

undercurrent

The Private, Exclusive Guide for Serious Divers

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Crystal Blue Resort, Anilao, Philippines

making much of the muck

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Dear Fellow Diver:

The only way to enter the water from a Filipino bangka is by backward roll, and when I hit the 78-degree (25°C) water in April, I was glad to be wearing my 5mm wetsuit. As a Caribbean diver for the past 30 years, it wasn't only the cool water that got my attention; the visibility was a mere 25-30 feet (8-10m), and on many dives, there were no colorful corals or sponges. Instead, there was the much-advertised muck, which is gray sand and gravel that the local photo pros call "substrate." For this, I flew 11 hours from San Francisco to Tokyo and another 7 hours to Manila?

But, the Filipino dive guides made it all worthwhile as they consistently showed me unique, colorful and exciting critters that were fantastic for macro photography: hairy frogfish; mantis shrimp; colmani shrimp in pairs atop fire urchins; blue ring octopus; ribbon eels and nudibranchs. (In fact, some call it the nudibranch capital of the world!) And the guides know right where to find a half-inch pygmy seahorse camouflaged in a same-colored sea fan. I enjoyed the challenge of working patiently to get pictures of several species of "Nemo" for my nondiving friends. As opposed to the Caribbean, most of the frogfish had not disap-



Bangka moored outside CBR



peared into sponges of an identical color, so I could easily spot and shoot them. And I had the time, since a typical dive ran about 70 minutes because the depth was typically less than 60 feet (18m) and often as little as 25 feet (8m). They recommended gloves, and with beer cans and broken glass in the muck, I'm glad I brought mine (especially because they did not sell gloves).

CBR limited a bangka to four divers and one guide, and my guide was both professional and serious about doing a good job. He was about

35 years old and married with a child, and in the impoverished Philippine economy, a dive guide is fairly well paid. If I asked for a specific critter, he would look for it, pointing it out with either a flashlight or a pointer. I had the same guide for a week -- I'm told most other Anilao resorts switch guides daily -- so we got to know each other well, which enhanced our communication both above and below the surface.

I traveled with 20 Americans hooked on underwater photography. Nominally we dived in buddy teams, but in reality, we four divers and our guide decided upon a subject (e.g., frogfish, nudis, clown fish, pygmy seahorse, etc.), and the guide would choose a site and nearly always find what we sought. Because the critters are small, only one diver at a time can shoot, and the guide worked one-on-one with that diver to help get the shot. Obviously, we had to wait our turns, so while keeping the guide in sight, I looked for other things to shoot, not venturing beyond the range of visibility. This is diving for experienced divers who are comfortable taking care of themselves.

Crystal Blue Resort, Anilao, Philippines

- Diving for Experienced★★★
- Photography★★★★★
- SnorkelingN/A
- Accommodations★★★★★
- Food.....★★★★★
- Services and attitude★★★★★

★ = poor ★★★★★ = excellent

Worldwide scale

I also enjoyed some reef and wreck diving. Sombrero, a small, uninhabited island, had enough soft coral to entice wide-angle photographers, and the visibility was better, maybe 40-50 feet (12-15m). As for wreck diving, the most popular is a former floating casino, the Daryl Laut, that sank in the late 1970s. Legend has it that the owners torched it for the insurance proceeds. The top of the encrusted 80-foot wreck sits at about 40 feet (12m), and it extends down to about 90 feet (27m). The outer structure was salvaged, but nearly the entire frame remains, making for good wide-angle shots with a blue background; the life included

flatworms, scorpion fish, and nudis.

For some divers, the day began in the outdoor dining room at 5:30 A.M. when the WIFI was strongest, but mostly there was no WIFI (which meant I did not constantly see people with their faces in their Smartphones). My day typically began at 6:30 A.M. with breakfast overlooking the water, seated at long tables that accommodated 10 or more. All meals were buffet-style, and for breakfast, besides eggs or omelets, they offered fruit, cereal, oatmeal, and bacon or sausage, as well as toast and rolls. Coffee was available 24/7, and the helpful wait staff kept my water glasses full. (Tap water is not potable, so CBR provided bottles, which I refilled from dispensers around the resort.) For the first two days, I ate

fresh salads at both lunch and dinner, which tasted fine, but I think they gave me a touch of Montezuma's. After speaking to an American dive leader who won't touch salads in the Philippines, I stopped eating salad, and my discomfort subsided quickly, and I only lost one morning dive. Buffet lunch and dinners included several tasty entrees -- beef, pork, chicken, and seafood, prepared mostly American-style with local spices -- as well as fresh vegetables, potatoes, pasta, and dessert.

The bangkas left at 8:30 A.M. for the two-tank morning dive, typically a 20- to 45-minute ride. For our one-hour surface interval, the boatman usually pulled up to a rocky beach, where we hydrated with water, hot coffee or chocolate, and munched cookies. Some folks waded ashore, but a 5-mil is not the best strolling

What You Need to Know About The Philippines

The Philippines has 22,500 miles of coastline, nearly twice as much as the United States, thanks to 7,107 islands. And it has lots of friendly people since Filipinos go to work all over the world, giving them an international outlook and affection for Westerners.

Manila, the capital on Luzon, one of the most densely populated cities in the world, is as busy as an ant hill. Traffic often stands still for what seems like hours. The jeepney (manufactured in the Philippines), a popular form of transport, evolved from the WW2 jeeps that were converted into colorfully decorated buses. Bicycle rickshaws are still popular.

Once you get away from the city, the village people, who live in a matriarchal society, are very easy going, in general, devout Catholics (except in the extreme southern parts of Mindanao, where there is a Muslim population) with most people speaking good English. Here, the U.S. dollar goes a long way.

The diving is extremely varied. For example, the Camotes Sea, which is bordered by Cebu island in the southwest and Leyte to the east, offers everything from the muck at Sogod Bay and the jetty at Padre Burgos to the whale sharks of Cebu and Limasawa Island. Malapascua, with its famous thresher shark encounters, lies to the north and Bohol, with its white sandy beaches, chocolate hills, and tiny tarsiers, to the south. You can tour the Camotes Sea by Bangka, staying at a different resort every night (www.abysworld.com). Or opt for a liveaboard if you don't want to be restricted to one island.

John Seymour (Mauritius), a retired PADI dive instructor and filmmaker wrote after a trip in December 2016, "The diving at Padre Burgos rates in my top three dive sites thus far. I am hooked after diving here [with an] incredible variety of corals and tropical fish, nudibranchs, sea snakes, scorpion fish, turtles and the most anemones and clownfish I have ever seen." He also saw a whale shark on his first dive

there.

Elsewhere, Tubbataha reef in the Sulu Sea is a uniquely protected eco-system reached by liveaboard from Puerto Princesa on Palawan. John Yavorsky (NJ) went there on *Philippine Siren* in August and reported a plethora of different marine life from nudibranchs to manta rays.

Dumaguete (Dauin) on Negros Orientalis is famed for small critters as well as the green turtle haven of nearby Apo Island.

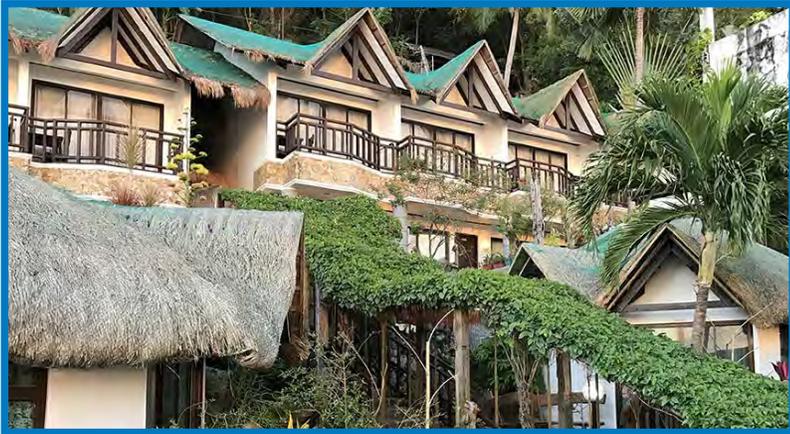
Closer to Luzon island you'll find WW2 wreck diving at Coron Bay. Ed Noga (OH) traveled there aboard the liveaboard *Atlantis Azores* in February and wrote "The [WW2] wreck diving was pretty good. Other than a seaplane tender and a couple of gunboats, the wrecks are cargo ships sunk by the U.S. fighters and bombers in a devastating 15-minute raid. These were ships that escaped from Truk, then Palau, previously."

Then there are the popular diving locations of Puerto Galera and nearby Verde Island. Michael Fritz (NJ) said of both Puerto Galera and Dumaguete, "Everyone speaks English, so it's easy to get around and interact with the (very friendly) locals" after visiting in March this year.

They certainly know how to look after you in the Philippines. Jeff and Pat Maeda (TX) said of Kasai Village on Cebu after a trip there a couple of years ago. "This is true valet diving. They take care of everything except your wetsuit and booties."

