

# undercurrent

*The Private, Exclusive Guide for Serious Divers*

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## *Bahamas Aggressor, The Bahamas*

*sharks and swimming pigs*

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Dear Fellow Diver,

The fall of 2017 was a brutal hurricane season. Hurricanes Harvey, Irma, and Maria devastated many Caribbean and Atlantic islands, so in October I was both anxious and eager to see how things fared in the Bahamas. Amazingly, the reefs looked great on this Bahamas Aggressor itinerary, and the weather deities offered a fine week with only a few hours of rain.

Under the able leadership of Captain David Patterson, the crew of six took great care of the 13 divers on board, keeping things clean, making sure we got the food and drinks we preferred, teaching courses (two divers took Nitrox training and two took other courses), and of course, keeping to the dive schedule. We began with the captain's briefing on safety; the nearest hyperbaric chamber was in Nassau, which made it either nearby or many hours away, depending on the itinerary.

The boat (formerly the Carib Dancer) is 100 feet long, has a salon that doubles as the dining area, a spacious sun and shade deck, but some of the tiniest cabins I've seen on a liveaboard (under 7x7 feet/2x2m.) Five identical two-person cabins have a double bed and a single-sized bunk above, and there's one quad cabin in the bow, all



*Bahamas Aggressor*



with ensuite baths. Because cabins were minuscule, I had little inducement to hole up, so I socialized or relaxed on the sundeck or in the salon between dives. Because I was in the quad, I showered on the dive deck instead of the cabin shower, one of those shower/toilet combinations that leaves you wet but not feeling clean.

Our first dive set the tone for the trip. The high-profile topography of Jewfish Wall near Allen's Cay in the northern Exumas was typical of the many dramatic walls we dived. Staff briefings included dive site drawings with compass headings and

noted significant landmarks and what we might see. The compass headings were worth noting, since, between complex underwater topography, currents, and some low visibility, a few divers had difficulty finding their way back to the boat. One experienced group had to be picked up in the inflatable half-a-mile from a site with brisk current; they returned rather shame-faced. So, a safety sausage or SMB is essential. Most divers dove with their buddies, though one crew member was always in the water. We made all the dives from the mothership by giant stride off the transom.

I saw sharks on almost every dive, a treat for Caribbean diving. At Jewfish Wall, small gray reef sharks moseyed around, while horse-eye jacks teemed beneath the hull. Fish abounded around the reef, including tiger and Nassau groupers, gray and queen angels, lots of snappers and grunts, and yellow-headed jawfish that popped in and out of the sand patches. No jewfish (or Goliath groupers), however. Indeed, site names seemed ironic -- no whale sharks at Whale Shark Wall, Danger Reef was low profile and mellow, and no black tip sharks showed up at Black Tip Wall.

But, I did see nurse sharks and gray reef sharks frequently, and big barracuda and Nassau grouper on most dives. Many sites, like Dog Rocks (near Bluff and Beacon Cays) and Black Tip Wall (near Long Cay), offered swim-thrus amidst the dramatic craggy topography, a photographer's delight. Silversides sparkled in the openings that framed views into the blue. The walls dropped into infinity. I saw turtles almost every day, mostly hawksbills, but also a couple of monster loggerheads, one (at the Blue Hole near Nassau) accompanied by a retinue of large remoras and blue tangs, which presumably enjoyed the algae buffet on its carapace. I spent little time searching for critters, maybe because the Bahamas are less rich in them than areas like Bonaire, or maybe because I preferred to keep my eye out for the sharks, rays, 'cudas, ceros, and groupers.

Eleven divers -- men and women ranging from their 20s to 70s -- on this trip were Americans, as well as a woman from Holland and another from Switzerland. The socialization forced by cabin sizes meant we got to know one another well. Since this trip I was without my spouse/buddy, I made a point of sitting with everyone at meals. The one topic never broached at



**Most made it back to the liveaboard**

the table was American politics, perhaps a sign of these polarized times.

I dove with the European women for the first eight dives, but one of them tended to suck gas fast and needed to surface at 45 minutes. I'm a cheap date on gas, as was buddy #2, so I asked our air-sucking buddy if it were OK to watch her do her safety stop from below, see her climb on board, then continue our dive. She was unequivocal and said "no," which seemed rude to me. Since she insisted on buddies staying glued together, I jumped ship and buddied with a loose group from New York City. I felt awkward extricating myself, but there was no way I was doing a week of short dives.



Swimming pig at Big Major Cay

**Bahamas Aggressor,  
The Bahamas**

- Diving .....★★★★
- Accommodations .....★★
- Food.....★★★★
- Services and attitude .....★★★★★
- Money's worth .....★★★★

★ = poor ★★★★★ = excellent

*Caribbean scale*

At the Austin Smith wreck (officially the Cape Current wreck, beat up and scattered about), near Highbourne Cay, the crew set up a pyramidal metal box containing dead fish 50 feet down. At least a dozen gray reef sharks showed up, unsuccessfully trying to bite open the box. The active sharks were a blast -- not behaving in the crazed way typical of a chum dive -- and the photographers went nuts. I spent most of the dive floating between sharks.

Our group elected to forgo two dives to visit the swimming pigs of Big Major Cay, a several hours' steam south to the Exumas. We arrived around 8 A.M., and as the inflatable chugged toward the shore, the swine emerged. Stories abound about how the pigs arrived here, from descendants of pigs stashed there by pirates to pigs brought in by a fellow convinced that Y2K would result in disaster, and a pig farm would provide a sustainable food

source after civilization ended. The latter is more likely, since the uninhabited cay has only been a tourist attraction since the 1990s.

At least a dozen swam out, especially when they saw our bags of food scraps provided by Chef Marco! It's essential to feed them only in the water (sand will clog their digestive tracts), and never to give them alcohol, which some idiot day-trippers have done. Seven pigs died a few years ago from sand ingestion, according to necropsies.

Some of the animals were enormous and aggressive (one diver was bitten on the butt by an over-eager pig lusting after a scrap); you might say they behaved like pigs. Piglets cavorted on the shore while Mama begged for food. Unlike the big swine, the piglets were as frisky as puppies. It was a diversion well worth skipping a couple of dives!

My concerns about reef and infrastructure damage proved unfounded in the northern Bahamas -- Undercurrent would love to hear from divers in the Keys, Puerto Rico, Dominica, and the Virgins -- and though a few sites had more algal growth than I like to see, almost all sites boasted healthy stony and soft corals and sponges. A few, such as Shroud Wall, were home to lionfish the size of groupers. Unlike places where divers regularly collect lionfish, the Bahamas islands lack enough divers to keep the population under control, which may also account

for what seemed like fewer than usual small fishes.

Between dives, most folks napped in the sun or bunk. The two divers taking courses did homework like heroes, and rather than nap, I preferred to read, complete my log, and chat. I was impressed at how quiet the boat was for sleeping despite the plethora of mechanicals. Of course, when the anchor was let out or winched up, you really heard it (particularly in the quad cabin in the bow). Earplugs are a good idea.

The food was quite good. Chef Marco, originally from Milan, offered hot breakfasts (eggs to order, bacon, pancakes, French toast; he even complied with one diver's preference for an egg white omelet), and after the first dive, muffins, banana bread, or cookies. Lunch began with a homemade soup like squash or lentil, followed by veggies and meat. I enjoyed roast pork loin, Thai chicken legs, cheeseburgers and hot dogs, short ribs, and shrimp tacos. Afternoon snacks were turkey sandwiches, mini pizzas, and hot wings. Dinner was plated, not a buffet, served and cleared by Gabi, Josh, Dave, and A.Q. with time to spare before the night dive. Our selections included tenderloin with roast potatoes, salmon with a citrus sauce, chicken breast with sweet potatoes, pork tenderloin with Roquefort sauce, and roast turkey with bacon Brussel sprouts. Marco excelled in baking bread, and the irresistible carbs contributed five pounds -- for which I am now paying with extra gym visits. We enjoyed two sunset dinners on the top deck, thanks to good weather. Glad I brought a jacket for those evenings. Wine and beer were included, although your first drink signaled the end of your dive day.

We finished with a pre-dawn dive at Flat Rock in the northern Exumas, within striking distance of Nassau. Though the dive didn't liven up until the dawn began (the nocturnal fishes were already tucked in, while the diurnals were just shaking off sleep), a flock of warblers with yellow breasts, confused by the lights on the boat, chattered and sang amongst our wetsuits and tanks, leaving after first light. Our final dive near Nassau was Blue Hole, a small underwater sinkhole that I found dull inside (more like a Black Hole) but loved watching sharks, rays, and turtles in the grasses and coral at its edge. The low vis and sandy bottom made the sharks looming out of the gloaming more exciting.

