

undercurrent

The Private, Exclusive Guide for Serious Divers

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Nautilus Belle Amie, Guadalupe Island, Mexico

eye-to-eye with a great white

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www.undercurrent.org

Editorial Office:

Ben Davison, Publisher and Editor
3020 Bridgeway, Suite 102
Sausalito, CA 94965

EditorBenD@undercurrent.org

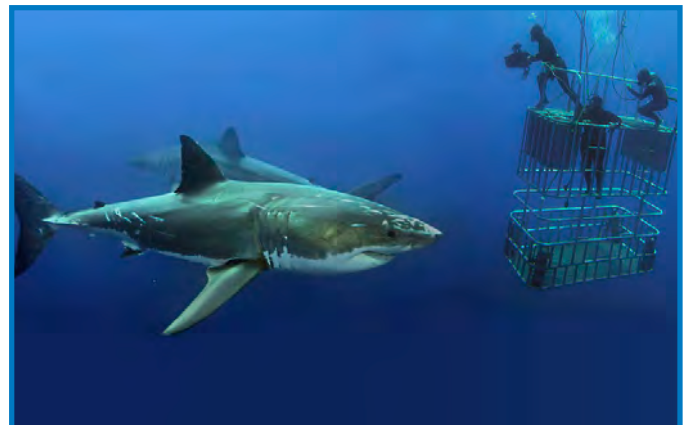
Dear Fellow Diver,

Shortly after the social media video of a great white shark inside a cage with a diver at Guadalupe Island went viral in October, friends learned I was going there myself to cage dive with great whites. The reaction was pretty much "You're going where?" "Have you seen that video?" "Are you nuts?"

Now, I've dived with Guadalupe's great whites twice before from the Nautilus Explorer, and I've never had a shark inside the cage with me. But on this trip, it felt like they were trying.

Anticipating great white shark encounters is half the fun, and for me that began the moment I signed up. In October, my buddy and I arrived late afternoon at San Diego's Best Western Island Palms Resort, and I could feel the excitement among the divers as we met in the hospitality suite. The room buzzed. Around 7:30 p.m., we boarded the chartered bus, clutching cookies and water bottles, for the 25-minute journey to the Mexican border, where everyone disembarked and went through immigration while the

luggage was X-rayed and the bus scanned and inspected. Then, off for the two-hour drive to the Ensenada pier. After being greeted by Captain Bryden, we departed for the 150-mile,



What everyone hopes to see!



20+-hour steam to Guadalupe Island for the five-night trip with three days of cage diving This was one of the quietest boats I've ever been on, with barely perceptible generator and engine noise even while underway.

The 135-foot broad-beamed Belle Amie is a stable vessel, so the crossing wasn't too rough, although a couple of passengers kept to their cabins the entire time. During the full day at sea, I got to know many of the others, including divers from Finland and Holland, ranging in age from the 20s to the 70s, as we set up gear, had muster station prac-

tice, ship and cage orientation, and three meals. This, by the way, is not scuba diving; air is surface-supplied, so the only gear you need is a mask, and of course, a wet suit or dry suit for long hours in cool water.

Shortly after our 8:30 p.m. arrival, the crew lowered the five cages into the water. I hit the sack in anticipation of my assigned 8:00 a.m. cage dive, wondering if I would see sharks that early. Great white sharks are the only sharks at Guadalupe; they range from 16 to 20 feet, with smaller males appearing earlier in the season, and the big females showing up later.

When I wandered down to the galley for pre-breakfast at 6:30 a.m., one eager diver was already dressed and waiting for one of the two surface cages to open. Later, at 8:00 a.m., the 45-minute cage rotations to 30 feet begin. I was guaranteed three rotations a day in the deeper cages, with two other people, the times and people changeable. I signed up for more dives should any vacancy arise, and many did. And yes, I saw two different smaller sharks during the first rotation, a good omen. After leaving the cage, I'd hang my wetsuit one deck up for meals, but there were a few people who didn't appear to take them off until after the cages closed for the day.