Manila and Cebu city have international airports. While flying between the other islands, Philippines Airlines cabin crew conducts quizzes with the passengers. It's all very sociable. If you travel economy class, Manila's international airport is crowded and not comfortable unless you discover the \$10 lounge, which it seems few people do!

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Accommodation at Crystal Blue Resort

a six- to seven-foot beam -- are powered by old truck engines and have bamboo outriggers on both sides. To move around, I had to crouch down beneath the low-slung canvas midsection. We divers sat on the gunwales from which we did our backroll. If there was any chop, we got wet in transit. The boatmen set up our gear, and not only brought it to us, but also helped us don it while remaining seated. The portable wooden ladders hooked over the gunwales, and, after handing up weights and tanks/BCDs, it took a climb up several steps with no handholds other than the ladder steps and a half-crawl over the gunwale to get onboard.

There are two boatmen for each bangka, and pound for pound, they are powerful fellows. They carried all gear on and off the boat daily, rinsed it nightly, and hung it up to dry. In the midst of a simple chat between dives, one straightforwardly asked me, "How old are you?" According to an American who lives there, it's a Filipino thing, and they mean no offense, but be prepared to have your age-fib already in mind.

There is no dock, so the bangka is beached, and the boatmen and divers must get on and off by walking a wobbly, wooden 6-inch-wide plank. While most divers need assistance, the boatmen dashed back and forth carrying the tanks and BCDs on their shoulders. While it's not a problem to fall into the shallow water wearing a wetsuit -- I did twice -- one can certainly do without the guffaws and ribbing from fellow divers.

attire in the blaring tropical sun. Nor was there much to see, other than the modest homes, often only shacks. After the second dive, it was back to the resort for lunch, maybe a nap, then a 3 P.M. dive. Also, there was a 5 P.M. boat dive right off the resort. If four divers with boundless energy could be found, they offered a night boat dive on a sandy bottom at 10-12 feet (3m).

Besides having flat bottoms, the wooden bangkas -- 18-25 feet (5-7m) long with

A New Tip on Avoiding a Cold that Could Ruin Your Dive Trip

Most of us divers worry about catching a head cold that will affect our diving, and I'm most worried during a long flight to somewhere exotic and expensive.

There's help, says a study compiled by researchers at three American universities and published recently in *Physical Review*, that says there are effective ways of minimizing the risk of contracting in-flight infections.

They say you can reduce the odds significantly by the way you board the plane. They found that the time spent in close proximity to other passengers after boarding and standing in the aisle to find your seat increases infection risk by 67 percent. When planes were boarded from both front and rear, they found that

the infection rate dropped to 40 percent. The larger the plane — that is, the more seats — the bigger the risk.

Here's the tip: Board early and get to your seat quickly. Or wait to board until the last minute. Either way, you cut your possible contact with an ill passenger and reduce the risk of infection and a bad cold that could ruin your diving. Of course, if you sit next to a person coughing and wheezing, look for another seat.

Multiscale model for pedestrian and infection dynamics during air travel – Namilae./Derjany/Mubayi/Scotch/Srinivasan <https://goo.gl/ayxH4R>

— Ben Davison

Hey, Divers, Don't Eat the Reef Fish

Reducing tourist consumption of reef fish is critical for Palau's ocean sustainability, finds a new University of British Columbia study that suggests other small island nations — including those in the Caribbean — might also consider adopting this strategy.

And, tourists who eat the reef fish are clearly contributing to their decline.

Climate change is expected to lead to sharp declines in Palau's reefs, and the best tourism management strategy includes a more than 70 percent reduction in the amount of reef fish eaten by visitors.

"Palau's reefs and the fish communities they host are incredibly beautiful and recognized worldwide as a top diving destination," says lead author Colette Wabnitz. "Tourist numbers can reach nine times the local population, and most come to enjoy the ocean. This puts enormous pressure on local marine resources that are central to local communities' culture, food security, and livelihoods."

The authors found that the health of reefs can be

better maintained by shifting seafood consumption to open water fish, such as sustainably harvested tuna, instead of reef fishes such as grouper, snapper, and parrotfish.

"Dining habits are removing important fish species from local reefs, and it's ironic that viewing these fish is the reason people come in the first place. This is an important step that can be taken now, rather than a future adaptation to climate change," says co-author Andrés Cisneros-Montemayor. "Sustainable tourism, especially ecotourism, shouldn't threaten the food security of local people or their environment."

Ecotourism, climate change and reef fish consumption in Palau: Benefits, trade-offs, and adaptation strategies. Colette C.C. Wabnitz University of British Columbia, Andrés M. Cisneros-Montemayor, University of British Columbia, Quentin Hanich, University of Wollongong, Yoshitaka Ota, University of Washington. Published in *Marine Policy*, September 19, 2017.

It's a rocky beach, so you need either booties or sandals. Almost every morning on the beach were several locals -- some with small children -- offering to sell us cheap beads. It was a sad thing to see, and an unfortunate fact of life in such a poverty-stricken country; despite how truly needy they were, we were in our wetsuits with no cash. Some people returned to help out.

My room, with a balcony and lovely view, had a comfortable bed, a small desk, and air conditioning, and would have been tight for two. Maids cleaned daily, and overall, the staff tried hard to fulfill every request. Like all Anilao resorts, CBR is built on a steep mountainside. This setting is picturesque, but with 85 steep and uneven steps from my room to the dive deck (with the camera room and dining room at the halfway point), I got plenty of exercise. Some rooms are about halfway down, so if steps are a problem, request a room closest to the dining room. I let the staff and boatmen carry my luggage up and down. The camera room is air-conditioned, with individual stations and chargers for each photographer.

I didn't know that the Philippines are geologically active, and I felt several small earthquakes, one strong enough to topple a shampoo bottle in the bathroom. Indeed, toward the end of the trip, we did not even comment upon the tremors. Due to the quakes and other causes, the electricity went off briefly from time to time, but never long enough to dissipate the air conditioning in my room.



Anilao is the nudibranch capital of the world



85 steep and uneven steps to the rooms

some slide shows of his jaw-dropping images and how he got the shots, describing such things as camera settings and strobe placement. One of Mike's tips that helped me to get faster at macro focusing was first to learn the minimum focusing distance of your lens (for my 105mm, the minimum is six inches). Mike told me to move my head away from the viewfinder while setting the port about six inches from the subject. Then move back to the viewfinder to focus. Simple and helpful.

CBR offers no land excursions, so with no nearby bars, restaurants or nightlife, during my 10 days at CBR, no one left the resort. CBR has a small bar; drinks are about \$5, and wine is sold only by the bottle from their tiny selection.

So, CBR is a great place for a diver wishing to shoot the small, even miniature critters of the reef, but divers with other goals (and those accompanied by nondivers) may be disappointed. After I had a chance to review all my shots -- the number and diversity of nudis were incredible -- I'm indeed glad I made the long journey. The accommodations, food and extremely helpful and knowledgeable guides made for a unique and rewarding experience.

-- GPT

Our undercover diver's bio: *GPT was certified in 1983 and has made more than 900 dives throughout the Caribbean, California, Australia, and Hawaii. For the past 10 years, he's taken several organized underwater photography trips where instruction is an important feature.*



Diver's Compass: A 7-night stay at CBR cost \$1,696 per person, double occupancy (\$2572 for a single) and included all meals, 18 boat dives, nitrox, and van transportation to and from a Manila hotel (the 78-mile trip is about 2.5-3 hours) www.divecbr.com ... Seeing how hard everyone worked, it was easy for me to leave a \$300 tip, which I divided among the dive guide, boatmen and resort staff... The Marriott near the Manila airport is about \$150/night; the CBR van picked up all the divers there the morning after arrival. Entering the hotel was like going through airport security --

my luggage was X-rayed, and I had to walk through a metal detector ... Philippine Air has the only non-stop U.S.-Manila option, but I didn't take it because of the airline's reputation for using older equipment and changing planes and schedules at the last minute ... The nearest hyperbaric facility is 17 miles away, but the journey may take an hour due to the hills and poor quality of the roads.

Roatan, the Brac, Sulawesi, Fiji ...

and a lot of bad diving behavior

From time to time, we like to update our readers on good diving opportunities and operators to avoid, and to improve the decorum of our fellow divers. So, have a look:

Honduras is a dive destination undamaged by this year's hurricanes, with lots of living coral and tropicals, even whale sharks). On Utila, Eutopia Village is getting good marks from our readers. Frank

Rudecoff (Carbondale, CO), there in April, says it's "a beautiful, well-managed resort. The valet diving service was excellent. The accommodations are clean, spacious and air-conditioned. The meals were normally in a beautiful dining room overlooking the water. A few times tables were set in the shallow end of the pool and we ate while seated in the water.