Water temperatures ranged from 80-83°F (26-28°C); most divers were fine in 3mm shorties, though I'm a WIMP (Warm Intelligent Marine Professional) happiest in a 7mm. I did wear my 3mm on a few dives. Currents were sometimes strong, and vis could be on the low side, so make sure your compass navigation is up to snuff,



### *It's a Dog's Life!*

Dogs like to swim, but one dog took on more of a challenge than it realized when it was found adrift in the middle of the Caribbean. Back in October, a group of Diving For Life divers spotted the dog swimming in the water several miles out from Belize's Pompano Caye, about a 30-minute boat ride.

After a couple of attempts, they managed to haul it on board their dive boat. "The Sunday Miracle of Dive Boat Three," as the divers called it, became even more amazing when one of their number, a veterinarian, happened to have a dog collar and leash with him.

The dog was shivering with fear, but it melted everyone's heart during the journey back to Placencia, where the Placencia Humane Society unsuccessfully tried to track down its owner. Eventually, they named the mutt Lucky and two members of the group, Bob Bozarth and Brian Johnson, adopted it.

Diving For Life is a non-profit organization that sponsors The International Gay and Lesbian Scuba Jamboree, and has raised more than a million dollars for various charitable causes that support the health concerns of the LGBT community in the course of 25 years. [www.divingforlife.org](http://www.divingforlife.org)

and your SMB works. Most days offered five dives, although I found the night dives so-so. Instructor Gabi Ruben was thorough and charismatic, and all the staff was fantastic. Indeed, fine trip.

-- A.E.L.

Our Undercover Diver's Bio: *I've logged more than 3100 dives since 1989, divided neatly between the Caribbean and the Indo-Pacific. My spouse and I live part of the year in Bonaire, and my last piece for Undercurrent was on Villa Markisa and the east coast of Bali in the August 2017 issue. This was my 53rd liveaboard trip. And yes, I am a wimp.*



**Diver's Compass:** the Exumas itinerary departs from Nassau, easily reached from Europe on British Airways, or the U.S. on American, Delta, JetBlue, and Southwest ... My quad share cabin was \$2395. One needs to take a taxi from the airport to the boat dock (about \$50) ... U.S. dollars are accepted everywhere ... Dinner ashore in Nassau on the last night is on your dime ... Most of the trip we had cellular service, not enough to use the internet and read the paper, but enough to call home and touch base with my spouse most days, though I noticed a hefty fee on my cellular bill the next

month. The boat has a few steel 100s for divers needing extra gas; nitrox is an extra charge.

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## Cozumel and the Cenotes, Yucatan, Mexico

*commuting to the caverns*

Dear Fellow Diver,

Hot sun and margaritas were at the top my list when I decided to plan a diving trip to Mexico's Caribbean coast. However, my editor, Ben, wasn't interested in a Cozumel story, saying that he has covered it often. I explained that I would spend several days commuting to the mainland to dive the cenotes [seh-noh'-tees]. After all, the Yucatan is perforated with clear, freshwater-flooded underground caverns and prehistoric cave systems, just the opposite of Cozumel's ocean drift diving. He perked up. "OK, let's show the more adventurous how they might expand Cozumel's diving horizons."

Two other friends persuaded, date agreed, and flights booked, off we went. When the August heat hit me as I disembarked my flight, I needed the first taste of Mexico, a celebratory Piña Colada. A bus and ferry ride took us to Cozumel. Deep Blue had booked us into the Barracuda Hotel just south of the Punta Langosta pier and a short walk to town..

The first day, we took our gear by \$2 taxi-ride to the 8.30 am ferry, Barcos Caribe. The basic round trip was 200 pesos (about \$10). My middle-eastern background stood me in good stead, and I eventually bargained the fare down to 110 pesos! The Caribe has two decks, can carry about 300 people and the passengers were mostly Mexican's making the 45-minute commute to work. A shop serves weak coffee with powdered milk and a choice of potato chips. There was a



**Diving the Kukulcan cenote**



first-class section, but we weren't in it.

Upon arrival at Playa del Carmen, Hector, our tall, impressive cenote guide from The Scuba Tribe (which works with Deep Blue) met us and drove us for 20-minutes in his four-wheel-drive twin-cab truck to our first cenote called 'Kulkulcan' at Chac Mol. A serious fellow, Hector spoke perfect English, and he knew his stuff! When it came to briefings, he was authoritative. Safety first. He would take no chances.

While examining our dive qualifications, he was visibly surprised at how many dives we had made: one of us had 2000 plus dives, the other more than 1000 and I, a measly 700 dives including some cavern and cave experience. Satisfied, he proceeded to explain the procedures as if we were novices. In fairness, although we are all experienced wreck divers and have dived in dark and tight places, he was right to be strict and sober. Cenotes are different and not to be taken lightly. He called these first dives 'cavern dives' as opposed to cave diving, explaining that we would be able to see the blue of daylight almost all the way through the dive.

Wearing wetsuits and fully equipped with conventional scuba gear -- he provided tanks, weights and lights -- we walked to the first cenote entrance close to where the truck was parked. About a dozen concrete steps took us to the edge of Kulkulcan, a stunning open cavern. I was in awe as sunlight streamed through the trees and into the water's entrance. The kind of thing you see in the movies, digitally enhanced.

Hector kept a watchful eye, as we followed the guideline strung along the wall. His dive lights were powerful, so there was no chance of missing anything. Visitors may not bring cameras into the cenotes because unskilled photographers have damaged the million-year-old fragile environment, so a professional photographer was on hand to shoot us while inside. (At \$70, his shots were worth every penny. He also provides videos and maps of the cenotes and their short history in five languages).

The first dive was about 40-minutes and 45 feet (14m) deep. I was overwhelmed, though slightly disappointed by the lack of stalactites and stalagmites. The second dive was nearby at Little Brother. Much darker than Kulkulcan, it sported modest stalactites and stalagmites, and we entered a shallow airspace where I could see tree roots. For the next day, Hector, now confident in our abilities, agreed to take us to a more dramatic cenote, where he will not take those without perfect buoyancy control.

The next day, Hector drove us to Dreamgate, an hour and twenty-minute trip. After a great deal



**The long wooden staircase at Takbelum**

## Cenote Diving

Diving for Experienced ....★★★★★

Diving for Beginners ..(Not Suitable)

Accommodations .....★★★★★

Food.....★★★★★

Dive Operation.....★★★★★

Money's worth .....★★★★★

★ = poor ★★★★★ = excellent

*Worldwide scale*

of laughter while kitting up, and a dive briefing with safety reminders, we followed Hector into the big and inviting entrance. Stalactites, like stone icicles, some with sharp points, hung threateningly overhead. Stalagmites rose beneath us like bear traps, daring us to drop. At only 20 feet (6m) deep, perfect buoyancy control was essential. As we followed our flashlight beam farther into the gloom, my eerie feeling dissolved into awe and wonder of the cavern's majesty. One minute I was swimming through narrow tunnels, while the next I was slipping through an arch into an astounding cathedral-like opening. These stalactites and stalagmites formed after the last Ice Age before sea levels rose. They had seen the dinosaurs, accepted sacrifices, provided water and presumed by some to be the gateway to the afterlife.

Under our lights, the calcite columns became shades of green and yellow, sometimes stamped with fossils of vegetation or shells. Some looked like candles dripping wax, others like layers of fabric piled high, and some looked as if wooden dowels were sticking out. I swam through arches and narrow gaps between thin narrow pillars and ancient columns, the water so clear and clean it almost seemed sterile, visibility limited only by the power of my flashlight. (Hector will lend you a wide beam light, but carry a spare in your BC pocket). Our second dive was in the same cenote, but in a different direction that made it appear to be a different place altogether! I saw a blind white fish or two and twice surfaced into an air hole where bats flew above. Once, a beautiful motmot bird perched on a hanging root above our heads.

After a few days of reef diving back on Cozumel, we spent our final day cenote diving, recognizing that my gear would be rinsed in clean, fresh water before the trip home. Clever, eh? Having concluded we were suitably skilled divers, Hector took us to a more advanced dive site. Getting to Takbelum required a 90-minute drive into the Mayan jungle, and Hector became "Indiana Jones" as we bumped slowly and uncomfortably along a rutted track.

A long wooden staircase from the surface entrance leads to the cenote. The cave itself is long but shallow, and we dived at a maximum of 23 feet (7m) but usually between 10 and 13 feet (3 and 4m), avoiding the abundant sediment that could be stirred up by careless fin strokes.

Takbelum has been featured in documentaries, such as the IMAX "Journey into Amazing Caves," National Geographic's "The Yucatan," and a thriller, "The Cave." Although not at all deep, this cave was not for the faint-hearted or the unskilled diver, and we were privileged to dive it only because we had demonstrated our chops.