The three diving days required my managing meals around my dives and watching the "shark wrangling" from the deck. The five divemasters, Luis, Armando, Ryan, Pedro, and Garrett, and the captain, took turns from the pulpit protruding out over the boat edge, wrangling the large pieces of bait on a line to entice the sharks closer, helping divers in and out of the cages, standing on the cage to keeping it in position, and guarding the cage top opening to stop a shark from entering. One day, I spent two hours moving between cages until my toes went completely numb; I saw other divers shaking from the cold, but they just couldn't force themselves to stop watching the sharks! The first day, along with up to 10 different sharks circling the cages and chasing bait at the surface, a moss-covered turtle hid under the cages, turning his back to approaching sharks. A curious

Another Treasure Find Claim

The bullion stash said to be hidden by retreating Nazis in 1945 has been the stuff of dreams ever since. Some say it's buried in a bunker, other say it's aboard a buried train, but a diver believes it is aboard the wreck of the ocean liner pressed into service as a refugee ship, *MV Wilhelm Gustloff*, and sunk by the Russians beneath the icy surface of the Baltic Sea.

Former professional diver, 61-year-old Phil Sayers, says he met a survivor from the sinking, ship's radio officer Rudi Lange, who told him he saw crates of Nazi gold being loaded onto the ship at a port in Poland before its ill-fated voyage. It was the same man who, at 17 years old, sent the SOS after the liner was torpedoed by Soviet submarine S-13.

So all that is needed is to locate the wreck. One other snag: It's 1462 feet (450m) deep.

sea lion zoomed over from the near-by island, hugging the boat when sharks came around, and nibbling on the bait or swimming circles around the cages when they weren't. A day equal to any of my two previous trips.

All those hours in 69-degree water and air in the 60s to low 70s made a person ravenous, and we indeed ate well. Chef Marco and his two assistants churned out one great meal after another. Pre-cage-dive oatmeal, toast, fruit, juice, and coffee was followed later by eggs, pancakes, oatmeal, breads, and cereal. Lunch might be pizza, hamburgers, or tuna or chicken sandwiches, as well as delicious soups. Sit-down dinners varied, but always included a salad and dessert, maybe steak or roasted chicken; one night it was a taco dinner on the top deck. Dietary requests, such as gluten allergies or no red meat, were taken into consideration, but mine didn't always turn out palatable, usually consisting of overcooked chicken. Hostesses Nubia and Laurentina kept the food coming, including wrapping meals for divers still in cages (one guest marveled at how the eggs remained perfect for hours), as well as tidying cabins and changing towels and sheets. The dining room held four tables, each seating eight, and many breakfasts and lunches were served on the dive deck to divers still in wetsuits. Because of the large crowd, the packed dining room was very noisy at dinner, when everyone was finally out of the water, making it difficult to understand conversations.



MV Nautilus Belle Amie

Rigid Rules for Flying with Lithium Batteries

To determine whether you can carry your lithium batteries on board a plane requires your close inspection of the batteries.

You see, it depends on their configuration and either Watt/Hour (Wh) rating for rechargeable batteries or Lithium Content (LC) for non-rechargeable batteries. To convert Amp/hours (Ah) to Wh, multiply the marked Ah rating by the rated voltage of the battery. (There are 1000 mAh in 1 Ah.)

Less than 100Wh or 2G (LC) batteries contained in equipment can be carried on or stowed in your checked baggage. Typically, the AA batteries commonly used in much photographic equipment fall into this category. However, you must carry spare batteries with you, not checked in.

Laptops usually have 11.1v batteries while mobile phones use 3.7v. More than 100Wh but less than 160 Wh batteries can be carried on or checked if installed within a laptop, camera or mobile phone, but you must carry on your spares (a maximum of two). However,

you should get approval for the spares from check-in staff. If you have a video or powerful dive light, check the size of the batteries if they are lithium. They will be marked with Ah/voltage or Wh.