The diving is recovering from overfishing, so fish were sparse at a few sites. We swam with whale sharks on many occasions ... Elizabeth

Hilla, (Arlington VA), there in September, says "It's a small resort that caters to divers with a feel of a remote, rustic resort. Our divemaster, Chris, was amazing, and the dive staff takes care of everything. We saw eagle rays, morays, turtles, sharks, stingrays, lobsters, various crabs, and the usual Caribbean fish. The corals are in good shape and varied. We saw all kinds of small creatures, which Chris was excellent at pointing out. We got to snorkel with dolphins about 15 minutes." www.utopiautila.com

And, the *Roatan Aggressor* is being well received. Don Wikle (Atlanta), aboard in June, says: the previous *Utila Aggressor* has been refurbished stem to stern. Dive sites were off Roatan and Utila, as well as open water seamounts. There was one planned shark dive, which was so good, the divers voted to do it again. There is plenty of variety with reef, wall, and wrecks. The crew and service were among the best. Rooms are small, but nice ... Danee Hubbs

(Seattle), aboard in July, says "I rented equipment, and the crew set it up for me near the entry; I have some arthritis problems, and the crew could not have made it any easier for me. We dove Cayos Cochinos and most sites in the area except for Utila. Marine life was plentiful, and a special treat was the millions of silversides as we dove Dolphin Caves. Food was incredible and included organic greens

from Guanaja, plenty of local food and flavors, and decadent desserts!" www.aggressor.com

The Perils of Diving in Hurricane Season:

The *MV Juliet* had just begun its week-long Bahamas' trip October 1, with Frank Hall (Floyds Knobs, IN) aboard. "On the second day, trying to find a location where it was safe to dive was getting difficult, if not impossible. Captain Liza called a group meeting. The weather was projected to get worse, and crossing the Gulf Stream more difficult. We could stay one more day, or go back to Miami.

The group elected to go back, as the waves in the Gulf Stream were supposed to be 14 feet later in the week. Arrived back in Miami October 2 at 7:00 p.m. after a very rolling trip in 8- to 9-foot Gulf Stream waves. They gave us credit for the unused portion of our trip toward another trip (or we could submit a claim to our trip insurance). Thanks to the Captain and crew for getting us to Miami, a bit queasy, but safe and sound to dive another day."

www.julietsailinganddiving.com

For serious divers wanting to visit **Australia's Great Barrier Reef**, Mike Ball's operation has always been the choice. Jeff Robertson (Roseville, CA) dived with them years ago, but in April, with only a few days to spare, he went with Deep Sea Divers Den. He started in a day boat out of Cairns that had about 80 snorkelers, and divers for two dives, then was transferred to *Ocean Quest* liveaboard for diving and two nights aboard, then met up with the *Sea*

Others Want To Read About Your Trips

We're gearing up for the 2017 edition of the *Travelin' Diver's Chapbook*, so we need your reports to make it as chock-full as we can. So send us reviews of dive operators, liveaboards and resorts you've dived with this year by filling out our online form at <https://goo.gl/bacmCT>.

You can also follow the link "File a Report" on the left side of our homepage (www.undercurrent.org) or after logging in, follow the "Reader Report" link in the top navigation bar. Please send us your reports ASAP, and thanks for helping us keep up-to-date with both the great and the not-so-great dive travel experiences out there.

Are Octopuses Taking Over?

Cephalopod populations — squids, octopuses, cuttlefish — are booming and scientists don't know why. An analysis published recently in *Current Biology* indicates that numerous species across the world's oceans have increased in numbers since the 1950s. It's probably because we've depleted populations of predatory fish.

Octopus and their relatives have relatively short lifespans, and many of the young normally get picked

off before they mature.

Furthermore, says study co-author Zoe Doubleday of the University of Adelaide, "Cephalopods tend to boom and bust. They're called the weeds of the sea," she says. "If environmental conditions are good, they can rapidly exploit those conditions because they grow so fast."

So if an intelligent race of eight-tentacled underwater creatures end up taking over the planet, we can't say we weren't warned!

Quest for the afternoon ride back to Cairns. "Our cabin on the *Ocean Quest* was very nice, the food was adequate, but the briefings were terrible, with little in the way of dive planning. Go on your own or pay \$15 per diver per dive in a group. The reefs were in bad shape from coral bleaching, overuse, and inexperienced divers. The mostly young and energetic crew seemed helpful and friendly. I asked one of the crew about the minimal boat, safety, and dive briefings and he said that Diver's Den found it was easier to correct people than to try to inform them." And, since two divers were left to drift away from a GBR boat 20 years ago (remember the film *Open Water*), Queensland is supposed to have tough rules! www.diversden.com.au/liveboard.html

Undercurrent Gets It Right

Robertson says that "their reviews on Trip Advisor are glowing, so I'm in the minority on that score." And that's why *Undercurrent* stands out with serious divers, because we pride ourselves in honest writing, as do our subscribers pride themselves on their honest reader reports. For example, Steve Dougherty joined Los Island Voyages out of Nassau in August and says "Read about it in *Undercurrent's 2017 Travelin' Diver's Chapbook*. The review was all it said it was and more. Three to four a day plus night. Crew was impressive, food good and plenty beer and other liquors. The dive masters were very informative" ... And, Dr. Bill Schlegal went to Fiji's Paradise Resort in May and says, "You will be pleased to hear that all the 16 divers in our group, and two nondivers, agreed wholeheartedly with our feature article on Paradise Resort. Paradise, Taveuni is an amazingly high-end resort for something that remote. The description of the diving was wonderful and covered well." www.lostislandvoyages.com

www.paradisecoversortfiji.com

In 2004, *Undercurrent* was the first dive publication to report on the whale sharks off Holbox, and they've since become an enormous attraction.

Perhaps the easiest way to see them is through Isla Mujeres, a small island off Cancun. Howard Kaiser and his wife (Liberty MO) wrote: "We booked with Rafael de la Parra, a gentleman recommended by another *Undercurrent* reader. Rafael and his son gave us three straight days of interaction with at least 70-80 whale sharks, often with four or five within 20 feet of us! Rafael is an educator, and his knowledge made this trip exceptionally rewarding. He was a master at not only finding the whale sharks but steering away from the 30-40 boats that came out each day, often with eight to 10 people in one boat. Rafael was able to move a few miles away and we'd have quiet water that made for great photo opportunities." www.isla-mujeres.net

Bad Behavior from our Fellow Divers

Michael & Jan Lewis (Vonore, TN) went out with Ocean Frontiers on **Grand Cayman's** East End in June and had a great diving trip — they've dived with them 15 years, and, like *Undercurrent*, recognize it as one of the best full-service dive resorts in the Caribbean. However, they raise an interesting problem about rude photographers, "who extended their morning dives to one hour and 15 or 20 minutes without regard for the other divers or the crew. The crew had no chance to get lunch, and divers who were going to another resort for lunch or to pick up other divers had less than half an hour to get back to check in for the afternoon dives. We would have liked the shop to say something to these rude divers, and I think they might have. They should have been banned from future dives after doing this on multiple days." Some photographers will argue that they paid good money, so they want maximum bottom time, but that's a bit self-centered answer, we think. <https://oceanfrontiers.com>

And speaking of rude divers, what about this group aboard the *Okeanos Aggressor* last January? Elizabeth Russell (West Mifflin, PA) had a good trip on a local itinerary along the **Costa Rica** coast,

California's Giant Sea Bass — Friend or Food?

What price would you put on an encounter with one of these iconic California fish that can grow up to six feet (1.95m) long and weigh 500 pounds? Would you prefer that encounter to be underwater or at the fishmonger? We think we know the answer to that second part!

Ana Sofia Guerra has gone to war on behalf of California's giant sea bass. A graduate student at UC Santa Barbara's Dept. of Ecology, Evolution, and Biology, she reckons that divers will spend \$2.3 million, compared to a catch worth of \$212,600 to the fishing industry. Overall, says Guerra, California hosts 1.38 million dives/year, and the divers spend between \$161 and \$323 million. Yet few ever see one of these enormous fish, even though they often hang near kelp beds in depths accessible by sport divers.

She and other researchers, together with co-author Douglas MacCauley, recount in *Aquatic Conservation: Marine and Freshwater Ecosystems* that those millions represent divers' interest in paying for a charter expedition, with the chance to see these fish that are otherwise protected. Those caught accidentally are limited by number.



But this accidental catch happens so frequently that giant sea bass often end up on restaurant menus. Too often.

Just as researchers have determined that shark tourism is worth 17 times more than any shark fishery, or manta ray encounters are worth 28 times more than the sale of dead manta parts, giant sea bass encounters by divers should not be undervalued. Maybe it's times to eschew that choice at the dinner table.

"Fishing and ecotourism or wildlife viewing are *not* mutually exclusive activities," Guerra said.

"The paper highlights ways to strategically maximize the value of giant sea bass to both."