The stalactites and stalagmites appeared like molten wax, huge and ancient. We swam into enormous amphitheaters, grand halls with hidden caves. With no daylight, I was mindful of the guideline, never venturing more than an arm's length away. Without discussing it, we tourists became watchful of one another, reprimanding anyone who wandered even a tiny bit farther than instructed.

After the dive, we hauled our tanks up the long stairway, and then returned with full ones for one last dramatic dive. Many of the cenotes had a pulley system used to send the tanks down to the entrance, and back up (if you wished). Although we were the only divers inside this cenote, a large noisy gang of young people arrived in jeeps and enthusiastically zip-wired into the water when we finished.

Hector provided delicious sandwiches and a choice of drinks after each dive

while spinning great cenote stories, some gruesome and tragic. He made the experience enjoyable and instilled confidence that made the cenote diving relaxing and safe. So, if you're going to try cenote diving, Hector's the man.

The Barracuda Hotel is a simple hotel without pretention or luxury or even a restaurant, but fine for our needs. My room had two queen-size beds -- the bedroom was air-conditioned -- and an old-fashioned shower that worked well but took forever to drain. Daily, the friendly staff cleaned the rooms and changed towels, changing sheets every other day. Since all the rooms face the sea and are above the pool bar, they are a fine place to sit to admire the sunset with a cold cerveza. The first night, I thought my hotel choice a mistake when super loud music streaming from the pool bar chased away any sleep. Thankfully, it was only a weekend occurrence and other nights were peaceful. Nevertheless, many Undercurrent readers have complained of this intrusion.

The Rock 'n Java Bar 'n Grill a few yards away offered a breakfast of refried beans, rice and anything with 'chili', eggs, seasonal fruit and pancakes and as much coffee as your bladder can hold. Oh, and you can watch cadets at school



**A drive through the Mayan jungle**

## *Will the Sport of Scuba Diving Survive?*

I learned to dive in 1979, and by 1992 I had determined to make it a full-time job. I've been lucky, because I believe I've seen the best of it. Lauren Mowery, writing for *Forbes*, is a decade behind me, but says much the same thing.

"[When] Donald Trump withdrew from the Paris Climate Agreement, not all Americans, in fact, the majority of the U.S., wanted to remain in the accord. Politics aside, while nobody yet knows the true impact of this potentially fateful decision, scientists have already modeled a variety of detrimental repercussions from a global temperature increase of two degrees. In some areas of the world, the effects of climate change are real and evident. Consider our ocean reef systems."

We've both witnessed the rapid deterioration of our coral reefs, with dwindling schools of fish. If you read *Undercurrent* regularly, you'll know this hasn't happened merely in the Caribbean area.

Mowery asks, "While the ramifications of a dying ocean far outweigh the interests of a sport, the question should still be asked: what will happen to scuba diving if our coral reefs are dead?"

She posed this question to Drew Richardson of PADI and recorded him saying, "The PADI organiza-

tion is committed to being a global force for good. We are passionate about creating a preferred view of the future in healthier oceans.

"As for the future of the sport of scuba diving, I feel there are strong tailwinds that will drive future growth in scuba diving. These include a growing middle class, a strong interest in adventure/action sports, strong global tourism trends, and environmentally conscious millennials, to name a few. We are all about a future of engaging millions of new divers, training them well to be confident and comfortable divers, encouraging and enabling them to seek diving adventure and exploration of the planet's underwater realm and paying it forward as good stewards of ocean and marine life health."

So, Richardson is optimistic about the future of diving. However, we see little evidence to be optimistic about the future of our ocean and reefs. People may still want to strap on a tank and have a look; it's just that the life they'll be looking at will not compare to what we see today or have seen in the past ... unless there is a sea change in government and industry attitudes. <https://goo.gl/BXGGpv>

— john@undercurrent.org

practicing drills while you eat. In town, the few restaurants facing the Malecon are mostly tourist traps with views. At Palmeras, we had copious guacamole with nachos, then perfect fajitas, and melt-in-the-mouth steak or chicken and ran about \$20 per head. Casa Cuzamil on Avenida Sur offered local food with friendly service at about \$15. Machete was cheap, quick, and satisfying and served burgers. For \$15 per person, La Lobsteria (Cnr. of Avenida 5 and Calle 7) offered delicious lobster, great service, and a quaint garden. The downside? Mosquitos galore in the evenings, everywhere. I covered up and slathered myself with DEET!

Though Ben wanted only a cenote review, I must add something about the reef diving, which began with a no-hassle pick up at the jetty by Deep Blue's panga. I carried my gear from my second-floor room every day (I prefer my own BCD and regulator, not to mention my 20-year-old Mares fins, and my well-worn 3mm suit). One of my buddies rented her gear, and though it was well used, it worked well and was on the boat and set up when it arrived. Their pangas hold about ten divers -- that would be too cozy -- and there is no place to keep anything dry, so bring a dry bag for your personal stuff.

It was a 30-minute speedy ride to the first dive. Our relaxed and youthful dive guide, Carlos, ensured everything was in order and made his expectations clear. Donning my gear, I snapped my fin strap right out of its buckle! Quickly, the other dive guide fixed it with a cable tie.

The first site was "Palancar Bricks," a colorful reef with its swim-thru's and profuse life. The variety of sponges, the lovely soft and hard coral was spectacular, the colors intensified by the sun. The 65-foot (20m) visibility was great for viewing the two turtles and a nurse shark that we drifted past. During the week I also dived Palancar Caves, Palancar Gardens and Paseo de Catedral for fast drift dives, and moved along the big pinnacles of Columbia (the longest boat ride, 45 minutes).

There were rays aplenty, as were the seahorses in the grass. Huge spiny lobsters watched me with their beady eyes. Splendid toadfish hid in cracks. Anemone shrimp perched for a view. Angelfish, triggerfish, grouper, and puffers swam around without a care in the world. Barracuda guarded from above, and all sorts of morays peeked out for a look, mouths agape.

The day's four dives were split with an hour surface interval, where either we were dropped for lunch at Paradise Beach, a large resort that caters to the gartantuan cruise lines or we could return to the dock and our hotel. Between dives, there were bananas, pastries or cake and plenty of bottled water.

Another guide, Paulo Maçarico, a well-traveled diver and photographer was relaxed and terribly funny. Underwater, he had perfected the art of unobtrusive supervision but still pointed out unique sea life. A third guide, however, tended either to herd his group or at swim way ahead of them. I assume he thought his divers were sufficiently experienced, but that's how accidents happen. Many inexperienced divers visit Cozumel, and I was shocked to dive with a physically impressive father-of-two, who was less impressive in the water, where he yoyo'd from 50 feet (15m) to 16 feet (5m) throughout the dive. Why the dive guide didn't intervene was a mystery.

## *You'll Need More Than That to Get Me to Visit*

Under the heading, "*Whoa! This scuba diver stumbled upon a sponge coral in mana Vizag!*", the *Times of India* posted this story on December 19.

"Visakhapatnam could be the next scuba diving spot that people would love to throng to after the Andamans. This can happen in just a year," says an excited scuba diver, Balaram Naidu, who recently discovered a coral during one of his dives in Vizag. "The coral I discovered is a sponge coral, and there's a lion fish living inside it. Given a chance, scuba tourism in Visakhapatnam could thrive. The possibilities are endless."

Also, Cozumel currents can get woolly; it seems that just about every year someone is dragged deep by down currents and some divers have never returned. That said, it is just about the Caribbean's top diving destination -- and certainly among the least expensive -- but newly certified or nervous divers ought to get their experience elsewhere before visiting. For everyone else, have at it. And don't overlook the cenotes.

-- F.M.

Our Undercover Diver's Bio: *F.M.*, a mother-of-two, has been diving since 1979, but after a hiatus became enthusiastic in the mid-90s, visiting dive sites as different as *Scapa Flow* and the *Outer Hebrides* of Scotland, Iceland, and Vancouver Island, to the Caribbean, the Galapagos, Yemen, and Truk Lagoon. Nowadays she often travels with a girlfriend, leaving her long-suffering husband at home.