Batteries of more than 160 Wh can only be presented to check-in staff and packed in your checked luggage in accordance with IATA Dangerous Goods Regulations. Generally, large lithium battery packs such as used in DPVs are barred from air transport. If you want to transport such a DPV by air, check that its battery pack is ni-cad.

If you carry on spare batteries, their terminals must be protected from short-circuiting by either enclosing them in their original packaging, taping over the terminals, or carrying each battery in a separate plastic bag. Batteries in the mobile phones, laptops, etc., that you check must be switched off and measures taken, if necessary, to ensure they cannot be accidentally activated. More info: www.iata.org/whatwedo/cargo/dgr/Pages/index.aspx

Nautilus Belle Amie, Guadalupe Island, Mexico

Diving for Experienced	★★★★★
Diving for Beginners	★★★★★
Snorkeling	(n/a)
Accommodation.....	★★★★ ½
Food.....	★★★★★
Service & Attitude.....	★★★★★
Money's Worth	★★★★★

★ = poor ★★★★★ = excellent

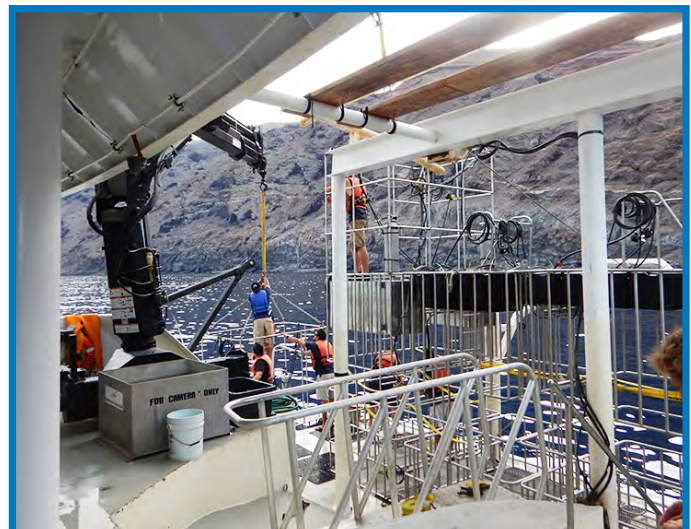
Worldwide scale

The second day started out promising, with three to four 16- to 20-foot sharks appearing. A small pod of dolphins swam by, paying the sharks no mind. For the second rotation, my cage mates and I voted to keep our starboard cage at the surface, where it had the best view of the shark feeding. The wrangler would throw a line with a good-sized chunk of fish and then try to jerk the bait away from the shark before it grabbed it. Occasionally the sharks made half-hearted attempts, probably because they were overfed as they traveled between the other liveboards in the area. Other times, they would attack aggressively and grab the bait, resulting in loud clapping on the deck. No sharks visited on my third rotation, so I kept my mind off the cold and boredom by watching the other cages and practicing forming bubble rings -- an acquired skill. All total, I spent about three-and-a-half hours in cages on the first and last days, and just

over two hours on the second day. Many people spent more time. When some divers began to hog the starboard surface cage, grumbles from a few of us led the crew to create wait lists and enforce time limits.

My upper deck superior room, almost as large as my bedroom at home, had a full-sized shower, toilet, a king bed (could be set up as twins), two-night stands, and a spacious area to hang clothes, though it lacked drawer space and bathroom shelves, so I kept toiletries on a small stool in the cabin. After the cages closed around 6:00 p.m., I luxuriated in a hot shower and then joined happy hour for snacks and drinks as laptops came out for picture sharing. Though a few people had to stand, the lounge accommodated everyone -- I was told that the boat holds 32 and there were 31 on board, plus crew. I also worked on my photos in the dining room until shooed away at mealtimes. After dinner, we tried to identify the sharks we had photographed by name from a database started in 2002 by Nicole Nasby Lewis, a researcher at the Marine Science Institute. I was terrible at this, except for identifying Lucy by her extremely bent tail. (On the upper deck one night, under a sky full of stars, we watched another named shark, Jaws, on the big screen.)