PS: Ken Kurtis, who runs Reef Seekers in Los Angeles, wrote on October 15, "I saw an FB post today from Karen Norris (one of our divers — so I know she only speaks the truth), who was out at the Avalon Underwater Park off Catalina on Saturday and who says they saw ... THIRTEEN ... Black Sea Bass (aka Giant Sea Bass) out around the 55-foot contour. This sounds like the same depth, so perhaps the same area, where we've been seeing them the past few weeks. But 13 of them, my oh my!!!!" <https://goo.gl/PJiy6o>

except for these louts. "Seven people who came as a group were loud, arrogant, and obnoxious. They found reasons to throw our drying suits on the floor, move gear from lockers, sit on our lockers when we were trying to dress, and be general nuisances. After the last dive of the day, they took three bottles of wine each and went to the upper deck. They left no room for anyone else to sit, so the remainder of the passengers were relegated to the salon. I know that some boats ration alcohol and charge for extra drinks. I don't think that is the answer, but perhaps some reasonable limits should be put on drinking and diving."

And, she supports a pet peeve of ours. "On our first day, our divemaster wanted to swim as fast as possible to get to who knows where. I'm not sure why young male divemasters think their divers want to swim long distances into the current, but it seems to happen on too many boats. Several of us decided

to follow our own dive plan after we hit 104' and the nitrox alarms on all the computers started screaming. After that, the dives became less stressful and more enjoyable."

There's a good chance that a reader or two may recognize themselves, so we offer it up as an opportunity to join The League of Considerate Divers next time out. www.aggressor.com

Guadalupe and Guadeloupe

Mark Tarczynski (Glendale, CA), went to **Mexico's Guadalupe Island** with the *MV Sea Escape* in September. He got plenty of great shark photos and was happy with the cage diving, but, he says, "OMG, this boat is filthy. Every night the bottoms of my feet were black ... like I had been walking around in black mud. Do they ever hose down the decks? Safety? Well, the door from the dive deck to the salon, on pretty much every liveaboard I've

been on, is a steel bulkhead door that seals against water intrusion in case of a catastrophe. On the *Sea Escape*, the doors are standard residential doors and seal against nothing! If you are the hearty, uber-macho, California diver type, who likes to spearfish, or drop below 300 feet on tri-mix gas, my issues with *Sea Escape* probably won't matter, but if safety and a 'clean' operation are important, I would recommend a different liveaboard." The Nautilus Fleet has great boats for diving with the great white sharks of Mexico's Guadalupe Island, and it is preferred by *Undercurrent* readers. <http://southernportliveaboard.com>

Don't mistake Guadalupe Island for **Guadeloupe**, an island in the Caribbean. Americans rarely seem to dive there — probably because French is the primary language — but Cousteau loved it, and there's a large marine reserve there named after him. From the Atlantis Dive Resort in Guadeloupe, Meurice Vincent wrote to say that the reserve had survived hurricane Maria and was good for diving. <https://goo.gl/p9G73d> How about one of our subscribers going there and sending us a report?

Luxuriating on Land

While **Indonesia** is liveaboard heaven, a week or more confined to a boat is not for everyone,

so if you're one of those, but dying to get wet in Indonesia, Gerald Wilson (South Orange, NJ) says Bunaken Oasis and Spa on North Sulawesi, near Manado, is "quite simply, the finest resort I've ever been to. It is a small resort with a high level of service. From your airport pickup on, you'll never have to pick up anything heavier than a large glass of beer. The rooms are private cabins, beautifully appointed, with air conditioning. Vaulted ceilings and beautiful views from their locations on the hill. Diving's superb. Plentiful, healthy corals, tons of fish, and lots of interesting smaller creatures. I saw more frogfish than I've seen over 700+ dives. Turtles abound. And who doesn't love clownfish? The boats are large and beautifully appointed with bathrooms, and carry a maximum of five divers. The guides are sharp-eyed and attentive, with typically two guides per boat. I was part of Martin Edge's underwater photography workshop, so all of us had vast amounts of heavy, fragile, and expensive camera gear. Each diver had his own camera Sherpa to carry his rigs back and forth from the camera room to the boat. The menu varied, always with a local option, and had artistic and tasty appetizers, soups, beautifully presented, flavored entrees, and yummy deserts. One night, the staff serenaded us with local songs, pop classics, and even a charming solo ren-

Is That Warranty Worth the Paper It's Written On?

So you want a watch for scuba diving. You buy a watch such as a Pro Diver, represented in the U.S. by Invicta Watches. It's advertised as suitable for divers, and on the watch itself, it says it's good for 50m to 300m deep (according to model). It represents very good value, too. Seems ideal?

Not if you're Jon B. Felice. He's brought a case against the Invicta Watch Company because neither of the two watches he purchased through Amazon appeared suitable for diving. The first continually leaked and proved not fit for the purpose.

He made multiple attempts to resolve the matter through Amazon and the Amazon Marketplace seller Clockwise and discovered that the excessive fees and burdensome procedures required for the repair service made it an unreasonable option for a watch costing a little more than \$80.

So Jon looked at the Invicta warranty that came with the watch and discovered it required him to pay a \$28 warranty service fee plus the cost of shipping and insurance. Also, the warranty stated that the watch may be replaced with one of lesser value. That's less than the

original \$80 he spent!

Undeterred, Jon then bought a second Pro Diver watch for \$55 to replace the first. Within a short time, the wristband fell apart, and he then discovered that band defects were specifically excluded from the warranty. He had to employ a third-party watch repair service to rectify the defect for \$15. He then brought suit.

It appears from Court documents that social media and multiple websites have been full of similar complaints, yet Invicta continued to market and sell Pro Diver watches as suitable for diving and other water sports. These watches were accompanied by an international warranty card and booklet, but it appears that there were multiple versions of the warranty.

The case in the United States District Court, S.D. Florida, is on-going. It may not have been an expensive purchase, but there's clearly evidence the Pro Diver may not be suitable for a diver, despite its name.

Have you had warranty issues with scuba gear? Let us hear from you, not forgetting your town and state.

– BenDDavison@undercurrent.org

dition of Leonard Cohen's 'Hallelujah.' Truly a remarkable experience!" www.bunakenoasis.com

Most folks headed to **Cayman Brac** stay at the well-regard Brac Reef Beach Resort, but if you prefer getting away from the crowds — one of our subscribers took a group of 50 divers there — consider what Richard Rigg (Boise, ID) advises. "The Brac is very beautiful, very quiet. The diving is as good as diving Grand Cayman's the East side (though insufficient restaurant choices). We stayed at a VRBO owned by Henry, who has five houses you can rent. His onsite manager, Sasha, will cook for you; blackened fish or chicken are two of her top dishes. She buys the food and you get to enjoy it in the comfort of your home. The units Henry has are top-of-the-line. Brac Scuba Shack goes out of their way to make sure you have a great experience; they are on a flexible schedule, so if you want to leave at 9 a.m. instead of 8, they do it. Safety and instructions about the sites are foremost." Email to:

hbarbera@comcast.net

You Can't Get There from Here

That Yap/Palau United Direct Flight is No More. And Ken Kurtis, owner of Reef Seekers in Beverley Hills, tells us that as of January 8, "If you want to go from Yap to Palau, or from Palau to Yap, you'll have to fly to Guam and endure a long (12-17 hour) layover." ... Adam Preston (Koh Samui, Surat) adds that the cost of going to Micronesia is the bad attitude of United Airlines employees "and the aggressive attitude of American officials when passing through Guam. Immigration consists of long, pointless questionnaires (everyone needs a visa anyway, even to transit), and if the box is not ticked in the right way, you are sent back to complete a new form."

Double Depth-Record Bids End in Tragedies

During the last week of September, a Bulgarian technical diving instructor-trainer died in Greece while attempting to set a new depth record for women by diving to 754 feet (231m). Teodora Balabanova (45) died, while her husband (47), who had accompanied her, is now in the hospital in critical condition. The planned dive using trimix as a bottom gas and travel gas was intended to have 5.5 hours of decompression stops, but she became disoriented at depth and had to be pulled to the surface by support divers, while her husband cut short his mandated deco to 3 hours.

The Guinness World Record for deepest female scuba-dive was set at 718 feet (221m) in 2004 by South African diver Verna van Schaik in Boesmansgat Cave, South Africa.

Only days earlier, a well-known male Polish technical diver, Waclaw Lejko, failed to surface after attempting a record-breaking 902-foot (275m) dive in Lake Garda, Italy. His body was later recovered by a remotely operated vehicle at a depth of 754 feet (230m).

Next month, the *Travelin Diver's Chapbook*, with hundreds of well-organized pages of scores upon scores of world-wide dive resorts and liveboards, will be delivered to your mailbox. There is no better way to research your next dive trip. Thanks for being members and subscribers. As a nonprofit organization that takes no advertising, we can't do this without your support.

— Ben Davison

Will Your Liveboard's Insurance Cover Your Loss?

many will, some may not

In June, we reported about a fire aboard the *MV Overseas* in the Red Sea that resulted in the passengers, though safely evacuated, losing all their possessions. They still are having trouble getting compensation from the vessel's Egyptian operator. Most likely it's because there is no money available and no insurance. They will have to rely on their own travel insurance or homeowner's insurance to cover their losses.

That led to a conversation with an Indian Ocean liveboard fleet owner whom I've known and

trusted for many years and who recently took a new liveboard into a territory of Indonesia he was unfamiliar with. Sensibly, he put the management of his vessel into the hands of someone who, acting as an agent, had an enviable reputation for operating liveboards there.