Diver's Compass: I booked my trip through [www.deepbluecozumel.com](http://www.deepbluecozumel.com) ... Deep Blue works with [www.scubatribeplaya.com](http://www.scubatribeplaya.com) for the cenote diving ... Our eight-day diving package included three days in cenotes and 20 reef dives, plus accommodations at the Barracuda ([www.barracudahotelcozumel.net](http://www.barracudahotelcozumel.net)) for a roughly \$1000/person, double occupancy (there was an extra charge for diving distant sites) ... US dollars work just fine, and credit cards invoke a three percent surcharge) ... Barracuda had WIFI reception only in the public area ... More information about cenote diving is available at:

[mayazone.com/hidden-worlds-cenote-diving](http://mayazone.com/hidden-worlds-cenote-diving)

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## Misfortune Follows the Siren Fleet

*is there something inherently wrong?*

Is the Siren fleet of liveboards jinxed? *Fiji Siren* is the latest liveboard in the Siren fleet to sink during a diving voyage. After being driven aground by Cyclone Winston back in February 2016 and successfully recovered, it appears the vessel struck an unseen object in the early hours while under way in Fiji in the Bligh Channel, close to the Namena Reserve, between Vanua Levu and the island of Nakodu.

When it occurred, it evidently didn't sound or feel too serious. Passenger Ross Hoek from Michigan told the *Fiji Sun* that he was awoken at 1:30 a.m. by the sound of an impact, a single hit, "maybe like a log in the propeller would feel . . . the impact felt small to me." Unconcerned, he went back to sleep.

In fact, the wooden hull was breached close to the engine room. Members of the crew grabbed tanks and immediately dived under the hull in an attempt to stem the flow of water into the hull using epoxy resin. Above, the crew was able to pump out close to four tons of seawater per minute, but they made no real headway against the

water flooding in. The captain turned the vessel toward land while making emergency calls from the boat's marine VHF, but they went unanswered.

After an hour, it became clear that the pumps were unable to clear the water faster than it was pouring in, so the passengers were ordered to abandon ship. Simon, the cruise director, asked them to muster in lifejackets with only their passports and any medications they required. The passengers and nonessential crew boarded diving skiffs and reached Namena Island (once Moody's Namena), where they found shelter.

The remaining crew worked feverishly to save the boat. Four-and-a-half hours after the initial impact, the main water pump failed because of water in the engine room, but the fire pumps still functioned at full power, thanks to staff from the Namena Divers, who delivered additional fuel. They and other members of *Fiji Siren's* crew continued to work underwater to block the hole, but it proved impossible to seal the breach. At 7:15 a.m., all but the captain and the cruise director evacuated. It had become apparent that it was impossible

to save the vessel, which slipped beneath the waves around 10:00 a.m., nine hours after the initial impact — a total loss but at least everyone was safe.

Dive and Travel Adventures had a group on board and posted on their Facebook page: “Could this really be happening, or [is it] just a dream? No, this was real. Captain Jack sincerely apologized, and with a heavy heart gave the order to abandon the *Fiji Siren* on our dive tenders. No water was in our cabins yet, but it was still coming below. Our

*After an hour, it became clear that the pumps were unable to clear the water faster than it was pouring in.*

wonderful tender drivers, Sy and Mo, took us to the nearby island of Namena. There was an abandoned resort there that had been hit by Cyclone Winston. This resort would be our shelter. There were a few

construction workers on the island to assist when we arrived, along with two *Fiji Siren* crew per tender. Thankfully, everyone was evacuated safely. No one was injured.

“We walked up the hill to a single bure cabin. The crew brought water, food, and bedding for us. They brought in mattresses. We rested for a few hours. It was a beautiful sunrise the next morning! The crew had been busy retrieving much of our dive gear, clothing, and personal items. (They put themselves at risk doing so!) We were very grateful to find a lot of our belongings in big plastic bags on the shore that morning. It was like one big scuba rummage sale, sorting and matching items to owners. There was a large dive boat available around noon to take us to an inhabited island and town of Savu Savu, a little over an hour away. We boarded the boat and headed to our new home at the Hot Spring Hotel.”

Mark Shandur, a part owner of the Siren Fleet, told *Undercurrent* a day after the loss, “As you can

## ***Regulator Servicing: Do It Every Two Years***

In *Are Today’s Regulators Better Than of Old?* (*Undercurrent* November 17) we inadvertently gave out-of-date information about regulator servicing. Well done, Bradley Condo (Vail, CO), who spotted that the latest raft of regulators mainly need a routine service every two years or 100 dives despite some dive shops still claiming it’s an annual requirement. We contacted regulator manufacturers to get clarity.

Gilbert de Coriolis of Scubapro said, “The new policy is, regulators should be maintained every two years or every 100 dives by a Scubapro technician. For intensive use, regulators should be visually inspected every six-months (filter, hose, mouthpiece, and leaks) and maintained every year.”

Manuel Cabrere of Aqua Lung told *Undercurrent*, “Your Aqua Lung regulator should undergo servicing at least once every two years and visual inspection at least once a year by an Aqua Lung specialist center. Depending on the number of dives and the utilization conditions, your regulator may need to be serviced more often.

“If your regulator has suffered a serious shock, water entry into the regulator, or a leak during pressurization, you should have the regulator serviced before reusing it. If the regulator is leased or used in a chlorinated (swimming pool) or polluted environment, it must be serviced every six months. Swimming pool

chlorine can cause a chemical reaction leading to rapid degradation. Aqua Lung does not specify the numbers of dives.”

Peter Greenwell of Apeks Marine Equipment told *Undercurrent* that their first-stages should be serviced every two years and the second-stage should be inspected every year. To be on the safe side, many dive shops still suggest a full service every year.

Sergio Angelini, at Mares SpA, says, “It used to be one year or 100 dives (whichever comes first) but we recently went to two years or 200 dives with a visual inspection after one year or 100 dives.”

Justin Hanning of Atomic Aquatics said, “Atomic Series 2 regulators should be serviced every two years or every 200 dives and Series 3 regulators should be serviced every three years or 300 dives, whichever comes first.”

“Atomic still uses a unique design that leaves the valve seat out of contact with the poppet when in storage and not under pressure — thus avoiding engraving of the valve seat, which so often reveals problems after a regulator is left unused for a period.”

Since most regulator problems seem to occur on the first dive after servicing, this extended period is not only good news for the pocketbook, but also good news for hassle-free diving.

imagine, it is extremely disheartening for all of us. Especially, given that the company as a whole, and all of the crew, have put so much time, effort and dedication into making Siren Fleet, in our own opinions, one of the safest fleets to dive with. We really do hone our policies with each incident and run drills for this exact kind of accident on a regular basis.

“As is our *modus operandi*, we are now super busy ensuring that our clients get the best possible customer service in the aftermath and have been in constant contact with everyone on the ground in order to protect holidays.”

Misfortune has dogged the Siren Fleet since its inception. Its first vessel, *Sampai Jumpa*, sunk off Thailand in 2009 when traveling between Phuket

## Wooden Hulls, Tumble Dryers and Single Engines

What has my time as a dive guide on a pioneering Red Sea liveaboard and my Hotpoint tumble dryer got in common?

The liveaboard I worked on, the *Lady Jenny V*, was built of solid German steel in 1936. I traveled with her down throughout the Red Sea in 1992, where, off the coast of Sudan, Eritrea and Yemen, the only charts we had were drawn by Commander Moresby’s cartographers 150 years earlier. To say they were inaccurate is an understatement. I remember one reef being seven miles distant from where we expected it to be!

The upshot was, from time to time we heard the ominous sound of the hull grinding on to a remote reef. We’d run aground. The German steel regularly saved our lives, and I became adept at using the powerful pickup boat to help push our vessel off, tug-like, from the bow.

Of course, had we a wooden hull, this routine exercise would have happened only once. Such impact usually breaches wooden hulls.

On one occasion, the *Lady Jenny V* touched a propeller on the reef, resulting in a distorted prop shaft. She traveled back at a slow pace to her home base in Egypt on the remaining engine. It was fortuitous she had more than one.

So what of tumble dryers? Well, it’s no secret that built up fluff can ignite and burn down houses; Hotpoint has recently recalled and modified a vast number of tumble dryers it distributed in the UK for that reason. When you’ve witnessed how fast a wooden-hulled Egyptian liveaboard burns down to the gunnels once it catches fire, you’d think twice about having a tumble dryer on board. Still, the *Mandarin Siren* fell victim to that fate.

These experiences tell me that to be on any wooden-hulled liveaboard boat far from help carries a risk. Witness the Siren Fleet and its experience with such vessels. Furthermore, those with single engines should also not roam far from shore. Disasters don’t happen often, but they are always disasters.

So remote places I wouldn’t dive in a vessel with a wooden hull: Cocos Island, Darwin and Wolf in the Galapagos, Tubbataha Reef in the Philippines, the Coral Sea, Palau and parts of PNG. Thankfully, all the vessels I can think of that go to these places have steel (or aluminum) hulls apart from *Philippines Siren*!

