during the 'swing' seasons of April-May and late September-October for sites in the north and south."

**The Maldives.** While they're idyllic tropical islands in the middle of the Indian Ocean, they're not always so idyllic, says Bantin. "The seas can be huge and the rain torrential, and that mainly happens from June to December."

Once you get into the Indo-Pacific, you must deal with the dramatic seasonal switches in rain and humidity, and the Ring of Fire threats of volcanic eruptions and earthquakes. But Indonesia, the Solomons and other far-flung places are where the best diving is, according to our expert contributors. "Many of the pelagic species have simply gone missing, and divers need to travel to places like Cocos, Fiji and French Polynesia to see the great schools of fishes that were once common elsewhere," says Bantin.

If you're going on a bucket-list dive trip, double-check with a dive travel expert about the best time to visit, says Shimlock, "A good tour leader or travel agent should be able to advise you on the best times for the best weather in whatever region you want to dive." If you've already booked reservations and bad weather comes calling, don't blame the tour operator for canceled dives or itinerary changes, she says. "The weather is changing everywhere, and most operators have statements in their releases and liability forms stating that they are not responsible for the weather, and they may have to change itineraries because of the weather, etc. If so, realize that the dive operators and trip leaders are changing the route in your best interest, and they're going to try to salvage the trip despite bad conditions."

- - Ben Davison

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## Should Diver Certification Last Forever?

*not if you haven't dived since J.R. Ewing was shot*

Historically, upon taking training for scuba diving and successfully passing the academics, pool sessions, skills and openwater diving, the student is awarded a certification card that qualifies him or her as a "diver" at some level ... be it: "open water," "advanced," "rebreather," etc. This certification is essentially good for life. It does not need to be renewed. It does not expire. There is no requirement for additional training. And no obligation to actually continue diving to maintain proficiency and practical experience. Basically, once you're in the "club," you're in for life.

It has been that way since dive training agencies began back in the 1950s, and it remains that way today. Instructors, assistant instructors and divemasters are required to renew annually, pay dues to an agency, buy insurance, complete continuing education courses, and show legitimate evidence of diving activity and student training. But the regular "diver" population is not obligated to any such requirements, and, according to industry protocols, can continue diving on their original c-card forever. Sounds like a good deal ... But is it a good idea in today's reality?

## The Dive Industry: Infamous for Not Implementing Change

Having been asked to comment on this rather sensitive subject, I will open the ultimate “can of worms” that no one seems to want to discuss. It reminds me of the controversy that ensued when I advocated for the acceptance of nitrox, diving computers, technical diving and rebreathers nearly 25 years ago. I was branded as an apex “anti-Christ” then by diving’s arch-conservatives, and I suspect that they will be preparing a fresh cross to nail me upon once they read this little epistle. At least I’ll have an elevated view to gaze down at those in disagreement as they try to re-engineer my crucifixion. There’s a Monty Python skit here somewhere. Think “Life of Brian” and just substitute me.

Let’s take a look with an objective perspective. First of all, I don’t have the simple answer because it’s a multi-faceted issue and will require a fundamental cooperative change of protocol industry-wide. But the diving industry is infamous for being unable to implement practical and timely changes to recognize innovations, technological advances, and evolution of diving practices by active participants ... while simultaneously possessing a remarkable ability at times to replicate a camel burying its head in the sand when the “obvious” strikes diving’s “leadership” as too controversial and might require them to take an initially unpopular stand on issues that need to be addressed and remediated.

*Some divers who obtain an initial certification (or two or three) don't dive much for years. Skills and situational awareness lapse and degrade.*

Again, consider the nearly decade-long war against nitrox and diving computers as one example. Of course, all this became mainstream practice ... not because DEMA woke up and led the way, but because the diving public was a whole lot smarter than many thought, and simply moved forward while DEMA’s “leadership” watched from the sidelines and finally caught up.

Last year, I wrote an article about the state of diving instruction today and whether the training agencies were doing an effective job educating and qualifying divers. There were positives and negatives that I put forward then, including questioning the plethora of meaningless specialty certifications (some of which did not even require diving) and other nonsensical practices, such as issuing Advanced Diver certifications to people who had completed only a total of nine dives in their lives: four dives in entry-level training and five more in the “advanced” course.

C’mon. Does this make any sense except to keep moving students through the monetary turnstile and handing out c-cards like supermarket coupons in the Sunday newspaper? You want a “shark diver specialty?” No problem . . . do one day of diving while you watch dive guides feed reef sharks. You want an “underwater photographer specialty?” Easy . . . do one day of diving with a digital point-and-shoot rental camera and you join David Doubilet and Ernie Brooks in the ranks of image artistry. The list goes on ad nauseam. But does it make you a better and more proficient diver? Well, duh, I think we all know the answer to that.

### Divers Who Look Good on Paper Don’t Always Look Good in the Water

Many divers get certified and go on to actively dive and participate regularly. They visit different regions and are exposed to various conditions including currents, restricted visibility, boat diving, deeper diving on drop-off walls, wrecks and caves, and develop practical experience that embeds confidence and competence. They evolve into divers completely capable of independent activity and do not need supervision or control. These divers are not a problem.

But others obtain an initial certification (or two or three) and really don’t dive much at all for years. Skills and situational awareness lapse and degrade. Equipment and technique move forward, and they miss these evolutions due to inactivity. One example is the popularity of weight-integrated buoyancy compensators.