When it came to insurance, our liveboard owner, who asked to remain anonymous lest he lose friends in the business, told us he was shocked when his agent told him he was paying far too great an insurance premium for his vessel. He decided

to look into it and was doubly shocked to find that when he looked at the less expensive policy he was recommended, he didn't believe the insurance would adequately cover the people on board. He was equally shocked to discover this minimum coverage was common among similar liveboards in Indonesia.

"I'm very happy that Undercurrent asked this question! Of course, divers have the right to know."

It appears that some owners often get coverage for their own losses, that is, the loss of the hull, but more often than not underinsure or even fail to insure the passengers' losses, including their lives or their property.

You might recall the loss of 20 lives in October 2001, when the liveboard *Wave Dancer* capsized during a hurricane that hit Belize. DAN insurance covered none of the deceased divers. You see, the tragedy was not a diving accident. The *Wave Dancer* carried \$5 million of insurance, but after the cost of raising the *Wave Dancer*, less than \$4 million was left to be distributed among the families of the 20 dead.

What if, as a passenger, you suffer loss or injury in some way? What if you slip down the steps of a wet companionway and break your back? Are you going to try to take the boat's operator to court, probably in some far-off country – where most liveboards are

flagged – with a dubious reputation for legal outcomes?

And, keep in mind, your own insurance will not provide any punitive damages in the case of proven negligence. And pursuing a defendant for pay-out in a distant land can be impossible.

Despite what some may tell you, it's difficult enough to make a profit from a liveboard business. The least expensive insurance option will always have a seductive appeal to those who have to pay the premium. Would you be prepared to pay a greater cost for your dive trip, if you knew the boat was properly covered to carry passengers?

Some Operators Reply

Undercurrent contacted more than a dozen major liveboard operators. Those who replied included *Galapagos Sky*, and *Odyssey* in Truk, The Siren Fleet, the *Atlantis Azores* in the Philippines, the Emperor fleet in the Maldives, Worldwide Dive & Sail, and *Dewi-Nusantara* in Indonesia, all operations with well-established reputations. Replies were similar in that they all had proper Protection and Indemnity insurance, commonly known as P&I. It is insurance for third-party liabilities and expenses arising out of the ownership or operating of vessels. Risks covered include third-party liabilities for cargo, collision, and damage to or loss of property.

Amy Lesh wrote, "*Galapagos Sky* carries adequate insurance of the vessel and adequate liability insurance. There is also a specific water sports rider as well, due to the activity of scuba diving.

Deadly Air Kills Experienced Diver

Andrew Thwaites, 44, a very experienced diver and Queensland, Australia, Fisheries Director died from carbon dioxide and carbon monoxide (CO) poisoning after his air tank was filled with grossly high levels of these toxic gases. The Brisbane Coroner's Court heard that the remaining air in his tank contained 2366ppm of CO as well as high levels of CO₂. The recreational limit is 5ppm.

In fact, Thwaites, himself had filled his and six other tanks on 13th July 2016, and of those that were recovered and tested, two had high levels of CO. Apparently, other tanks also had been filled from the same compressor at the clubhouse of the Underwater Research Group of Queensland. Thwaites, a widely respected marine scientist, was one of a small number of members approved to use the club's compressor.

The Court also heard that Thwaites' partner, Dr.

Kelly-Anne Masterman, suffered nausea, splitting headaches and short-term memory loss after the dive. The air in her tank was found to contain CO at 820ppm, as well as CO₂.

Both CO and CO₂ are odorless gases, and neither is detectable without chemical gas analysis, but such contamination is usually caused by a compressor air intake that is contaminated by the exhaust gases from the compressor's prime mover, a diesel or gasoline engine.

Gas expert Bill Hunt testified that the compressor had not been properly maintained, the compressor room had inadequate ventilation, and the filtration was completely inoperational. The air produced had not been tested since 2011. Because the compressor had irrevocably broken down since the incident, it was impossible to determine why such high levels of CO were present in Thwaites' tank.

“We do require our passengers to sign a waiver acknowledging our terms and conditions of the transportation contract. Some of our travel agents request a Certificate of Insurance before they book with us and/or ask for an annual update of coverage. We have absolutely no problem providing that.”

Cliff Horton for *Odyssey* in Truk replied to our inquiry, “We carry liability insurance that covers our guests and even our crew in the event of negligence or accidents on our part, for both in water and out of water.”

We also had a response from All Star Liveaboards, which has a fleet in the Bahamas that includes *Aqua Cat*, *Cat Ppalu*, and *Blackbeard*, also *Cuan Law* in the BVI and *Aurora* in Indonesia. Bruce Purdy wrote, “Our policies have always included liability insurance to cover injury or death on the boat or while diving if from negligence on the part of the boat. (What determines boat negligence is up to the courts.) He offered to send us copies of the certificates.

“I think it is pretty standard for Caribbean boats to have coverage for death or injury on the boat,” Bruce continued. “The insurance for the diving isn’t on the standard boat policy, but the insurance carriers that handle our boats, and I think that of most of our competitors have, that coverage [is] added on.”

Alison Bygrave from *Dewi-Nusantara* in Indonesia wrote, “It is telling we have only been asked by two agents for this in my whole six years with the boat!” Guido Brink, the owner, added, “I’m very happy that *Undercurrent* asked this question! Of course, divers have the right to know. Agents and wholesalers should ask this from every dive live-aboard and dive resort that they represent.”

Craig Stevens for Mike Ball Diving Expeditions in Queensland, Australia, pointed out that in Australia, commercial operators are regulated by legislation and must have P&I liability insurance with a minimum cover of AUS\$200 million.

Alex Bryant with the Emperor fleet, including *Emperor Orion*, in the Maldives also replied in the affirmative about having Protection and Indemnity insurance cover.

It was the same response from Mark Shandur of the Siren and Master fleets that include *Indo Siren* and *Truk Master*. Andy Pope of *Atlantis Azores* in the Philippines even sent us a copy of its certificate of insurance, adding that he believed many other Filipino liveaboards were often inadequately insured.

Aqua Lung Safety Notice

I get angry if I find my regulator dumped into a rinse tank without its first-stage dust cap in place. It usually means an expensive service at a time the regulator would not otherwise have needed one.

Aqua Lung got around the problem by making some models available with an Auto Closure Device or ACD. It stopped water getting into the works. A great idea, but Aqua Lung is now conducting a voluntary product check of select regulators with the ACD yoke systems. They are concerned that at the time of manufacture, a component may not have been tightened properly, resulting in a possible gas-flow failure during a dive.

Manuel Cabrere, the Product Manager of Aqua Lung, told *Undercurrent*, “Please note this is not a recall; it is the step just before. Since issuing notices to service technicians, Aqua Lung has been made aware of two additional incidents and has decided to elevate our communications by going directly to our consumers . . . We found out that one of our airgun screwdrivers [on the production line] was defective, and did not tighten a component to the correct torque value consistently. In May 2017, we modified our production process to better insure the torque on the assembly is set correctly.”

Models affected are the Titan LX with serial numbers prefixed E or F, the Core ACD with serial numbers prefixed E-H, and the Legend ACD or Legend LX ACD. Aqua Lung If you have one of these regulators, best get it checked out by a qualified Aqua Lung service technician before you next use it.

— Ben Davison

We received no reply from the Aggressor Fleet, but note that Aggressor Fleet is essentially a marketing organization and the liveaboards carrying the Aggressor name are individually owned, and each may or may not carry its own insurance. But, for all the other major operators, it seems they might carry \$5 million-\$10 million coverage for guest liability, presumably enough to cover the guests for injury resulting from negligence. Though, in the case of the *Wave Dancer*, \$4 million for the family of 20 deceased divers, most of whom were the families’ breadwinners, was not enough.

And what is the greater cause for concern? Those that do not hold adequate P & I insurance or none at all? Of course, they aren’t going to admit that to us.

What the Insurance Guru Said

We contacted Peter Meyer, a well-respected insurance expert with a long history of advising on insurance matters for the diving industry worldwide. Meyer, Partner at Owl Underwriting Agency in Vancouver, BC, old *Undercurrent*, “Typically, I suggest to all of my dive vessel clients that they should ‘require’ all their passengers to have personal dive accident insurance (DAN or equivalent) before allowing them on board. In addition, I advise my clients (individuals or dive facilities) who are booking a dive trip on a vessel, or at a resort, to request proof of insurance from the operator (in the form of an Insurance Certificate) showing the coverage carried by the operator. If the operator does not carry appropriate coverage or is not willing to provide proof of coverage, don’t go with them!

“We follow the same procedure/suggestion with other types of insurance. For example, I received a request from a U.S.-based retail facility to issue a certificate of his insurance to Hollis Rebreathers as they wanted to become a Hollis dealer and Hollis wanted proof of their coverage before appointing them a dealer. I agreed, on the condition that Hollis also provide a certificate to the retailer showing that Hollis also had insurance for its products.”