The third and last morning, I awoke with some trepidation -- since day #2 was slow, would the sharks show up? During my first rotation, a couple of great whites swam past, while at the same time, shark feeding and breaching action was picking up on the surface. A few sharks came halfway out of the water (on a previous trip I saw a great white totally leave the water while I was at 30 feet). During my next rotation in the starboard cage, kept at the surface, one 20-foot female shark missed the bait, failed to turn sharply enough and got her teeth caught momentarily on my cage, about a foot from my face! Talk about an adrenalin rush! It's particularly exciting when a great



Shark cages rigged at the aft of the vessel

Stay Away from that Propeller!

It's often been stated in *Undercurrent* that the most dangerous thing you are likely to encounter while scuba diving is your own boat. We've had reports of people losing fingers to a dive ladder hinging in a swell, but the most hazardous situation is a turning propeller. If a vessel were to put into gear and back up to a diver making his way to the stern, he could easily be drawn into those revolving blades.

Even the unprotected propeller of a small outboard motor could kill you, so imagine the horror of being in the water near the massive propeller of a freighter when it unexpectedly starts to turn.

Old footage reappeared on a newspaper website

in late November of amateur divers casually inspecting the underside of a ship that had evidently gone aground near Miami. Two divers make the mistake of thinking that since the vessel was tied up to a bridge, it wasn't going anywhere. Wrong!

One of the divers, Phil Jaynes, uploaded the clip to YouTube, saying: "We made the assumption that if the ship was tied up, it wouldn't turn on the propellers" and recently responded to comments by saying, "If anyone is still wondering, I'm alive, and yes, we were stupid for being there; kids, don't do what we did."

www.dailystar.co.uk/news/latest-news/562565/scuba-horrific-deep-sea-mistake-underwater-panic-video

white looks like it's coming straight for the cage or goes directly underneath the cage. Divers had to quickly remove their hands from cage bars when sharks swung by within inches or hit the cage accidentally; I saw one diver end up on her butt on the cage bottom when she quickly pulled away and lost her balance.

For our last rotation of the trip, we let our port cage go down to 30 feet and got great shark action at depth. Back on the surface, bent-tail, beat-up-looking Lucy, another 20-footer, was back for the third day, and everyone rooted for her to get the last piece of bait being doled out. And she did!

Diving at Guadalupe Island is for just about anyone with even a small sense of adventure (I've heard of children under 10 doing the trip). Non-divers are welcome, but they must stay in the surface cages, where most of the action was anyway. One gentleman had a nasty sinus squeeze and stayed in the surface cages, a couple people went in the surface cages wearing only swimsuits and tee-shirts for short periods due to wetsuit problems, and a woman found out she was pregnant between the time of booking the trip and going on the trip, so she also stayed in the surface cages. I've done this trip three times now (it was only supposed to be once), and am already planning another!

-- D.Y.

Our undercover diver's bio: Having been certified since the early 70s, I've logged about 3800 dives. While I hate the stress of travel, a buck up and love diving around the world. My best dives were in the 90s at Sipadan, when you were still allowed to on the island, with showers in the jungle and sinks hanging on trees. I plan on diving until my last breath, even if I have to crawl into the water.

Divers Compass: Port fees of \$65 had to be paid in cash; everything else could be put on credit cards ... they rent 7mm wetsuits ... Standard cabins ran \$2995/person; my superior cabin was \$3495, which seemed expensive until I considered the distance traveled and the amount of fish fed to the sharks ... We headed back to Ensenada immediately after the third day's cage dive, arriving around 6 p.m., then bussed back to San Diego for a night at the Best Western ... The boat had three huge camera tables with multiple charging sockets and enough room for all cameras, two warm showers on the back of the boat and two large dive deck heads ... Preventive measures are a good idea if at all prone to sea-sickness...no alcohol until you're done for the day. www.nautilusbelleamie.com