If you were trained using a traditional BC and a separate weight belt, this can pose problems in a stressful contingency, and fatalities have occurred simply because the diver did not know how to ditch the weight.

“Aha,” cry the naysayers. “Many dive operators require divers to either declare their recent experience on a form or produce a log book that shows their diving.” Well, that all sounds good in theory. But some dive customers clutching their c-cards and knowing that they are certified “for life” are not going to worry too much about fudging a declaration or “pencil-whipping” a log book. If you doubt this, just ask a resort divemaster or California boat crew if they’ve ever had to deal with divers who looked good on paper but seemed to have some pretty serious issues when they jumped in the water. That’s life in the real world, and it can be a real bitch. No one wants to admit a deficiency among peers, even though blithely misrepresenting their actual proficiency could be an accident just waiting to happen. And more often than not, that’s exactly what is happening. Accident rates are up dramatically, and no one wants to admit it.

I’m not advocating governmental control over diving. The government can do nothing right in such arenas, and our taxes would all go up just to fund a new bureaucracy of nitwits who would administer such oversight and still screw it up. But within our self-regulated industry, there ought to be some revision to our protocols that creates a practical methodology to ensure divers do maintain proficiency and skills through active diving participation. There may very well need to be a requirement for some divers to go through some updated training and evaluation. And brace yourself: There may be a strong argument that diving certifications should actually expire and be renewed by demonstrating proficiency in knowledge, skills and actual diving.

Ouch, I just felt the first nail pounded into the palm of my hand on the cross. At least the centurion with the hammer smiled when he did it . . . maybe because he had to maintain his “crucifixion” specialty annually or be sent back to shoveling horse dung at Pontius Pilate’s stable. He also had a nice “chariot specialty” patch sewn into his robe that he told me he got during a weekend race with Ben-Hur a few years back, but he found the racing too stressful and dropped out. Nonetheless, he’s still

## Filefish’s Camouflage: Smelling like Coral

If you eat garlic, your breath smells like it. But the orange-spotted filefish, which feeds exclusively on *Acropora* corals in Australia, takes that one better: Its whole body smells like the corals it eats. While your garlic breath may disclose you to your predators, the coral smell hides the filefish from its predators, such as the potato cod.

This is the first time scientists have discovered a vertebrate chemically camouflaging itself via its diet, said Rohan Brooker of the Georgia Institute of Technology, who led a study with results that appeared last month in the journal *Proceedings of the Royal Society B*. Visual camouflage is well known in the animal kingdom, from stick-like insects to owls that blend into trees. But many other animals interpret the world mostly by smell. “For them, chemical camouflage may be far more important to stay hidden,” says Brooker.

While teaching at James Cook University in Australia, Brooker and colleagues captured filefish near Lizard Island on the Great Barrier Reef. They placed the fish in large aquariums and divided them into two groups -- one that ate an exclusive diet of the

coral species *Acropora spathulata* and one that ate only *Pocillopora damicornis*, which is not part of the filefish’s regular diet. The fish ate this diet for four weeks. To find out if the fish smelled like coral, the team also captured two species of small crab, *Tetralia glaberrima* and *Trapezia cymodoce*, which dwell inside *Acropora* and *Pocillopora*, respectively. These crabs were added to both fish groups. As expected, *T. glaberrima* crabs clearly preferred the smell of the filefish that had eaten *Acropora* over those fed *Pocillopora* -- indicating the fish were taking on *Acropora*’s scent. The filefish’s scent was so strong, in fact, some crabs treated the filefish as if they were coral.

After verifying the filefish had adopted the coral’s smell, Brooker’s team caught a predatory cod species and added it to the aquariums. The cod spent less time hunting around the filefish that ate *Acropora* than around the fish that ate *Pocillopora*, indicating that it could not detect the *Acropora*-eating filefish. The conclusion? By smelling like coral, filefish can blend in and avoid predators. So next time you see a filefish, think about the unique way it protects itself.

qualified in that specialty and offered to take me around the track if I make it through the resurrection. We exchanged cell phone numbers.

### **How About a Free Refresher Dive?**

But back to eternal diving certifications. It's not going to be a pleasant journey. First, none of this will work without full industry cooperation at every level. The initial resistance will come forward by those declaring it will cause drops in sales for equipment, dive trips and a host of other spending. If done without a carefully planned roll-out, it could very well have such consequences. But it would actually stimulate revenues if phased in with a modicum of common sense and marketing. Experienced active divers are not the target. Even the "weekend warriors" who do one dive trip a year in Bonaire don't show up in my sniper scope. It's the folks who got certified and simply didn't continue the sport who need to be properly identified and vetted for their own good.

One way of eliminating customer resistance would be to provide a refresher dive and knowledge update at no charge. Crazy, huh? Yeah, but it would bring business in the door, and collateral sales would result. Divers who are not confident or haven't been diving are not buying wetsuits, regula-

*Divers who aren't confident are not buying gear or laying down their credit cards for exotic dive trips. This would be a gateway to stimulate their interest again.*

tors, BCs, camera systems, diving computers, new mask, fins and snorkels, and they're certainly not laying their credit cards down for exotic trips to Indonesia, the Solomons or Cocos Island. But this would be a gateway to stimulate their interest again in turning a benign vacation to the Bahamas or Caribbean into a family outing that includes diving. And if done properly and diplomatically, the process would re-awaken interest, stimulate sales and bring back a customer who had drifted away. It would also tend to draw spouses and children into the sport who weren't around when Joe Diver got his battered c-card sometime back in the 1970s or 1980s.