“The philosophy is quite simple: you need insurance for your own liability exposures (homeowner, diver, retailer, vessel operator, etc.) and the people/businesses you deal with need their own coverage for their own exposures. Going on a trip, or dealing with a business partner, where they do not have their own coverage, is foolish at best.”

Back to our unnamed liveaboard operator. He is most concerned about the liveaboard operators in the Indo-Pacific, where he suspects a majority do not maintain appropriate coverage. And, there

Awake to a New Kittiwake

The Caymans have suffered hurricanes in the past, and their marketing efforts have never been daunted by them. And while in October, hurricane Nate kicked up 10 foot seas, moving Grand Cayman’s famed *Kittiwake* wreck 10 feet (3m) deeper off Seven Mile Beach and giving her a significant port lean, they’re saying it offers a whole new, better-than-ever diving experience.

“With all its new angles, the wreck has become an even more interesting place to swim around and navigate,” said Jo Mikutowicz, owner of Divetech. “It’s still teeming with marine life; schools of horse eyed Jacks, turtles, green moray eels and tons of fish. There are some exits that are now not accessible because they’re facing the sand, but there are no new holes that have been created.”

“Our Sunset Divers team was pleasantly surprised during the assessment dive, and could not wait to take our visitors back to see the ‘new’ *Kittiwake*,” said Sunset House’s Emma Jean Fisher, also watersports director of the Cayman Islands Tourism Association. “The early reports from our first guests through the *Kittiwake* are that she feels more like a wreck now, an awesome dive!”

While the *Kittiwake* today is surely not a sow’s ear, great marketing skills ensure that she remains a silk purse.

are other regions as well, as the sinking of the *MV Overseas* in the Red Sea underlines.

So, if you’re concerned about liability insurance, ask your booking agent for evidence of coverage and get the answer in writing. It’s extremely unlikely that you’ll ever need a liveaboard’s insurance coverage, but divers aboard the *MV Overseas* thought that, as well. So ask the question when you book.

– John Bantin

Are Today’s Regulators Better than of Old?

Yes, but get yourself one approved by the EU

If you hunt down and watch *Never Say Never Again* (1983), you will know that US Divers was the regulator of choice for James Bond and his friend, Fatima Blush. No doubt some people still use that model.

Long-time subscriber Thomas Lopatin (Hopatcong, NJ) wrote to ask *Undercurrent*, “Back in 1988 I purchased a USD Pro Diver regulator, based on its rating by the U.S. Navy, that you published in

an *Undercurrent* issue ‘way back then.’ It’s been my primary regulator ever since! I’ve had routine maintenance performed on a regular basis, and it still breathes great.

“I would be interested in learning more about what significant improvements (beyond all the marketing ‘hype’) have been made to primary regulators since I purchased mine. Do the current ones

breathe any easier? Do they hold up better between overhaul schedules, etc? Based on what I'm currently aware of, there have not really been any 'sea-change' design improvements that have motivated me to upgrade."

The diving trade was scandalized. Many retailers held large stocks of regulators they wanted to dump.

What Tom is referring to is a 20-page 1988 issue of *Undercurrent* in which we reproduced the full 1987 U.S. Navy regulator tests, revealing that many sport diving regulators were seriously deficient as a diver approached 99 feet (30m), or even as shallow as 66 feet (20m), especially if he or she had to breathe hard. His USD Pro was one of the top regulators by those 30-year-old standards and is probably just fine today for the conservative sport diver, though modern regulators breathe much easier.

In 1987, 26 of 43 models tested by the Navy didn't pass muster, including models from Scubapro, US Divers, and Poseidon. Only eight were superior and safe for all levels of sport diving. The Navy tests were not circulated by the industry, so that we made the tests public was of great concern to the manufacturers, and we received a heavy-handed letter from Performance Diving, a now-extinct company, that threatened to sue us for our reporting. We didn't back down, but no other publica-

tion picked up the tests, so they remained largely a secret known only to *Undercurrent* subscribers.

However, in the UK a few years later, regulator testing began to go public, and eventually the results helped usher in new European legal standards that today assure us that regulators even in the U.S. are, indeed, safe, which they weren't in the 1980s. Here's what our Senior Editor, John Bantin, has to say:

* * * *

While I was Technical Editor of *Diver Magazine* in the UK, I started publicly upsetting the regulator manufacturers with my honest in-water comparison tests. One of the first I published, back in 1990, really set the cat among the pigeons!

At that time, there were plenty of bad regulators available, but experienced divers swore that the Swedish-made Poseidon Cyklon was the best. At the same time, a new regulator was produced in the north of England by Ken Ainscough, who owned a small engineering company. Since I was a believer in the Cyklon, I devised a test to demonstrate how this untried newcomer to the regulator market would be a poor performer by comparison.

I fitted four second-stages of this new regulator to one first-stage, and with four test divers (each equipped with their own tanks and regulator), we descended down the line to determine at which point the test regulator was unable to feed to all of them the air they needed. The idea was to replicate just one diver who for some reason — panic, current, etc. — was working extremely hard to get air.

Who Fact Checks "Oxygen-Breathing Diver"?

Journalists often do their research by reading reports by other journalists. This can lead to inaccuracies when information falls into the hands of the ill-informed.

For example, a 20-year-old Indian woman living in California was severely injured in a July scuba diving accident in Hawaii, but it was widely reported that she fell into a coma after her oxygen mask fell off. From reading this, someone who knows diving would be unclear whether she was receiving therapeutic oxygen after a diving accident or if she suffered a near-drowning when she lost her regulator (air supply) while underwater. Sadly, she later died. (*decanherald/thenewsminute/bangalormirror.com*)

In May, *Undercurrent* reported the story of a Spanish diver rescued from a cave on the Spanish island of Mallorca. The BBC got hold of the story in July and

retold it in an online news magazine, but while the journalists got the facts correct, the headline writer couldn't stop himself claiming that the man was trapped in an underwater cave and running out of oxygen. (www.bbc.co.uk/news/magazine-405580670)

Even the journalist writing for www.enjuris.com, a legal advice website that asked guidance from *Undercurrent* regarding diving fatalities, talks of 'bad oxygen' and managed to write "If you're underwater and all of a sudden your equipment malfunctions or your oxygen tank stops working, you are out of luck," despite being forewarned. And, how does a tank stop working?

What is this love affair that ill-informed writers have with oxygen? Is it because it's seen as lifesaving in a hospital environment? Is it that they just don't know? Alas, few of these journalists know that pure oxygen would be lethal to a diver within sport diving limits.

I was shocked to find that at 180 feet deep (55m), the new regulator was supplying air better to each of the four divers breathing at once than when they switched to their individual regulators! I wrote the story, *Diver Magazine* published it, and the rest is history.

And, the regulator I presumed would hold up, but in fact outperformed the others, was the first of a new range of Apeks regulators.

The diving trade was scandalized. Many retailers held large stocks of regulators they wanted to dump. The boss of Poseidon at that time, Thomie Hjalmmner, was so outraged when we published the results, I received a lawyer's letter from him. (Under English Law, as in America, if it's true, it is not libelous). It didn't stop me, and I went on to do the same with other well-known regulators. We soon discovered which regulators were the best and those that were not. The diving trade in those days hated these revelations.

At the same time, British engineers Ian Himmens and Stan Ellis proved staunch allies. They produced the first ANSTI machine, which, besides backing up my in-water experiences, could measurably test regulators for their breathing efficiency. It used a turnkey system that plotted the inhalation and exhalation effort together with the effort required to initially pull open the valve, producing an easily understandable and quantifiable graph.

Over the years, the ANTSI tests became standardized and accepted. While there was no independent effort in America to ensure overall that regulators were safe for divers — Gosh, how the American dive industry abhors regulation — the EU realized the danger apparent for individual divers and

required that all regulators sold in the EU must meet performance requirements established by ANSTI testing.

And thanks to that, American divers, even with no independent body to oversee the safety of their equipment, have benefited greatly. Today, most regulators are made or sold in Europe, and these companies sell their ANSTI-approved regulators in the U.S. There may be a few regulators sold in American that do not meet the ANSTI standards, but they do not carry the telltale CE-mark of EN250 or come with a CE-EN250 certificate. EN250A means it's certified to work in conjunction with an octopus rig under the same conditions and in water colder than 10°C (50°F). You should check that. It may be hard to spot where it is engraved.

To get more technical for a moment, to meet the EN250:2000 standard, the overall work-of-breathing has to be less than 3.0 joules/liter with a respiratory pressure of plus or minus 25mbar, with no measurable spikes, at a breathing rate of 62.5 liters per minute (25bpm) at a depth of 165 feet (50m). That's with an air supply pressure equal to 725 psi (50 bar).

It's amazing what you get used to. Most regulator designs now achieve a work-of-breathing of less than 1.0 joule/liter. Nowadays, comparison with a modern regulator might make your old USD Pro Diver feel as if it breathes like an asthmatic in a smoke-filled room! You need to try a new regulator. Thanks to EU regulation and ANSTI, if you buy an approved regulator, you can be certain it's a good one (unless you've bought a rare faulty one that needs to be replaced).