Timber-built hulls have their place. There was a time when the seas around the islands of Raja Ampat could be considered remote. Now 40 liveaboards have a license to operate there. The commonly encountered, Indonesian-built, pinisi-rigged, wooden-hulled vessels probably have safety in numbers. It wasn’t always the case. Although some of the most luxurious liveaboards afloat, they generally all suffer from the same defect that would prevent them from getting an international passenger license — and that’s the wooden hull. (One exception is *The Pelagian*.)

The big wooden-hulled dhoni liveaboards that operate within the atolls of the Maldives tend to travel in the company of a second smaller dhoni (the diving dhoni) and are rarely far from help either. It’s the same with any vessel operating within the safety of a lagoon.

The same can be said of the often-crowded near-shore sites of the Egyptian Red Sea. However, if you are taking a trip to the Brother Islands, to Daedalus Reef or to the Sudan, choose a vessel suitable for the job — that’s one with two engines and a steel hull. The *Diver’s Heaven* fleet vessels always took the precaution of storing passengers’ documents and valuables in a watertight container in the wheelhouse. It’s a sensible idea. They’d learned the hard way after losing a wooden-hulled vessel to a fire.

Wood is often the chosen material for locally built boats, whereas steel is more often likely with vessels that have been converted from a previous use. It’s something to consider when booking your next liveaboard trip. Ask the question!

— John Bantin

and Koh Tao, after colliding with a ferry at night. One crew member died. The fleet's second vessel, *Sampai Jumpa Lagi*, was renamed *Siren* for commercial reasons, and further Siren vessels were built or incorporated into the operation.

*“As you can imagine, it is extremely disheartening for all of us.”*

In 2011, the *Mandarin Siren* sank after a fire broke out in a tumble drier while it was operating in Raja Ampat. In 2012, the *Oriental Siren* sank after it hit an unseen object during an ocean crossing to Layang Layang in Malaysia. In 2015, *Truk Siren* was driven on to the reef by a typhoon and abandoned by its crew. Locals looted and burned it. Only one accident can be attributed to poor seamanship, when *Palau Siren* was allowed to run aground on a reef, sustaining severe damage, in 2015

It is unclear what caused the damage to the *Fiji Siren*. The vessel may have collided with an outlying reef, but there are other possibilities. Lost steel shipping containers that have fallen from freight-

ers tend to float just under the surface. These have caused the demise of many smaller vessels, as well as some larger ones, and represent an ever-growing marine hazard.

Mik Jennings, Siren Sales and Marketing Manager, told *Undercurrent*, “We don’t know for sure what caused the impact yet; hopefully, we’ll [eventually] know more. We know for sure that the impact hit the reserve engine prop, which sits off center, and that the subsequent pressure from that pushed the prop shaft and housing in towards the hull. That’s the basic cause of the breach. Because of the nature of the hull in that area, it was almost impossible to use most of the breach kit effectively.”

So what do you think? Founded by Frank Van der Linde in 2004, Worldwide Dive and Sail owns and operates a range of diving, sailing and cruising yachts across Asia and the Pacific including the Siren Fleet dive liveaboards. Is *Siren* owner Van der Linde’s love affair with wooden-hulled vessels coming to an end? We note that the vessels in his growing fleet of *Master* liveaboards have steel hulls.

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## A Taste of New Products at DEMA 2017

Every year the diving industry gathers at a convention center to meet and greet and launch new initiatives and products. This past November, it was Orlando’s turn to host the event. A newcomer to the event was amazed to see icons of the diving industry, such as Bruce Wienke, the man who wrote the algorithm for many popular dive computers, Richard Pyle, the deep diving ichthyologist, National Geographic Explorer in Residence Sylvia Earle, and others like them strolling the aisles. That’s typical, but it’s also an indication of how small and personable the diving industry is.

### *Evolution in Diving Computers*

As usual, there were few revolutionary products on display in the main hall (these days it’s “gentle evolution”). For example, Suunto displayed its EON Core computer, a recreational version of the original EON steel (with the same intuitive 3-button menu logic) suitable for less deep diving (to only 262 feet (80m) deep), housed in a



reinforced composite case but with a similarly sized TFL color display.

Its rechargeable battery is good for 20 to 40 hours and wirelessly connects to a smartphone. With the addition of a suitable Suunto tank POD to a regulator’s first-stage, it can monitor up to 10 different gases with the right number of PODs. One can alter the display to suit personal taste by connecting with the Movescount app. Available in 17 different languages, it is expected to sell for \$999 plus \$440 for a POD. [www.suunto.com](http://www.suunto.com)

More notable is that navigation giant Garmin has entered the diving computer arena with the Garmin Descent Mk1, a good-looking oversized-watch platform for a multi-sport diver who wants one instrument to guide him through life. Besides the diving computer functions for recreational, technical (multi-gas) and free diving, it employs a 3-axis compass, a surface GPS, a heart



## Don't Skimp on the Oxygen

In December, a Southern California diver surfaced, came back to the boat, took off his gear, and moments later collapsed. Oxygen was administered quickly, and he was evacuated to a local chamber where he was treated. But his symptoms didn't really improve after treatment.

He was transferred to a hospital where it was discovered that he wasn't bent or embolized, but had had a stroke. He is expected to recover fairly fully. But the presumption is that a large factor in that full recovery is that he was given O<sub>2</sub> right away.

We can't emphasize how important this is in treating *any* emergency, let alone a diving-related one. Giving oxygen to someone who doesn't really need it will *not* hurt them or injure them further. But *not* giving oxygen to someone in *any* type of distress might affect their ability to fully recover.

So if you have O<sub>2</sub> available, hook it up and administer it as soon as you can.

– Ken Kurtis, Owner, Reef Seekers Dive Co.,  
Beverly Hills, CA

rate monitor, and full-color map displays. It offers sports/training, fitness, and outdoor navigation tools for swimming, running, biking, hiking, skiing, rowing, paddle boarding and more.

Users can save, review and share their dives and other activities via Garmin apps, and even receive texts. The stainless steel model should retail for \$999. <https://explore.garmin.com/en-US/descent>

New to the show, the manufacturer of the COSMIQ+ dive computer, Deep Blu, has created an affordable instrument that wirelessly connects to your smartphone after the dive so that you can effortlessly create digital dive logs and connect with a wider online dive community. It costs \$299. <https://shop.deepblu.com/products/cosmiq-plus>

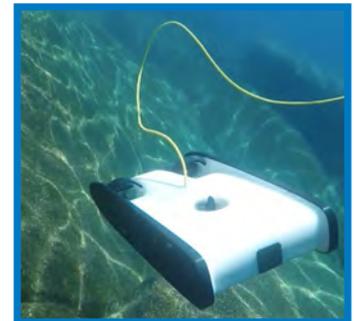
The annual DEMA show is where optimistic smaller manufacturers display prototypes to gauge their acceptability. The Thalattoo MAOI is such a product, a computer prototype that a diver straps directly over her mask so that at depth she can read dive duration remaining, no-deco time, ascent-rate and safety stop time on a head-up display. We'll have to wait to see if it comes to market. [www.thalattoo.com](http://www.thalattoo.com)

The Ratio Color-Coded Wireless Transmitter has an LED that indicates tank pressure by changing from green to yellow and red on the unit when fitted to a regulator first-stage high-pressure port. It might prove useful to diving instructors who could see at a glance the status of their trainees' air supplies. It is also available as a head-up display and has the option of an occluding cover for the tank unit for those divers who wish to be discreet about their remaining air supply. It works with the iDive and iX3M computers and adds \$618 to their price. [www.ratio-computers.com](http://www.ratio-computers.com)

## A Plethora of Must-Have Accessories

As usual, scores of must-have accessories were on display. Several companies offered personal oxygen analyzers for nitrox divers. Maxtec offered a version for use with the BC's direct-feed hose. They displayed the iMax Dive Buddy, a discreet wireless data logger that works unattended while you dive and interfaces directly with a smartphone app, and you can even download your dive profile direct to your Facebook page. [www.maxtecscuba.com](http://www.maxtecscuba.com)

The plethora of underwater drones makes one wonder if the market is trying to persuade people to visit the underwater world without getting wet! Typical was the OpenRV Trident Underwater Drone that enables 1080p HD video down to a depth of 330 feet (100m). Pre-order for \$1500. [www.openrov.com](http://www.openrov.com)



Underwater photography is ruling the diving world, and endless booths exhibited light sources and camera housings.