Another issue arises concurrently: Should today's certifications have an expiration date before which some sort of renewal is required? Again, it requires some basis of Solomon's logic, but it would improve safety, spur sales and prompt diver interest to begin active participation again. Face it, inactive divers have largely dropped out and moved on to other activities. They're not customers anyway. If renewal was tactfully implemented, they might like to preserve their diver status and come on down for the refresher program offered at a minimum charge, and be issued a new card good for another five years. And while they are in the retail store or dive resort getting re-qualified, don't you think that just maybe some sales will result? Remember, you're grabbing a customer who has dropped out and re-stimulating his interest. The only result can be positive.

Promote such renewals with a social element, such as a film on exciting diving, a special on snorkeling gear, or simply a beer and BBQ "meet & greet" to get people in the door. Then treat them like adults and make it fun. Don't run the programs in a demeaning or patronizing manner. Emphasize how far diving has moved ahead with better equipment designs, suits that fit more comfortably, great exotic diving travel on the new generation of luxury liveaboard diving vessels, and how the new evolutions in cameras make passable underwater photography possible for just about anyone.

It's all about customer service and sales technique. If the renewal process is presented as a "scuba police" mentality, it will not bring the desired results. The Caymans tried that in the early 1990s by banning dive computers, outlawing nitrox, mandating absurd depth limits, and making all divers, regardless of experience, dive under the supervision of divemasters. Most qualified divers just said "the hell with these morons" and moved on to more accommodating venues. Once gone, those divers were not coming back. But put forward some creativity and you'll bring new customers in and harvest some old ones who have been around before your dive store was even opened.

## Judges Thumb Their Noses at Disability-Seeking Divers

If you have a dive buddy who is considering applying for disability insurance and he's going diving with you, it's OK to raise an eyebrow. You see, we've recently come across two cases in which the plaintiffs were too busy diving to be severely disabled.

Mark Randolph's application for disability insurance was rejected by the Social Security Administration, so he sought legal recourse. He contended that his major depressive disorder, post-traumatic stress disorder, panic disorder with agoraphobia and anxiety disorder were severe impairments and merited payout. The Administrative Law judge found Randolph's disabling symptoms were not fully credible and that he retained the capacity to perform light work with some limitations.

Randolph, who had never sought psychiatric treatment, pressed on, appealing to the U.S. District Court in Missouri, claiming symptoms such as the inability to remember his own daughter's name and being unable to read. He claimed that panic disorder with agoraphobia and his anxiety disorder were so severe he could not leave his home. But when the judge discovered Randolph had, among other activities, traveled to the Philippines to go diving, he sent him home empty-handed. Good for the judge. Yes indeed, it's a little difficult to imagine an agoraphobic with panic and anxiety disorder sitting on a dive boat, let alone having him assigned as anyone's buddy.

In another case, in Seattle, the Social Security Commission had disallowed James Polonski's supplemental disability benefits. While Polonski had been treated for back and shoulder pain, medical experts believed his conditions were controllable with treatment. Polonski disagreed and appealed the claim, citing severe impairment. An examining physician concluded Polonski would not be able to maintain attendance or focus in the workplace. The judge concluded Polonski's testimony was not credible, stating that his "actual daily activities readily refute" his alleged limitations; noting, for example, that Polonski "testified to scuba diving 20 to 30 times since obtaining certification in 2003." A friend of Polonski testified about the severity of his pain, but she was discounted because her testimony was inconsistent with "Polonski's recent travel and scuba diving activities."

A lot of people with serious injuries do scuba dive. The point is, however, diving requires some physical capacity and strength, and certainly mental stability and clarity. The words of active divers who want to claim otherwise and collect disability payments may convince no one.

P.S.: We changed the names of the plaintiffs so as not to embarrass them.

### There's a Smart Way to Stop Diver Dropout

Diving suffers from a phenomenal dropout rate. You can argue about it all you want, but it's close to 70 percent within the first 12 to 18 months. I can hear the denials already, but after 44 years in the industry, including running NAUI and founding the TDI/SDI conglomerate, I've got some unique perspective. I was also invested in resorts, liveboards, diving cruise ships, publishing and manufacturing. Now my primary focus is consulting on litigation in the diving industry. This gives me insider and highly confidential access to actual records on diver certifications and how the insurance business operates. A huge element of this is accurately assessing the active diver population. And believe me, the dropout rate is real ... not only on the diver level, but also in the instructor and divemaster ranks. How do you sustain a business model when the overwhelming majority of your original customers choose to stop participating? You don't. Ask Blockbuster how their sales are going these days.

What causes diver dropout? A huge reason is training that does not adequately qualify them for confident independent diving. That has to be fixed as well. You are not going to retain customers who have a stressful incident shortly after completing supervised training. Sure, you told them they were qualified divers after they did four 20-minute dives in that sinkhole, lake, warm water Caribbean location or even an aquarium. But when they get a scare in the surf, or a current takes them for a ride like the water slide in an amusement park, they may decide to take up golf or tennis. You cannot make sales of anything except toilet paper to people who get the poop scared out them.

The industry needs to wake up. Diving is shrinking. Accidents are occurring that never should manifest and did not occur in the “old days” when divers were more aggressively trained. Training needs to evolve, and the nonsensical specialty ratings need to go away. Yes, it’s a revenue stream for each card issued, but that can be shifted easily into courses that last longer (and have a higher tuition). And with more dives under supervision, a minor crisis is turned into a positive learning experience instead of a life-threatening, suit-soiling freak-out that drives the diver out of the sport. You will not be selling a \$1,200 dive computer to someone who had a bad dive experience on their own when they should have still been under the watchful eye of an instructor. Keeping people in the sport is the key to a successful business model in every segment of the industry.