Many top-end regulators include "value-added"

New Critters to Spot Along the West Coast

The massive tsunami that followed a disastrous earthquake in Japan in 2011 swept five million tons of debris into the ocean. Much of it was not biodegradable, and items like glass-fiber boats, mooring buoys and plastic shards now swirl through the Pacific.

A 60-foot-long polystyrene and concrete dock was washed up in Oregon a year later, close to Oregon's State University's Marine Science Center. A biologist discovered that it harbored close to 100 Japanese species. It proved a harbinger of things to come.

Although none of it showed any traces of radiation, volunteers in Hawaii, Alaska and down the Pacific northwest to the mid-California coastline started collecting and bagging this Japanese tsunami marine debris and the pas-

sengers it brought rafting across the ocean to U.S. shores.

A report published in *Science* says they've already counted more than 280 species on 600 pieces of debris. Most were invertebrates such as seastars, nudibranchs, barnacles, bryozoan and isopods, even two species of fish.

Ocean dispersal has been going on since the dawn of time, but plastic has largely replaced wood, and since that doesn't sink like wood does when it becomes waterlogged, it's a more efficient method of transport. Although the scientists do not have immediate plans to study the wreckage from recent hurricanes in the Caribbean and Gulf of Mexico, they may assess the debris field from those storms when things return to normal.

features like a breathing resistance adjustment knob so that you can increase the inhalation effort needed to ‘crack open’ the second-stage valve. But, why would you need that? Many regulators are so highly tuned, they need a device to stop the exponential free-flows when suddenly subjected to an increase in pressure, as happens at the surface between air and water. This is usually something that temporarily interferes with the Venturi effect within the second-stage and is often called a Venturi +/- or a Pre-dive/Dive switch. Mares regulators use a patented bi-pass system instead.

As for maintenance, manufacturers still recommend an annual service apart from one — Atomic Aquatics. Its regulators use a clever design that requires servicing once every three years. However, this is reflected in the purchase price. It’s pricey.

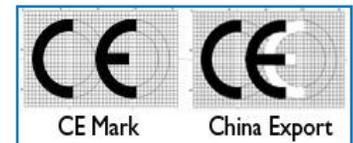
So, to answer Thomas Lopatin’s question, yes, Thomas, it’s time to upgrade. In fact, any diver still using a regulator from the last century is likely diving with an underperforming piece of equipment.

Unless you confine your dives to 60 feet in benign water, it’s time to part with your old friend. In an emergency, it may become your enemy.

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It’s not all as it seems: People cheat. In recent years we’ve got used to the fact that if a product bears the CE mark, it is safe. Unfortunately, there exists a very similar mark, which the majority of consumers and even sellers may see as the CE mark of the European Union but actually is something completely different. This “CE” mark means “China Export” meaning the product was manufactured in China! Various organizations believe that this similarity is not a chance coincidence and that it expresses an aggressive approach to sell into the European market without applying the right standards.



This Time, Frogfish in Kauai

is it right to take fish from the water?

Last month we reported that social media went wild with accusations (most likely unfounded) that a seahorse had been manipulated onto a Q-tip for the benefit of the photographer who had become a finalist in the prestigious Wildlife Photographer of the Year competition. The photo, no matter how he got it, sent a powerful message about ocean trash.

O’Hara is now receiving the flak from angry local scuba divers

These days there is a social media lynch mob eager to pile on to anything suspicious. Here’s the latest:

Brave Wilderness is a YouTube wildlife program (which claims 2.5 million viewers) fronted by a vociferous gentleman with the unlikely name of Coyote Petersen. Its modus operandi is to educate people about wildlife. Their production team went to Hawaii’s island of Kauai to film a couple of segments, and while they were there, they spotted two giant frogfish on a reef. They seized the moment and decided to produce a third show.

All well and good, but Coyote is a bit of a wild dog when it comes to handling marine life. They captured the frogfish and videoed them in a small aquarium while he gushed about them before the camera. Of course, they could have — and should have — gotten their footage where the fish lived — after all, their show is called *Brave Wilderness* — but it would have made it more difficult for the presenter to act like the deceased Aussie, Steve Irwin. At least, they ultimately returned the frogfish to the ocean, apparently none the worse for the experience.

But, there’s more. They had employed the hapless Brian O’Hara, president of Kauai Scuba Rebreather and Technical, whose dive shop supplied them with gear, and he guided them and acted as safety diver. He is now receiving the flak from angry local scuba divers and other dive shops for his role in what they allege as the torture and terrorization of the frogfish.

O’Hara says, “This created quite a stir with all the other dive shops, and they started laying into our dive shop for supporting them.”

A Facebook page entitled *Global Diving Community Alerts* has been set up, ostensibly to field

Looking for a Holiday Gift? Here Are Three Great Books

First, how about giving an autographed copy of our publisher, Ben Davison's (writing as KL Smith) scuba thriller, *Tropical Ice*?

Scuba Diving Magazine calls it a "Must-Read for Scuba Divers." "From shark-feeding gone wrong and thugs on the streets of Belize to corrupt conservationists and a battle on the high seas, this eco-thriller by the editor of dive newsletter *Undercurrent* is jam-packed with twists and turns that make it hard to put down. While telling the story of Matt Oliver, a travel writer who gets roped into an international mystery, Smith highlights the vicious effects of shark finning and other practices that further the destruction of environmental resources."

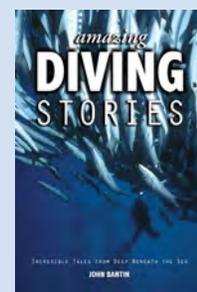
Homer Hickam, who trained astronauts to dive and wrote the award-winning film *October Sky* says "One of the best adventure thriller I've ever read and I've read a million. Listen, do you like Clive Cussler? Smith is a better writer than old Clive, and he's actually lived the life he writes about."

We'll send you an autographed copy (or copies) as



soon as you order (we'll first email you and ask how you want them inscribed). The price is \$14.99 plus \$3 for postage. [Click here](#) to order. Or, to order from Amazon and read all the great reviews — and there are more than two dozen — [click here](#).

Looking for nonfiction? *Undercurrent* Senior Editor, John Bantin, tells many adventurous tales collected over two decades, including what it was like to be grabbed by a large tiger shark and swum off with, in his fine book, *Shark Bytes*. He has another book, too, *Amazing Diving Stories*, a collection of 65 tales. Either is a great choice for that armchair diver on your list. [Click here](#) or listen to a sample of an audio version here: <https://goo.gl/QFd1p7>



complaints about this and similar activities — on the surface a noble thing to do. But to us, the page seems devoted to this solitary example of the bad manipulation and handling of marine life.

O'Hara wrote *Undercurrent* to say "I was crushed that I had upset my local peers and made a public apology. I never meant to cause any bad blood or upset my competitors. I was doing everything I could to make it right with them."

"*Global Diving Community Alerts* has been attacking my business and me for an incident where we helped *Brave Wilderness* do these three YouTube shows. One was on the crown of thorns, the second was on sea turtles, and that was my favorite. Then the third was the frogfish episode."

He seemed contrite and apologized online to the Kauai scuba community, asking for opinions as to whether people thought Coyote Petersen did anything wrong.

We'd like you, our readers, to vote, but we also wonder if there is another agenda at work, namely someone trying to harm O'Hara's business. Dive operators on small islands everywhere are notorious for their inability to work together. But Kauai divers ought to have better things to do, such as working

together to stop the far greater evil conducted on their reefs — commercial divers pulling off fish for the aquarium trade.

By the way, the frogfish have since been found back close to where they were captured and are probably exchanging notes on the day they were kidnapped by aliens. www.youtube.com/watch?v=HUUsEgAe8x4

Meanwhile the BBC is attempting to head off any criticism by openly admitting that some of its sequences of the new *Blue Planet II* series were filmed in glorified fish tanks. But only the difficult bits like time-lapse sequences of coral bleaching, where stable lighting was needed.

The show's executive producer James Honeyborne explained: "We make films that are totally true to nature and we're honest and open about the techniques we use to do that. If you're filming something that's microscopic, you have to put added light on it — that's just the simple laws of physics."

But is it wrong for a filmmaker to remove fish from the ocean, film them, and put them back? What do you think? Vote Yes or No by going to: www.undercurrent.org/UCnow/FishMoving

If You Make a Mistake ...

don't be afraid to talk about it

If a near-miss occurs in aviation, everyone, including pilots, airline companies, government agencies, passenger witnesses, air traffic controllers and airport administrators, all works together through federal agencies — the NTSB and the FAA — to find the cause.

One reason for involving all the parties is because, on average, it takes at least seven mistakes to cause a catastrophic error in aviation. So there's a lot to learn from taking apart the details and looking at the context-rich data across different areas. Investigators have the help of black box recorders, video surveillance systems, team-based communication protocols, and practiced simulation to maximize safety effectiveness. And, they have a level of legal protection that allows candid information to be protected from the judiciary.

Of note, even if a single individual's actions are the sole contributory cause of the accident or near-miss, the individual who has managed to fail at this level exposes a failure of the system somehow. That, the industry agrees, is a good thing to discuss and fix.