The GoPro's little HD cameras have taken the dive community by storm, and every year the company produces an improved model. This year it was the GoPro Hero 6 Black, which automatically sends footage to a smartphone three-times faster than before. With 4k 60 fps and 1080p 240 fps video, it delivers twice the performance when compared with the previous model, the Hero 5 Black. Of course, there's a price hike. It costs around \$500. In the past, GoPro has had the biggest and most impressive booth, but, a sign of cutbacks, it was

left to the company Backscatter to tell the story.  
[www.backscatter.com](http://www.backscatter.com)

Though divers are obsessed with attaching these little cameras to themselves, they often come back with nothing but recordings of their exhaled bubbles. A novel device that might solve the problem is a camera mount that fits on the front of a diver's regulator, thus avoiding the bubbles while allowing the user to monitor the LCD screen and see what she's recording. The Reg-Mount costs \$35 from [www.regmount.com](http://www.regmount.com).

Indigo industries demonstrated its new and novel BZ-Delta wing-style BCD, which has buckles that are activated magnetically but held shut mechanically. A built-in lighting system that features 2000 lumens of hands-free illumination at the front and colored lights at the back not only indicates a diver's position in the water, but the rear lights change color according to the status of his air-supply. Is this a technological advance that we can really do without? [www.indigo-industries.com](http://www.indigo-industries.com)

Big diver propulsion vehicles (DPV) were less obviously on display than before, which might reflect the problems of transporting big lithium



batteries by air. Much smaller, the novel hand-held Scubajet uses jet-power instead of a propeller. Weighing just 6.6 pounds ((3kg), the Austrian-made device generates 44 pounds (20kg)

of thrust up to an hour, yet measures only 16 x 3 inches (42 x 8 cm) with its 200 w/hr 'travel' battery pack attached. A bigger 400w/hr battery gives a two-hour run-time. It's roughly \$1600, much less expensive than conventional DPVs, yet powerful enough to push a small surface craft, too. It might be the perfect accessory for divers daunted by dive sites with strong currents, and its price and weight make it a viable accessory choice. [www.scubajet.com](http://www.scubajet.com)

The unique SWES Technology D-1001 dive light from Canada generates its power from seawater and requires no special maintenance. It has an energy cell with an anode and cathode with electric power generated by seawater as the electrolyte. This means that forgetting to recharge or replace batteries in a diver's flashlight, or running out of charge during a dive, might be a thing of the past — for ocean diving at least. Price to be announced.  
[www.swestechology.com](http://www.swestechology.com)

There will always be companies offering improved-design fins, and this year a Taiwanese company showed GripMore Fins that had a surface coated with a surface resembling fish scales for ostensibly better grip on the water. We'll have to wait to see if the claims



are true or whether it's a "one DEMA product."  
[www.reefdivers.io/gripmore-power-scale-fins/4732](http://www.reefdivers.io/gripmore-power-scale-fins/4732).

Realizing that the diving market is aging, Scubapro has come up with a mask where the user can easily change the optical lenses at home, without returning the mask to a dealer or resorting to special tools. Sensibly Scubapro has made both negative and positive lenses available, bearing in mind that we older divers suffer from ever shortening arms! The Zoom EVO basic mask costs about \$68.  
[www.scubapro.com](http://www.scubapro.com)

A small British company is leading the way in conservation with a range of beachwear made from recovered and recycled ghost fishing nets and the Fourth Element Thermocline wetsuit, now made entirely neoprene-free and machine-washable. [www.fourthelement.com](http://www.fourthelement.com). The company is aiming to eliminate plastic packaging of its products entirely by 2020.

### *Looking for New Markets and Meeting Old Friends*

The dive industry is flagging. Open water dive certifications have been declining in the U.S. during the past decade, and the industry's various marketing techniques have not reversed the trend. That, and expanding online sales have caused hundreds of dive stores to close. At this year's DEMA show, CEO Tom Ingram discussed DEMA's social media marketing strategy. Recognizing that minority participation in the sport is minuscule while America's minority middle class is growing wealthier, DEMA's well-conceived marketing pieces featured plenty of people of color. It was heartening to see the joys of diving presented to the full range of ethnically diverse Americans.

DEMA show attendance is limited to by dive professionals, and as such, is less frenetic than consumer shows. It allows dive shops organizing group dive trips to compare what different dive operators worldwide have to offer. There are also well-attended seminars, and it's a great opportunity for divers to catch up with old friends from around the world.

# A Kauai Frogfish Follow-Up

*letters from Hawaii and what you thought*

In response to the report on giant frogfish being taken from the water for a YouTube production, *Undercurrent* received this email from Scott Bacon, a local dive instructor:

“Coyote’s actions were inconsiderate and harmful to this rare species. When he removed two frogfish from Koloa Landing in July of 2017, it enraged the local dive community. According to eyewitness reports and from watching his video footage, he removed two of the easier to find and most prominent frogfish. He put them in buckets to get them out of the water and then put them in a small glass aquarium up on the hot black lava rocks in the sun and videoed them for about 2 hours. During his video, he removed them from the tank multiple times. The glass aquarium had no equipment to maintain the cool water temperature, water circulation, or water oxygen levels to maintain the health of the fish.

“As divers, we do not touch or harass the frogfish, as they are amazing and rare species to encounter, and we do not want to hurt them or stress them. We want them to be able to live in their natural environment, go about their lives without fear from being abducted so that we can observe their natural behaviors in their natural environment.”

## ***What You Thought About It***

*Undercurrent* asked our readers what you thought with an online poll. About two-thirds of those who voted were against interfering with the fish and taking them from their habitat, while others thought that if it were for a good reason, it was OK.

For example, Dave Van Rooy (Austin, TX) suggested, “For the good of science, it’s OK if they are doing this as a valid, scientific study. If [it’s] just amateurs and not for public consumption (not just YouTube), it is wrong.”

However, one Pennsylvania member says “Fish don’t have the mental capacity to feel terrorized, it is just another environment to them. With the goal of exposing more people to the oceans and the wonderful things that are there, it works for me.”

And another member from Cincinnati wrote, “After watching the YouTube video, I did not see that the fish were mishandled in any way . . . did not seem to be under any stress and were put back into the ocean after the presentation. I do not see anything wrong with what was done.”

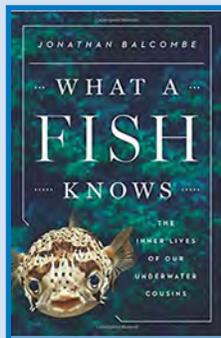
However, we can’t judge stress in fish just by watching them any better than we can in humans. Furthermore, fish do have feelings, which is unrelated to mental capacity. For example, Calum Brown, a professor at Macquarie University in Sydney, Australia, has published a review paper in the journal *Animal Cognition* entitled “Fish intelligence, sentience and ethics” that clearly shows fish are sentient and

emotional beings and clearly feel pain in much the same way that humans do. Mental capacity has nothing to do with pain.

So, most readers just didn’t cotton to Coyote’s manhandling. John Dawson (Palo Alto, CA) thought differently and argued, “[It was] totally wrong. Filmmakers should not get a free pass to molest sea life because they are professionals, any more than it is OK for divemasters to molest sea life because they are leading a dive group. I’m glad the frogfish were [evidently] OK, but that doesn’t excuse the behavior.”

## ***What a Fish Knows: The Inner Lives of our Underwater Cousins,*** by Jonathan Balcombe

Do fish feel? Do they really have memories? Can they recognize other fish by their faces? Or even humans? The myth-busting ethologist Jonathan Balcombe addresses these questions and more to reveal the astonishing capabilities of the fish we swim with, providing evidence they are sentient, aware, social and even Machiavellian — in other words, much like us. Buy this terrific book directly from Amazon or by [clicking here. \(https://goo.gl/C233PB\)](https://goo.gl/C233PB)



With a broader perspective, some views of subscribers were mirrored by Kara Leach (Denver, CO), who suggested, “Although I wish they had not disturbed the frogfish, maybe it is for the greater good to get nondiving people interested in reef species” while Tom Lopatin (Lake Hopatcong, NJ) countered by controversially asking, “Is it wrong to capture marine life for public aquariums? Is it wrong to pull a shark out of the water, stick a saltwater hose in its mouth and snip a tag on it, then put it back? Is it wrong to snap of photo of a fish with a strobe, terrorize and temporarily blind it?” Hmmmm.

A Canadian, signing himself off as Terramoto (Earthquake) from Vancouver, BC, suggests there are greater concerns, writing, “It’s a very minor offense compared to what other divers, fishermen, polluters, etc., do to our marine life. So, I wouldn’t get worked up over it. It was educational, and they did put the animals back unharmed, and they were honest about the filming. If anything, the capture and non-release of [any] marine life should be prohibited. Now, that’s something to get worked up about!”