This narrative is not intended as an indictment of the training agencies. There have been some phenomenal positive elements in instruction over the years, including better textbooks, videos, online training, and more precise and unified consensual levels of training. But somewhere along the way, instruction got “dumbed down.” Entry-level training was simplified and did not meet a proper standard to credential divers for “forever” unless they decided to stay in a system of seemingly endless additional course levels. Eventually, they would emerge with enough experience through multiple courses to gain adequate experience to dive on their own. But there is no requirement that they do so ... only recommendations. And a lot of divers do not choose to stay in the system because they think they are more qualified than they actually are. Then they get in trouble. Again, an “advanced diver” with a total of nine dives? Let’s all try to digest just how ridiculous that really is.

And it’s smart business to set some sort of standard and practice to deal with certified divers who haven’t gotten their hair wet since Mork and Mindy was still on television. Or Perry Mason. It won’t be easy, and it will require cooperative creative thinking by the industry. But it will be good business -- and that’s the bottom line.

Yeah, that’s it: “bottom time” increases the “bottom line.” Let accounting and diving do a Vulcan mind-meld. As Spock would say, “It’s only logical.” And if you remember Star Trek and haven’t been diving since, you might like to think about dipping a toe back in the water with an updated fun certification renewal. Nah, that’s as crazy as thinking nitrox would catch on.

*Bret Gilliam has been diving since 1959 and was professionally involved in every aspect of the diving industry for more than four decades. He was Chairman of the Board for NAUI, then founded TDI and SDI as President and CEO.*

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## Aging Divers Have Their Limits

*here’s how our readers deal with them*

We received a lot of information from Undercurrent readers about aging and diving, which we turned into our November story, “Are You Too Old to Dive?” That brought more feedback, as additional readers chimed in with their thoughts, suggestions and comments about the health hazards of being an older diver.

Michael Zagachin (Peabody, MA) has this advice: Get into diving shape, no matter how old you are. “I am a 67-year-old diver who cycles 5,000 miles a year, riding 60 miles per time on average. When winter comes, it is cross-country skiing up and down the New Hampshire hills. And in the off-season, I alternate between the weight room and the pool before work every day.”

Most divers won’t replicate Zagachin’s regimen, but staying in shape is key because diving is a true stressor. In fact, the most prevalent cause of diving deaths is a heart attack. As Zagachin adds, “I have never seen more unfit, fat and borderline obese people than on dive boats. Sometimes they are young and are diving because that is the only activity that requires no fitness whatsoever.”

## Diving into the Heart of Trouble

Divers can be cocky and cranky, refusing to admit they're getting older and should consider their medical issues before plunging into the water. That can lead to fatal errors. In the U.K., recent dive incident data shows increasing dive fatalities in the 50-and-over age group, a fair number of them due to heart attacks in the water. On a related note, two recent studies show that 10 percent of divers surveyed took medications for primary or secondary prevention of heart disease.

We've written frequently about how some countries, like Australia, are strict in requiring divers to show proof of good health and fitness before going out with a dive operator, while other countries, like the U.S., are more laissez-faire about it. Marguerite St Leger Dowse, a veteran researcher at England's Diving Diseases Research Centre, says the U.K. falls in the latter camp, and that "the compulsion to undergo diving medical/self-certification is limited."

She created an online survey for divers to collect data on diving demographics, their prescribed medications,

diagnosed hypertension, other health issues and habits when it comes to smoking, alcohol and exercise. A total of 672 divers responded, three-quarters of them male with a mean age of 44. Twenty-seven percent of them had never had a dive medical, and another 11 percent had not had one in the last 10 years. High blood pressure was reported by 18 percent of the divers; 21 percent of that group had never had a diving medical exam.

Patent foramen ovale (PFO), a relatively benign cardiac defect that creates a passage in a wall between the left and right upper chambers of the heart, increases the risk of bends in divers. Of the respondents, 28 report having a PFO, with 20 of them opting for a procedure to close it. Of 83 divers treated for decompression sickness in the past, 19 of them had a PFO.

The responses show that divers who inevitably develop heart problems will continue to dive, but not all of them will have a medical examination to determine whether they're still fit to dive. Dowse speculates that because treatment of dive-related illness is free for U.K. residents, the lack of financial skin in the game may contribute to divers' lack of rigorous health surveillance or accurate self-assessment. So the attitude may be, "If anything happens, I'm covered."

When we review causes of deaths, we find that many who have died diving have undetected heart disease because they failed to have checkups. John Miller (Lubbock, TX), a 66-year-old dive instructor and public safety diver, does it right. "I am a Type II diabetic, a little overweight, and have to watch my blood pressure, so I get my internal medicine doctor to look me over twice a year. He tries to limit my depth to 100 feet, and I abide by that. Besides, the best pictures are obtained at 20 feet or less."

After reading our story, Ben Glick (Williamstown, MA) says he is now more cautious about diving. "As a 75-year-old diver, I recently pondered whether I should sign up for a two-week trip in Raja Ampat. Having 1500-plus dives and being in good health, I decided to go for it. I did, however, take out trip insurance!"