Little Corn Island, Nicaragua

the Caribbean of yesteryear

Not many divers visit the Corn Islands, one reason being that they've never heard of these little Caribbean isles, about 50 miles off the Nicaragua coast. Little Corn is about 1.5 square miles, with no cars, motorcycles or even golf carts, but full of amiable folks, good shallow reef diving, diverse cuisine, and lots of charm. Entirely without glitter or much of a tourist infrastructure, it's my kind of place. So, thanks to an invitation to a Nicaraguan wedding, I toured the fine colonial cities of Leon and Granada, which is bordered by the imposing Lake Nicaragua, and did some spearfishing in the Pacific. Then, I grabbed a flight from Managua for eight days on Corn Island.

I wasn't sure what to expect, though I had read a ten-year-old *Undercurrent* article that suggested a diver might be bored after a few days. I certainly wasn't. While this is surely standard Caribbean diving, it's far from the madding crowd, with unspoiled, unbleached reefs. After six days of diving, I would have welcomed more.

Perhaps a unique diving feature is the ubiquitous and gregarious nurse sharks. On my first dive at Jeff's Rock, the ocean was bumpy and visibility about 60 feet (18m) or less. Soon after I hit the water, I was approached by a curious five-foot nurse shark that followed us around for most of the dive (hmm, like he was looking for a handout, but my shop did no feeding). Among the reefs and small canyons, I came across two others, as well as a good-sized western stingray, plenty of tropicals, but not in large numbers. The depths ran 50-80 feet (15-25m), and water a constant 84°F (29°C) in November.

Our afternoon dive was at White Holes, maybe no deeper than 30 feet (9m), but 80-foot-plus visibility. Unlike so much of the depleted Caribbean, here



Dolphin Dive Center

A Hard Lesson Learned

In October *Undercurrent* reported on two groups of divers who were lost within a week. One group lost off Mauritius in the Indian Ocean were located after more than four hours adrift by an air and sea search, while some of those lost off Malpelo were less lucky. In November, we published an article suggesting different ways in which you could avoid this happening to you. This included the German ENOS autonomous diver recovery system.

Stephane de Senneville, director of Dive Sail Travel, which contracts out its scuba business to DiveSail Consultants in Mauritius, claimed at the time, "the mistake was the decision by the divemaster to swim away from the protection of the cove and into the currents

that dragged them out to sea."

We are heartened to be informed by Christiane Linkenbach of Seareq, the makers of ENOS, that "to spare his divers [a repeat of] such nightmare, Stephane de Senneville took consequences to heart and purchased ENOS."

Divers with Dive Sail Travel can be assured that they now are protected by the ENOS autonomous GPS diver-recovery system whenever they dive remote sites near Mauritius.

Hopefully, worldwide, more will follow. Pass this article on to the next liveaboard you're thinking about booking.

were stands of magnificent staghorn and elkhorn corals among the large sand patches. An eagle ray winged past, several 5- to 6-foot (2m) nurse sharks lolled about, western stingrays lay in the sand, and typical reef fish swayed to and fro in the modest surge. And after that dive, I did what I came to do every day -- go to Habanas, between the dive shop and our hotel, to devour a delicious ham and cheese sandwich or fish sandwich on coconut bread, served up by the Cuban owner.

To get to Little Corn, I had to spend the first night on Big Corn -- that's where the airport is -- and took a one buck/person taxi to our guest house, Comedor Maris Danet's, where \$9 bought a full lobster dinner. Next morning, another taxi ride to the wharf to catch the panga (\$6) to Little Corn. It was a wet and wild ride (if the ocean is too rough, it doesn't go), and I wish I had had a garbage bag to cover my stuff.