A balanced opinion came from José Kirchner (Roseville, CA), who wrote, “In most instances, reef and ocean denizens should be photo-videoed in situ and not harassed. Yet, sometimes, professionals can only get valuable footage that demonstrates certain behaviors, color phases, etc., when confined to an aquarium. [This was certainly the case when recording some close-up sequences for *Blue Planet II*.] In these cases, if the confinement causes no harm, I’m okay with it. I’m not okay with harassing critters, e.g., poking, etc., bringing up Nautilus from the deep for liveaboard photos, etc.”

And, Rick Ratliff, a Scuba charter operator (Jupiter, FL), adds, “It is wrong because of the risk of harm or death. However, we still eat fish. I’m not sure if this species of frogfish is in the endangered class or not — obviously if it is, that would have been illegal, so I’m assuming it is not. So assuming it is just bad form and not illegal, can’t we just accept the operator’s apology and move on?”

We’ll drink to that!

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## Plastic is Suffocating the Ocean

*and the dive industry must share the blame*

As a diver, you have no doubt seen plastic under the water, an example of the ecological damage our consumer society inflicts upon the environment, especially the ocean. You may have seen Craig Leeson’s documentary, *A Plastic Ocean*, and been appalled at the harrowing images that follow relentlessly one after the other.

*It’s not the plastic snorkel you accidentally drop that’s the real problem, it’s the disposable plastic bag that it came in.*

As Leeson points out, manufacturers love plastic because they can use it for anything — look at all the plastic on a BCD — and it is durable. However, that durability is equally terrible for the same reason. Especially, when one realizes that a lot of plastic is intended only for a single use before it is discarded. A Styrofoam cup takes 50 years to biodegrade whereas a plastic bottle can take 450 years. Nylon fishing line can last up to 600 years in the ocean. It’s not the plastic snorkel you accidentally

drop that’s the real problem, it’s the disposable plastic bag that it came in.

The world produces more than 300 million tons of plastic every year, and that, plus all the plastic ever produced still remains on our planet in one form or another. Production will triple by 2050, and then, by weight, there will be as much plastic in the ocean as there are fish. It’s as if a large garbage truck backs up to the ocean every minute of every day, dumping plastic.

Ocean gyres, the circulating ocean currents, cause the plastic to form great unnatural islands. Marine life, from the smallest creature to great whales, ingests the plastic — and dies. Turtles mistake floating plastic bags for jellyfish, their staple diet. Thousands of seabirds, like shearwaters and albatross, inadvertently feed on plastic, even bringing it back to their chicks, which then die before they even get a chance to fledge. The beaches of what once were uninhabited paradise islands are awash in discarded plastic.

Scientists from Newcastle University tested crustaceans at the bottom of the Mariana Trench, known as Challenger Deep, 10,890 meters (35,730 feet) below sea level. Each creature had ingested some

form of humanmade material, including the plastics nylon, PVC, and PVA. Reported in the British *Independent* newspaper, Dr. Alan Jamieson, professor in marine ecology and the study's lead, said the results were "immediate and startling. . . . There were instances where the fibers could actually be seen in the stomach contents as they were being removed."

In New Zealand, Auckland Zoo staff found 106 pieces of plastic inside a hawksbill turtle, which died after 13 days of intensive care. Around Wellington, N.Z., plastic bags are so numerous they're now known as Wellington jellyfish.

A new study by the American Chemical Society has discovered that all most all marine plastic debris in the ocean comes from land-based sources, with rivers acting as a major pathway. Ten rivers in Asia and Africa are the worst offenders: the Yangtze, Yellow and Pearl rivers of China, the Indus and Ganges of the Indian sub-continent, the Mekong of Indo-China, and the Niger and Nile in Africa. The U.S. is 20th when it comes to plastic debris in the ocean. For more information, see <https://goo.gl/Edy9Za>

### ***All That Glitters Is Not Gold***

Our seas now contain as much as 51 trillion tiny micro-plastic particles, 500 times more than the number of stars in our galaxy. It's a sorry tale, but they come from facial scrubs, toothpaste, shampoo and other cosmetics. Along with microbeads, glitter is a microplastic, and they can pass through water filtration systems and end up in the ocean where they enter the food chain.

At the DEMA show in Orlando, tables in several booths were covered with tiny plastic glitter. Kim Kardashian, a style icon for many young women, was recently photographed wearing precious little else. A 2016 study in the UK found it's a cause of the declining fish populations and suggested Glitter should be banned around the world, as it is in California, because it's a 'global hazard,' according to Dr. Trisia Farrelly of New Zealand's Massey University.

### ***And The Dive Industry Must Respond***

As a good steward of the planet, you most likely avoid disposable plastic shopping bags by carrying a cloth bag and even carry water in a reusable bottle

rather than disposable plastic. However, when you buy dive equipment, you are supporting an industry that seems to ignore the plastics problem.

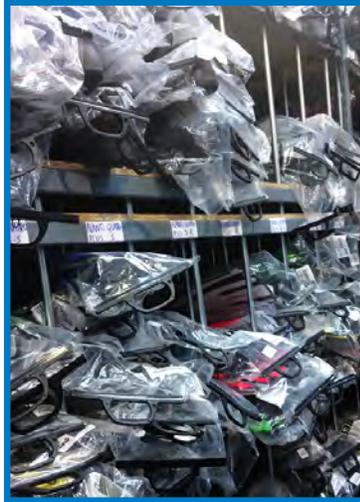
You see, almost every item of diving equipment shipped to retailers is packaged in plastic. Fins, BCDs, diving suits, snorkels, an endless array of smaller items, many, like snorkels and fins, unbreakable, are packed, wrapped, and protected in plastic. Regulators may be contained in cardboard, but the boxes are sealed in plastic wrap. Masks are placed in reusable plastic boxes, and then sent to retailers wrapped in more plastic. Notwithstanding their cardboard boxes, neoprene boots are wrapped in plastic within. (What is that protecting?) A busy dive shop can fill a dumpster with discarded plastic wrapping every day.

Most retailers insist that products the products they buy carry a barcode (on an adhesive label). Those manufacturers *Undercurrent* spoke to stated that it was because of these labeling requirements that they must use plastic bags. Oh well, shrug your shoulders, blame it on others, but is there not a better way? Like, maybe, putting the barcodes on paper tags and attaching them to the gear?

The problem is so widespread; we can't even name and shame particular manufacturers because virtually all of them are equally to blame. Aqua Lung, Huish, Mares, Scubapro; all pack their goods in plastic. We only found one lonely manufacturer of drysuit undersuits, Weezle, based in the UK, which has eschewed the use of plastic packaging. Another small manufacturer, Fourth Element, hopes to do away with plastic packaging by 2020 — great, but it takes three years? To its credit, it has produced a new wetsuit without any neoprene and constructed with material made entirely from recycled plastic bottles. It makes swimwear, too, from recycled ghost fishing nets that have been recovered.

Jean-Michel Cousteau and Jaclyn Mandoske, writing in the Canadian *Diver Magazine*, recently exhorted readers to take the lead in conservation. "The opportunity for the dive community to lead has never been greater," they wrote. They were focused on global warming and the increasing levels of carbon dioxide in the atmosphere. The oceans are the major sink for carbon dioxide — and where would we be if we lost that?

Cousteau continues, "It's not only up to divers



to lead the change; it is also the role of the diving industry to drive ocean conservation forward. It starts with making sure all dive shops and centers offer guests the opportunity to enrich their knowledge and minimize their environmental footprint.

“Divers must make the conscious effort to spend money at dive shops that employ only the best practices. We are the eyes of the ocean, and like our first meeting with the sea, something changes. It is time [for divers] to lead the change.”

Indeed, but those best practices should mean eliminating plastic packaging, as well. And divers must object.

Therefore, we call upon the diving industry and the manufacturers to lead the way to find an alter-

native to using thousands of tons of unnecessary and environmentally destructive plastic in shipping their goods to dive shops.

Are manufacturers ready to step up to the challenge? Don't write to us. Write to the companies that proudly display their brand on your diving equipment. If you are another member of the industry planning to do away with plastic wrapping, please let us know.

– John Bantin

You can see a trailer for *A Plastic Ocean* here: [www.youtube.com/watch?v=6zrn4-FfbXw](http://www.youtube.com/watch?v=6zrn4-FfbXw)

For more information about the rivers as pathways, see: <https://goo.gl/Ngbtpu>

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## Catastrophe at Cocos Island, Costa Rica

*a diver is killed in a tiger shark attack*

On November 30th, an American woman was killed by a large tiger shark while on a diving trip in the vicinity of Cocos Island, about 330 miles from the Costa Rica mainland.

Twenty-six-year-old diving guide Jiménez said that it was a female tiger shark that mauled the 49-year-old Rohina Bhandari, a Manhattan, NY, private equity director, while she was at the surface. The shark cut deep lacerations in Bhandari's legs, and as well as in Jiménez's legs.