Because too many divers don't properly monitor their own health, some operators raise health issues during the booking process. Mike Ball's operation in Australia presented John Keith (Logan, UT) and his wife some serious requirements, unlike those you would find with just about any other operation outside of Australia. "Once they learned our ages and that we take blood pressure medicine, they sent a three-page health form to fill out, and required a hyperbaric-certified doctor (there's only one in Utah) to do various tests, which included a stress EKG with sonogram, a respiratory function test, several other physical and mental tests, and a certification by the doctor that we were fit to dive. Even at that, the dive shop limited our choice of dives to the less rigorous trips. While I felt their examination requirements were a little excessive, I now carry a copy of that physical with me just in case, but I haven't been asked for it since. By the way, my Medicare supplemental insurance paid for most of the cost."

As divers age, many tend to reduce the difficulty of their dives. No more pulling oneself over the gunnels of a Zodiac. No more surprise downcurrents. No more four dives a day. No more climbing on board still packing weights and tanks. Linda Delayen (Yorktown, VA) asks this question: Is there any place that caters to old divers? "I'm sure I'm not the only former diver who would love to continue but knows her body just isn't up to the more strenuous aspects that can and do come up. If there were a

place that recognized that when people age, they don't have the same strength they once possessed and did dives with gentle entry and exits, I might try again."

Linda, I'm not aware of any venue that caters strictly to older divers, but I have a few suggestions as you search. Dedicated dive resorts tend to have older divers, because younger people want to do more than just dive. So in the Caribbean, places like Roatan's CocoView or Pirate's Point on Little Cayman sport older crowds and divemasters who are used to catering to them.

High-end hotels attract older people, and those with dive programs generally have big boats and cautious diving, and are accustomed to helping people who want help. Some handle quite a few divers -- Cousteau's Fiji resort comes to mind -- but others, such as the Caneel Bay Resort in St. John, Anse Chastanet in St. Lucia or Harbour Village on Bonaire, run simple and comfortable diving, due to the age or relative inexperience of their divers. Then again, Bonaire has easy diving, and most hotel dive operations take good care of their aging divers.

Dive operations that offer concierge diving are accustomed to carrying and setting up gear, and helping divers in and out of the water. Look up a couple destinations that interest you in our reader reports or Chapbook, and you'll be able to sort out a few that will suit you.

And have fun. That's what it's all about.

-- Ben Davison

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## More Shark-Stopping Devices on the Market

### *do they work? And why do I think about goat implants?*

In the dive industry, people are always coming up with new devices to keep sharks from biting or attacking. At least once a year, we see a news clip or a press release of a gadget that claims to stop sharks in their tracks when a diver waves it -- or fins it -- in front of their faces. But to date, none has been proven consistently effective. Even the well-received electronic Shark Shield, used by some commercial divers and a few surfers, has failed some tests.

Do sport divers need such devices? Maybe if you're in the middle of a feeding frenzy at Tiger Beach. One diver was killed there a few years back, though it was more of a misplaced bite on his thigh than an attack.

But the people who really needed devices to prevent shark attacks were U.S. sailors during WWII. I've read endless gory tales of sharks devouring men after their ships were destroyed, even though shark repellent packs had been attached to their Mae West vests. The poor floating sailor was to squeeze the packet, releasing a noxious liquid that would dispel sharks. While the War Department dreamed it up, the chef was none other than Julia Child, whose first recipe was not for crêpe brulee or crêpes, but for repelling sharks. As the November issue of *Mental Floss* magazine reports, "Child, a worker at the Office of Strategic Services, was tasked with making a concoction to keep the big fish away. Her mix of black dye, copper acetate and water-soluble wax was used by the War Department for three decades, issued to sailors for self defense." Unfortunately, it didn't work well, if at all, but the Navy continued to use it because it gave sailors some peace of mind if they found themselves adrift.

However, back to the present, with two new shark-stopping devices launching promotional campaigns.

After Brian Wynne's mother moved from Long Island to Volusia County, FL, the "shark-attack capital of the world," he created the SharkStopper Personal Shark Repellent, a smartphone-sized device that attaches to a diver's ankle and is supposed to repel all sharks by noise. Wynne, 52, who spent 10 years

developing the SharkStopper, says he has worked with marine biologists and shark experts to test it on different species and in various locations, including in “extreme circumstances,” when the water was filled with blood and other bait to tempt sharks. Sharks came within five feet of the shark stopper but turned back when they heard the noisy device, Wynne claims. It is powered by a rechargeable battery and lasts for six to seven hours.

“We always believed sound can attract sharks, but it must also repel them, because sharks pick up the sounds of splashing and the sounds of injured prey,” Wynne told the *Daily Mail*. “We found a particular frequency range and modulation that was effective against many species of sharks.” He says the sound includes that of a pod of killer whales, and it scares sharks either because they are scared of those predators, or they simply don’t want to deal with the noise.

Wynne was trying to raise \$48,500 on Kickstarter to produce the devices, but was only able to reach \$21,500 before the fundraising deadline ended in the fall. There’s no update on his website ([www.sharkstopper.com](http://www.sharkstopper.com)) on whether he’ll be able to have them ready by January, as he told the *Daily Mail*.

In South Carolina, a father-and-son team created the Sharkbanz, a magnetic wristband that allegedly fends off sharks via a repelling electrical field. After “one particularly frightening day in the water” with sharks, Nathan Garrison and his father, David, were determined to take the fear factor from the ocean. After three years of research, and with the help of “shark repellent technology scientists,” the Garrisons designed the Sharkbanz. “It puts off a field that really disrupts that electrical sense,” Nathan told CNN. “It is really unpleasant for the sharks, but it doesn’t harm them, they turn around and flee.”