Diving has a Lesson to Learn

Now consider what happens in the diving industry when someone puts his/her hand up and says

"We had a close call ... here is what happened."

Often it includes discussions about missed checks, incorrect assumptions, poor briefing, inadequate assessment of the risks, changes that were obvious after the event ... and so on.

The armchair pundits, using online forums and social media, start pointing fingers, and say: "You should have done this or that," and don't look at the systemic or cultural issues at play. Hindsight bias provides a clarity that is not possible in real time.

I have recently seen two instances, one involving a four-person dive team that was drifting at 230-260 feet (70-80m) and got separated from their chase boat because their skipper didn't spot their surface marker buoys. They were picked up nearly 10 km from the drop-in point.

The second was a fatality in the Far East when a group of Open Water divers entered a wreck at 130 feet (37m), each using a single cylinder. The inside of the wreck silted out, and one of the divers got lost and died.

The result of this online criticism? People stopped telling stories, which would have allowed other people to learn from the experience.

You can't teach everyone everything in a training class. You don't have enough time; nor does

Regulating Scuba Diving

Once a diver is certified, he is certified for life. For those who have been out of the water awhile, some operators may require a refresher session. But, for the most part, a certified diver is free to dive anywhere at any time. Such loose requirements have, on occasion, led to the call for government oversight of training, but that never got very far, and the self-policing training agencies continue to resist any re-certification efforts.

But not so in Quebec, Canada, where the French-speaking province has scuba diving regulations in force that make it unique to North America. They require scuba divers to hold a certificate attesting to their proficiency. Not only must instructors have a duly recognized certificate from a major training agency, they must include specific topics in their classes and be accredited by government-approved examiners.

Scuba divers' certificates must be renewed every three years, offering a log showing at least ten dives

during that period, and an inactive diver must take a refresher course. An instructor must renew his license annually and be "in good standing with an approved diving instructor association" and "prove that, during the period of validity of the certificate, he or she took part in at least one improvement workshop of at least 4 hours, focusing on one or more of the topics listed in the schedules provided."

Divers visiting Quebec must get a temporary certificate valid for one month by showing a C-card and logbook attesting to their level of experience. These regulations apply only to recreational scuba diving.

We hear so often of out-of-practice divers embarking on dives that are beyond their ability, often with tragic outcomes. How would you feel if similar regulations were brought into force where you intend to dive? Let's hear what you have to say. Email BenDavison@undercurrent.org

the instructor have enough experience. Therefore, divers have to learn from others' mistakes, and the decision made in near-misses is instructional, even if the divers broke the 'rules.'

The acceptable level of risk an individual takes is a personal construct ... with hindsight, you are always better informed than the person at the time.

The diving community does not have an FAA or a CAA or an overarching regulatory body (which I think would add a level of complexity to a recreational activity that's probably not needed).

Furthermore, diving does not have an independent investigative body such as the NTSB. So, any investigation conducted is often protectionist in nature due to the threat of legal action. Indeed, one agency's incident form says, "This form is being prepared in the event of litigation." What are the chances that the 'real' story will come out if it means that rules, guidance or processes have been broken?

Human error is normal. If there are consistent errors leading to a near miss, these are systemic issues, not individual issues. However, to identify where those systemic issues lie, we need to collect data that can be collated and analyzed using a standard framework not only covering the proximal cause, but also that allows us to identify systemic issues. Aviation is as safe as it is because they have learned to recognize that human error and failure are normal, and participants and investigators talk about it in a non-judgmental way.

Crucially, you can fire an individual, but if you don't change the system, the failure will continue to happen.

— Gareth Lock

Over-sized Pinnae?

After reading about experiences with the ProEar mask, Robert Kopki (Boca Raton, FL) felt compelled to write to *Undercurrent* regarding his experience. Although recommended by a dive guide in Bali (who had very small ears), the mask's ear cups wouldn't seal on his larger ears.

So he uses a mixture of clear rubbing alcohol and white vinegar in equal parts, recommended by an ear doctor. He applies a few drops to each ear for 5 minutes after diving and has not had an ear infection since. Others put their trust in a few drops of tea tree oil or even olive oil before diving to give an element of barrier against the water, and there are proprietary remedies also available. Of course, none of these are effective against the problems of a perforated eardrum.

So we at *Undercurrent* suggest that if you make a mistake, you talk about it. Post a description of what happened online. Share the experience so that others, too, may learn from it — and weather the storm from the armchair pundits. They are of no consequence.

Gareth Lock is a retired military aviator with a passion for improving human performance and diving safety using his direct experience and knowledge of human factors and non-technical skills to facilitate this. He runs a consultancy, which has developed globally unique online and face-to-face training classes for the sport diving community to improve diver safety and performance. He regularly writes and presents on this subject.
www.humanfactors.academy

Flotsam & Jetsam

Dive Boat Smuggler: The boat captain for Blueocean Expeditions, a Ft. Lauderdale eco-tour agency and scuba operation, was sentenced in October to six years in prison for transporting illegal immigrants. Richard Karl Mork had been arrested in March after suspicious Border Patrol agents came across his 33-foot boat in Florida's Upper Keys. They found five Jamaicans and five Haitians below deck. One said he had paid \$5,000 for passage to the U.S. Mork admitted he had left Bimini with the 10 immigrants and knew they were undocumented.

Time for a Macro Lens: In the coming decades,

warming ocean temperatures could stunt fish growth by as much as 30 percent, according to a new study in the journal *Global Change Biology*. Warmer water contains less oxygen, so as oceans heat up, fish need to work harder to get the oxygen needed to sustain their body functions. But fish gills do not grow at the same pace as the rest of a fish's body, resulting in a decline in oxygen supply, and therefore, in growth. Fish are becoming smaller.

Dive Businesses Getting Back on Their Feet. Several dive business were damaged by the flotilla of hurricanes that hit several Caribbean nations, Puerto Rico, the Virgin Islands and Florida. DEMA issues press releases once a business is up and running again. For the latest information, visit www.dema.org/?page=HurricaneUpdate

Finding Nemo: That will get harder as anemones start to bleach, just like coral, and these iconic little clown fish and anemone fish get stressed and stop laying eggs. Rising water temperatures associated with climate change can severely weaken the anemone host, causing them to evict the tiny symbionts that give them their color, which is where the trouble starts. *Nature Communications* reports that scientists at Delaware's College of Earth, Ocean and Environment, suspect that this pattern may hold true for untold numbers of other fish nurtured by corals or anemones, so it's bad news for Nemo's pal, Cory, too.

Stop Using this OMS Regulator. If you have an Ocean Management System Airstream Evoque regulator, stop using it immediately. Taiwanese-made, they were sold between February and June of this year, not only through Diving Unlimited International (DUI) dealers, but also online through divegearexpress.com and DiveDUI.com. If you have one, return it to where you bought it for a full refund. Three divers, DUI reports, have had serious failures and the regulator is at serious risk of or catastrophic loss of air during a dive. Only 480 were sold, and DUI believes all have been recovered, but if you still have one, get rid of it. www.divedui.com

The American Ostrich. France and China, both key leaders of the Paris Climate Accord now that the Trump Administration is pulling out, will be jointly launching a new satellite to model climate change's role with the world's oceans and better predict storms. Any diver who has seen bleached coral and diminishing reefs and fish populations really ought to raise a stink about an Administration that has buried its head deep in the warming sands so it may continue to deny that humans have a role in the warming our oceans.

The Triumph of Will! We asked if you were or knew of any active divers older than British diver Ray Woolley (94), and Max Benjamin, owner of Walindi Plantation in Papua New Guinea, told us that controversial German film-maker Leni Riefenstahl was 96 when he last saw her diving in PNG. And, she was still diving two years later in the Maldives. Benjamin says she liked to dive past 30m (100 feet) because she said it relieved her arthritis. Beat that.

An Incentivized Swim. A British diver, separated from his boat in Western Australia, decided to swim for shore after he had drawn the attention of a large tiger shark. John Craig, 34, had been spearfishing off aptly named Shark Bay when he managed to swim more than four miles in possibly record time, as he said he felt the shark was escorting him. "It was extremely close and curious and kept approaching me from different angles. It was trying to work out what I was and whether I could be on the menu," he later told the BBC.

Top Wildlife Underwater Pictures. Five marine life photographers are featured in the prestigious British Natural History Museum's Wildlife Photographer of the Year competition 2017 including US photographers Brian Skerry and Tony Wu. To see the winning pictures go to: <https://goo.gl/9josqk>

Hawaii's Public Hyperbaric Chamber Closes. Located at the Kuakini Medical Center in Honolulu, the chamber has closed for want of a suitably qualified doctor to man it, even though it provided seven divers a total of 17 hyperbaric therapeutic treatments since as recently as July. About a third of the University of Hawaii's research dives have been postponed as a result. Jerrod Kowalski of Aqua Lung Pacific has expressed concern about the ability for recreational divers to get access to fast, high quality treatment should they need it.

undercurrent

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