The shark had paid unwanted attention to the group of divers as they made their way up to the safety stop in the lee of Manuelita Island, ignoring repeated attempts to drive it off. After the attack, the panga crew managed to fend it off with a boat hook, paddles or whatever they could grab, as they pulled the injured divers aboard.

Despite a number of medical professionals among the passengers of the *MV SeaHunter*, they were unable to save Rohina from the effects of massive blood loss. The vessel returned immediately to Punta Arenas with her body, together with the seriously injured Jimenez. Alan Steenstrup, *Undersea Hunter* fleet's sales manager, said everyone was in shock, but immediately had to focus on working with the victim's family and the authorities.

Avi Klapfer, the owner of the *Undersea Hunter* fleet, told *Undercurrent*, “We are in the midst of caring for the family, our injured dive guide, and the crew's mental care. We are still investigating and observing the tiger shark activity at [Cocos] island.

Once treatment is set, and all the details are clear, we will put out a detailed account of the incident.

“Regarding social media, there is not much we can do about tabloid-hungry individuals who can't tell fact from fiction. Their tales are full of mistakes and “expert” shark behavior interpretation.”

This is the first shark attack on divers at that remote location, known as “The Island of the Sharks,” and famed for its schooling scalloped hammerheads. Only in the last decade have tiger sharks returned to the Isla de Coco National Park as the apex predator. During a visit in 2012, researchers marked five specimens around 15 feet (4.5m) long. Authorities have now imposed a moratorium on diving around Manuelita Island, although tiger sharks have regularly been sighted elsewhere at dive sites around Cocos.

Meanwhile, the fiancé of the deceased woman, plastic surgeon Dr. Jeffrey Rosenthal, blames the *Undersea Hunter* operation for the fatality, for not providing adequate protection. In an interview with the *New York Post*, he said that neither divers nor instructors (guides) had anything with which to ward off sharks. “I feel that the safety precautions they took were not as good as they should have been,” he said and seemed to be considering a lawsuit.

While seasoned divers know that there is virtually nothing anyone can do to stop a tiger shark on the hunt, we asked David G. Concannon, a Wayne,

## Another Tiger Shark Incident

“One feels strangely detached when a huge tiger shark grabs you by your scuba tank and swims off with you, but that was what had happened. It soon decided the metal was not tasty enough and discarded me. The whole sequence had probably lasted only sixty seconds, but that’s sixty seconds too much in my book.”

That’s what happened John Bantin once upon a time, and if you want to read more about that incident and the Cocos Island incident, [click here](https://goo.gl/JNp9TZ) for his blog. (<https://goo.gl/JNp9TZ>)

Pennsylvania attorney with vast experience in dive fatality litigation, what kind of liability might be presumed? In his opinion, not much.

“For several reasons: The death was not caused by a fire on a vessel or something you can predict and guard against. It was caused by an unpredictable predator, which is known to hunt for food near the surface. The diver was experienced and obviously knew the risks posed by sharks, and Cocos is widely known as a remote place that you go to for diving if you want to see apex predators in their natural environment.

“The case would be governed by the U.S. Death on the High Seas Act (DOHSA), which limits damages to funeral expenses and the value of services the deceased provided to her family until retirement at 67, reduced to present value. That means you don’t get any of the damages for things you read about in the *NY Post* like pain and suffering, fear, apprehension of death or punitive damages. This is a small money case with all the emotional damages removed. It’s only about negligence and numbers.”

Despite the shock and fear generated by such an event, the chances of being attacked by a shark are almost negligible. Take into consideration that the *Undersea Hunter* group has been operating fully booked liveaboard dive vessels, along with the *Okeanos Aggressors*, at Cocos Island for

more than a generation. The original vessel, *MV Undersea Hunter*, made 450 trips to Cocos over 26 years. Even discounting other vessels and operations, that’s a lot of divers who have enjoyed close encounters at the “Island of the Sharks.”

Add to that, regular encounters with tiger sharks in popular diving locations such as Beqa Lagoon, Fiji, and Tiger Beach in the Bahamas, put such events into perspective.

In reality, it was catastrophic bad luck. Nevertheless, we should not discount that we are privileged visitors when we enter the ocean and there are hazards associated with diving with any predators.

Although dive guides at some locations are equipped with “billy sticks” to push sharks away, nothing can stop a determined attack, and it would be foolish to think otherwise. Neither would it be practical to issue divers expensive Neptunic chain-mail suits that would contribute considerably to negative buoyancy, making them difficult to swim with.

Some people on social media have advocated that dive guides carry bang sticks to kill dangerous sharks. Kevin Denlay, a well-known veteran Australian diver with plenty of experience diving with sharks, thinks that makes no sense. “In a place like Cocos with many different species of sharks about, a bleeding, dying tiger shark in its death throes would have attracted a shark feeding frenzy in no time at all, and then everyone in the vicinity could have been in real trouble!”

Furthermore, the tiger shark is not the apex predator at Cocos. In 2014, Edwar, a dive guide from the *Undersea Hunter* fleet, along with others, recorded a video of a tiger shark being hunted and killed by an orca in the very same place that this current tragedy happened.

While to us divers, the ocean seems safer than big city streets, we are swimming with wild animals. Anything is possible.

— John Bantin

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## Flotsam & Jetsam

**The Wild Guys Who Dived for Lahaina’s Black Coral — a Documentary:** Back in the ‘70s, a bunch of local hard-living divers routinely went beyond 200 feet on air to harvest black coral trees to sell to jewelry makers. That some of these rogues lived to have their stories recorded in this fascinating

and superbly produced documentary is a miracle. Even if you never saw them hanging around that harbor and smelled the dying black coral stench, you’ll find this historical documentary on a unique bunch of scuba divers well worth your viewing time. <http://www.blackcoralmovie.com>

**Apeks Sets a Standard.** Part of the Aqua Lung group, the company says that it no longer sends any nonhazardous waste from its manufacturing facility, warehouse or offices to landfill. Instead, it is all turned into biofuel for heating and hot water.

**More Photo Cheating.** A photograph of an octopus riding on a Hawaiian green turtle's back was displayed on the *National Geographic* Facebook page until they discovered the photographer, Michael Hardie, had intensively manipulated the octopus, to the critter's detriment. His picture was disqualified and removed. However, at the time of writing, you could still view the picture here: <https://goo.gl/EUB5EG>

**Vaquita Extinction Likely.** The last 30 rare vaquita porpoises found in a small area of the Gulf of California were going to be rounded up and placed in a marine sanctuary, but the \$4 million rescue plan by more than 60 international scientists was abandoned after the first specimen they captured showed signs of stress and the second died. The population crashed after years of illegal fishing for totoaba, when vaquita were caught in the same nets, became tangled and drowned. Totoaba swim bladders fetch \$10,000 a pound in China. Clearly, this tiny porpoise is no match for the forces of fish mafias, drug cartels, and the Chinese black market.

**The Free Divers of Avatar 2:** To film the Avatar sequel, Director James Cameron says Kate Winslett and Sigourney Weaver, in preparation for their roles, learned to scuba dive and free dive and "other actors are up to three- and four-minute breath holds. We did a scene with six teenagers, well, actually five teenagers and one 7-year-old, underwater holding their breath for a couple minutes and acting, actually doing a dialogue scene under water because they speak kind of a sign language."

**Good News from Mexico.** Mexico's government has created the largest ocean reserve in North

America around the four Revillagigedo Islands (AKA Socorro), often regarded as Mexico's crown jewel. The measures will help ensure the conservation of marine creatures including whales, giant rays, and turtles. The protection zone spans 57,000 sq. miles (150,000 sq. km) around the islands, which lie 242 miles (390 km) southwest of the Baja California peninsula.

**Bad News from the U.S.** The *Washington Post* reports President Trump is considering shrinking two Pacific marine national monuments with unique ecosystems and fragile coral reefs – The Pacific Remote Islands National Marine Monument and the Rose Atoll National Marine Monument – and the Northeast Canyons and Seamounts off New England. Please write or call the President, asking him to preserve our Marine National Monuments and keep them free from commercial fishing Sign the petition: <https://goo.gl/4pUkcD>

**Royal Blunder! What?** King Willem-Alexander and Queen Máxima of the Netherlands took a giant stride into Saba's waters on a state visit to the hurricane-torn Dutch Caribbean without wearing their masks? Yup, that's exactly what happened, despite security staff assiduously checking that their air was turned on, nobody checked to see if they had their BCs properly fastened or were wearing their masks before they plunged off the back of their dive boat.



## undercurrent

**Undercurrent** is the online consumer newsletter for sport divers that reviews scuba destinations and equipment. We accept no advertisements and have been published monthly since 1975.

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