Father and son put the Sharkbanz in the middle of chum, then swam with the sharks. David said, “We did testing with ourselves at stake with three or four sharks in the water . . . the sharks do not like this product, and they want to swim away very, very quickly.” Nathan added, “Peace of mind is really the heart of what we are trying to give people.” Kind of like that peace of mind the floating sailors had.

So why do I think of a book I recently read, a 2009 bestseller titled *Charlatan: America’s Most Dangerous Huckster, the Man Who Pursued Him, and the Age of Flim Flam?* Well, a century ago, a man named Dr. John Brinkley was running around the country castrating goats and implanting the testicles in men who

## A Diver’s Estate Sues for His Wrongful Death

The estate of a 40-year-old man who drowned on a Puget Sound dive trip in 2011 has sued the groups that led the trip for wrongful death. “Robert Vance was clearly distressed, exhausted, light-headed and was struggling to stay afloat,” the lawsuit, filed last month in Washington State, asserts. It contends that Steve’s Scuba Center in Milwaukie, OR, Bandito Charters in Tacoma, WA, and the training agency SSI were negligent in their supervision of the dive trip on which Vance died.

Vance and several other student divers were aboard the *Sampan*, operated by Bandito Charters, when it left Gig Harbor, WA, on the morning of November 19, 2011. He had made 23 dives before that trip, but was making his first coldwater boat dive that day. The lawsuit contends that Steve’s Scuba Center provided Vance with two air tanks, both of which contained toxic levels of carbon monoxide. When he entered the water alone just

before 10 a.m., Vance almost immediately began experiencing equipment problems, including loose fins and trouble with his regulator.

Instead of helping him out of the water, dive instructors and deckhands shouted instructions. Vance then passed out and sank to 52 feet. It took between five and 10 minutes to rescue him. He was brought to the surface and CPR was performed until the boat reached the dock, then Vance was transported to Tacoma General Hospital, where he remained unconscious until he was pronounced dead at approximately 5:40 p.m. that day.

While the Pierce County Medical Examiner’s Office ruled Vance’s death an accident, the suit claims the “Defendants failed to read and react to Mr. Vance’s panic and thereby properly respond and rescue him in accordance with industry custom, practice and applicable standards, and, in doing so, failed to preclude his injury and death.” The lawsuit seeks unspecified damages for Vance’s estate; he left behind a 19-year-old son.

wished to improve their sex life and gain eternal youth. If he were alive today, I wonder what he would be cooking up or hammering together?

-- Ben Davison

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## DEMA: The Latest, But Not The Greatest

### *mostly upgrades and revisions, with GoPro as the buzzword*

It's the halfway mark at the Dive Equipment and Marketing Association's annual trade show in Las Vegas, the week before Thanksgiving. It's 4 p.m., and the trade show floor is chock-full of booths, but some of them are unstaffed, and at many others, staffers look pretty bored. There are still some show attendees walking the aisles with interest, but most people have cleared out for drinks, dinner and the casinos. As I walk down a quiet aisle, I pass two guys standing by a deserted booth promoting neon camouflage wet-suits. One yawns. The other says, "Yeah, this industry is getting old and obsolete, and this show is, too."

Tom Ingram, DEMA's executive director, told the diving website Deeper Blue that 400 more people had signed up to attend compared to last year's show in Orlando. But more people didn't seem to add more hustle or bustle. And while every player in the dive industry had set up a booth there, there didn't seem to be a lot of new dive gear that was knocking anyone's socks off.

#### **The Hot Product**

Except for GoPro. You can tell who the big fish are by the size of their booths. GoPro had the biggest one, four times larger than the standard one, and the sign hanging over it could be seen from every corner of the show floor. Its booth was lined with around 30 50-inch Samsung HD TVs playing different GoPro videos. While GoPro wasn't initially aimed at the diving market, it is luring more divers to switch over from still to video cameras (read our dive gear expert John Bantin's comparison of the GoPro 3 to a traditional underwater camera in our October 2013 issue). And with the recent rollout of its new Hero 4 lines, its booth was regularly packed. The Hero 4 line shoots 30 frames per second, compared to 15 frames per second by the Hero 3+, making 4k video easier to use by the masses. The Hero 4 Black, which has doubled the processor speeds and boasts a high frame rate resolution of 1080 pixels, is priced at \$500. The Hero 4 Silver doesn't have 4K video, and its frame rate is only 720p, but it does have the new touch-screen LCD and the 12MP still image resolution; it's priced at \$400. GoPro also released dive filters in red and magenta for blue and not-so-blue water, priced at \$70 each.

It was also interesting to see how many companies now make Go-Pro-specific dive accessories. The Japanese manufacturer Inon has a cage system that lets you improve beyond GoPro's standard housing by fitting in an optional monitor and easily attaching wet lenses. For close-up footage with your GoPro, Inon's UCL-G165 lens lets you get within two inches of your subject (approx \$230). Backscatter introduced the Macromate Mini, designed to help with close-up use of the GoPro (\$89). It features the same optics as the DSLR version, but fits into Backscatter's Flip 3.1 filter bracket (which also fits the new Hero 4 series) and reduces the minimum focus distance to the subject down to about three inches. For wide-angle photography, Backscatter offers a variety of filters that fit the Flip 3.1 system, including Shallow, Deep, Dive, Green Water, and Nightsea Fluorescence filters (\$20 each).

Other GoPro accessories included a lot of trays and poles on display. Beneath the Surface's Boomerang Tray moves mounting points for the lights back behind the camera, helping to eliminate the risk of fingers making their way into your wide-angle shots (\$199). For entry-level GoPro users wanting a simpler solution, Beneath the Surface's Surf Stick helps grip the camera and better stabilize footage (\$30). Then there's GoPole, which offers GoPro poles with sealed telescoping compartments, meaning the pole is positively

buoyant even with the camera attached (\$25 to \$50), and a WiFi remote clamp lets you control the camera at the base of the pole. And you can now mount your GoPro right on your mask -- Octomask's has a built-in GoPro mount on top (\$79).

### Other Camera Gear

Oh yeah, there were other types of cameras there, too. A new one is the Sony A7, which also shoots 4K video but is pricey (it starts at \$1,700).

DSLR housing maker Aquatica introduced new products for action cameras, including a flexible boomerang tray, a tripod with a three-ball system to make it more adaptable underwater, and for beginners, a uni-grip handle that can fit a single continuous light. Also, all future Aquatica DSLR housings will come standard with vacuum circuitry, so all you'll need is a valve and pump to get it vacuum sealed.

To get new underwater camera users, Recsea has a new line of inexpensive compact housings made from polycarbonate for popular cameras like some Canon PowerShots and Sonys, and the price is \$550 compared to \$1000-plus for its other housings.

Maybe due to the GoPro effect, Nauticam is doing more video housings, although they're expensive (one of its RED series' wide-angle housings is priced at \$58,000), but it's also selling more housings for compact cameras and mirrorless models, including the Panasonic LX100, Canon GX7, and Sony RX100 III. It's also doing housing for the Olympus Tough TG-3, which is interesting because that's a waterproof camera, but Nauticam says it's a good choice for dive shops that want to lend out cameras without having to worry about flooding. At last year's DEMA show, Nauticam rolled out its Super Macro Converter, a strong, sharp lens specifically for supermacro photos (\$450). This year, it debuted its multiplier, which adds another 3.5x to the already 2.3x magnification of that lens. Additionally, it's rolling out a Compact Macro Converter, and a wide-angle wet lens for compact models.

Fluorescent underwater photography is getting more action. Ikelite introduced yellow lens filters and exciter filters for its DS strobes and Vega lights. A new company called Fire Dive Gear showed filters to fit on both continuous video lights and strobes, and custom blue LEDs in dive flashlights and video lights.

For photo retouch software, VividPix debuted a one-click improvement version that focuses on brightness, color balance, contrast and sharpening. It's offering a free, full-function trial for 30 days to anyone who wants to try it out before buying ([www.vivid-pix.com/free-trial.html](http://www.vivid-pix.com/free-trial.html)).

### There's a Smart Way to Stop Diver Dropout

On the travel fronts, the biggest booths had the usual suspects -- Bonaire, Indonesia, the Caymans -- but there were some new and notable destinations being marketed. In the Caribbean, Buddy Dive in Bonaire announced it's going to open a branch in Dominica this August, affiliated with Fort Young Hotel. Caradonna Travel says the new Caribbean island it will be promoting to U.S. divers this year is Guadeloupe; its government is stepping up efforts to promote its diving (its Cousteau Marine Sanctuary is worth visiting) to non-French divers. In the Bay Islands, a new liveaboard named the *M/V Caribbean Pearl II* will offer Saturday-to-Saturday cruises around Utila and Roatan. She serves 18 divers in nine cabins ([www.bayislandsyachtcharters.com](http://www.bayislandsyachtcharters.com)).

Other new liveaboards starting service soon include the *Nortada*, an eight-person private charter liveaboard, which got official permission from the Galapagos park to start sailing there (<http://galapagos-nortada.com>), and the *French Polynesia Master*, a 20-person liveaboard that will start sailing Rangiroa and Fakarava in 2016 ([www.masterliveaboards.com/french\\_polynesia](http://www.masterliveaboards.com/french_polynesia)).



GoPro Hero4 Black

Far from the typical dive destinations is the Azores, but it was promoting itself heavily to divers, especially a four-hour direct flight from Boston on SATA Air. I was told that the warm Gulf Stream increases sightings of tuna, barracudas, jacks and manta rays in the summer, and that sperm whales and dolphins are seen year-round.

### Not Much New in Dive Gear

In terms of standard dive equipment, there didn't seem to be anything really new or outstanding. There were certainly plenty of redesigns for BCs, dive computers, etc., but nothing really innovative to make divers change from their tried-and-true gear. One notable is that Apeks showcases its limited-edition regulator, the Black Sapphire XTX200 (approximately \$950). Only 5,000 of them are available, and its innovation is a Diver Changeable Exhaust system (DCE), which gives one the ability to change from a small exhaust tee to a large exhaust tee for minimal bubble interference when it comes time to take photos. Scubapro's latest regulator innovation is a patent-pending Extended Thermal Insulated System (XTIS), for cold-water diving. The MK25 EVO first stage (\$725) has XTIS that fully insulates the inner components for extra protection, and Scubapro claims that it raises the cold-water protection rating by another 30 percent.

On a humbler note, there's a new and improved mouthpiece by SeaCure, which introduced the X-Type moldable mouthpiece (\$30). The new design with its tear-resistant bite position reduces the risk of gagging with an increased grip and a reduction in bulk.

If you want to put your phone or tablet in the water, Watershot has a few accessories for you. It has a new dome port for your gadget's split shots, featuring a 165-degree field of view (\$189). A less-expensive option is in the form of a Splash Housing, which provides access to touch screen functions underwater and is sealed conveniently with a turning "clam latch" (\$109).

While at DEMA, I met with up *Undercurrent* contributor Ken Kurtis, who runs the Reef Seekers dive shop in Los Angeles, CA. He too was underwhelmed by the lack of newness in dive products, but there was one gadget that caught his eye. "It has absolutely (as far as I can tell) zero practical application, but the Torrid Pulse looked like a lot of fun. It's basically an underwater air gun that shoots perfect air rings about 35 feet. (This is the video they were showing: [www.youtube.com/watch?v=14pIvaDdtec](http://www.youtube.com/watch?v=14pIvaDdtec) ) The inventor was there, and he referred to it as underwater paintball. The device is about eight inches round, lightweight, and has a trigger/handle that you use to fire the air rings. It hooks up to your regulator via an included low-pressure hose, so you'll use up some (but not much) tank air to play with it. One concern is what the effect on fish would be, but they claim that the fish don't care and it's not a strong enough force to hurt them. In the video, you can see fish changing course as the bubble comes near them (\$130)."

Kurtis also commented that technical diving was well-represented at DEMA. "You need to be well-trained and very experienced to get into it, so it's always dismayed me to see the bar lowered over the years where tech is marketed as something you can get started with right after you're done with your openwater class. But there are now dozens of tech choices both from the mainstream manufacturers and from tech-specific companies. It's hard at times to see how they can all possibly stay in business, but there's certainly a market for it."

In his interview with Deeper Blue, DEMA's Ingram said that the dive industry itself is seeing modest growth of around three percent, "but it's growth, so I'll take it," he said. "I'm not sure the economy has really gotten any better, but the perception of the economy has gotten better, so people are starting to look at making purchases, and we're seeing folks who are interested in diving more."



Octomask with Built-in GoPro Mount

Will GoPro gear and new cameras be the tools to lure them in? Based on the trade show floor at DEMA this time around, it's certainly not going to be dive apps, neon camouflage suits or minor improvements to dive gear.

-- Vanessa Richardson

## Flotsam & Jetsam

**Dive Shows for Divers.** Our World Underwater has one for sport divers in the Dallas Metroplex area on January 25-26, then Chicago from February 27 through March 1. New gear, new travel destinations, demonstrations, film festivals, and get-togethers for sport divers and their friends ([www.ourworldunderwater.com](http://www.ourworldunderwater.com)).

**Why Divers Should Avoid Sunscreen.** A study published in the *Journal of Environmental Science and Technology* shows how sunscreen chemicals can wreak havoc on marine life. The problem? Certain kinds of sunblock react with the sun's rays when they hit the water to create hydrogen peroxides. That, in turn, can prove toxic to phytoplankton, a vital source of nutrition for fish and whales. Sunscreens that morph into hydrogen peroxide are made using a process called nanotechnology. In Europe, sunscreen manufacturers must label products made with nanoparticles, but the U.S. has no such requirement. So even if you're using sunscreen that says it's green or environmentally friendly, you have no idea whether it was made via nanotechnology, or its impact on the ocean.

**Diver Versus Crocodile in South Africa.** Jody Saunders, 37, was doing maintenance work on the Rust de Winter Dam last November when a crocodile suddenly clamped down on his head and dragged him down into the water. "I was shoulder-deep in the water while giving my colleague, standing on shore, my gear," Saunders told the *Rekord East*. "Everything suddenly went dark and I felt immense pressure around my head." Saunders stuck his hands in the

crocodile's mouth in an attempt to pull its jaws open. "If I didn't put up a fight, the crocodile would snap my neck and it would all be over." The reptile thrashed and spun Saunders' body around, and "after about a minute -- which felt more like 10 minutes -- the croc finally let go. Saunders sustained injuries to his hand, and received 10 stitches to his head and a neck brace, but said he was not afraid to go diving again.

**The Potato Cod: Too Friendly for Its Own Good.** The Great Barrier Reef Marine Park Authority is investigating reports that illegal fishing and fish "framing" are responsible for declining numbers of the refrigerator-size potato cod at the popular Cod Hole site near Lizard Island. At least two have been spotted with fishing line stuck in their gills. Col McKenzie, CEO of the Association of Marine Park Tourism Operators, told the *Brisbane Times* that visitors have been dangling fish heads or carcasses into the water to attract cods to the surface. "They'll drop them over the side, almost have a wrestle with the cod, and bring them right up behind the boat," he said. "We used to have more than 10, and now we've only got three or four . . . Their friendliness is killing them."

**Dive for Free in the Philippines.** Starting in March, the Biri Initiative, a nonprofit focused on restoring reefs around Biri Island in Northern Samar, will begin deploying artificial reefs offshore. To get volunteers, it is offering diving free of charge for those interested in helping, plus a 20 percent lodging discount at the Biri Resort and Dive Center. Biri Initiative founder Richard Ewen says, "All we ask is that while there, you assist with either a deployment of reef buds or a Crown of Thorns cleanup in return for free diving." Get more info at [www.biri-initiative.org](http://www.biri-initiative.org), and to book your Biri diving, contact Ewen at [richard-ewen@biri-initiative.org](mailto:richard-ewen@biri-initiative.org).

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