I had made advanced reservations at the 20-plus-room, air-conditioned, cinderblock Sunshine Hotel, parked amidst beautiful, manicured gardens. The \$55/night room -- reasonably sized, comfortable, plenty of warm water -- included a simple but classic Nicaraguan breakfast -- scrambled eggs on a tortilla with rice and beans and plantains and real coffee (most places, it's Nescafe) -- and a five-percent discount with Dolphin Dives, less than a five-minute walk. For three days, no alcohol was served anywhere on the island -- that's the rule during national elections -- so the friendly proprietors brought plenty of ice cubes for the bottle of spirits I had brought. In the hotel was the only (mini) "farmica" on the island, and several rustic piquant eateries were nearby.

Before flying to Corn, the weather looked bad, so I called Dolphin Dive's proprietor, Adam Clarke (he's from the UK), to make sure they'd be diving. "Of course," he said, "we have great conditions, a little wind and bump, but all is fine." As I learned, unless there are pre-hurricane conditions, they'll head out in their small (about 18-foot,/5.5m) open boats, which may carry as many as 10 divers, with no room for big camera rigs. (The sites were only five to ten minutes away). The boats, loaded and ready to go, launch from the beach. Upon return, you tote your gear to the shop, about 50 feet (15m) away.

To travel light, I brought only my Canon G12 in an Ikelite case, no strobe, my Suunto "zoot" wrist computer, a mask and snorkel. At no charge, Dolphin supplied the rest -- their regulators and BCs were well maintained -- including a wet suit. The gear was included in their dirt-cheap price of \$65 for two tanks (though dives were short -- about 45 minutes -- and some folks ran out of air sooner). Besides two morning tanks, they offer afternoon and night dives. I regularly dived with three others -- Canadians and an Egyptian -- and local Garry Sjogreen, the divemaster, so we stayed down longer, especially on the shallower dives. One day, another divemaster, Molly (she's from Holland), had a group of novices, and, to be kind, challenged divers. While my group had a fine dive, two of her divers quickly ran out of air, another got sick, and they all surfaced way early. I was impressed how well she handled them and their inexperience.

Yellow Tail, a reef with a few swim-thrus, and even dolphins when we first hit the water, provided more nurse sharks and a close encounter with a pair of four-foot barracuda, as well as eagle rays, triggers, and, briefly, far too briefly, a toad fish. You see, Garry wanted other divers to see the toadfish, and as he was pointing it out, a nurse shark swam over, stuck his head in the crevice, and abruptly devoured the poor toadfish.

We dived Suenos on a calm day, the ocean a pellucid blue-green, with visibil-



Garry and Molly

Little Corn Island, Nicaragua

Diving for Experienced ★★★ ½

Diving for Beginners ★★★★★

Accommodation..... ★★★ ½

Food..... ★★★★★

Money's Worth ★★★★★

★ = poor ★★★★★ = excellent

Caribbean scale

ity well over 150 feet (46m). Several large reef sharks cruised by, keeping their distance, unlike their nurse shark cousins, as did a cruising eagle ray. A hawksbill turtle flitted along the reef, parrotfish nibbled at the coral -- it was the only time I saw parrot fish -- while triggerfish went about their business. And here, a stunning site, a huge Goliath grouper the size of a wine barrel came so close I could have chucked his chin, but I resisted.

As I learned, where the boat goes is weather-dependent. I was disappointed not to get to Tarpon Channel on the north side, where hammerheads are said to congregate, and not to Blowing Rock, a seamount an hour away, closer to Big Corn. A few days, I did some

free diving on the north side. Snorkeling required a bit of a swim, so one would be better off snorkeling from the dive boat.

The easy access, clear water, minimal currents and healthy flora and fauna made Little Corn a nice dive destination. I enjoyed the "island vibe" and delicious eateries, which are little more than a few chairs outside people's houses on the main street -- frankly it's more like a trail, sometimes paved, sometimes not.

Getting Your Teeth into Scuba

Do you find that your jaw aches or your teeth hurt after a long dive? Does the pain mysteriously disappear once you've surfaced?

A new pilot study by researchers at the University of Buffalo found that 41 per cent of divers experienced dental symptoms in the water. Due to the constant clenching of that regulator mouthpiece and fluctuations in the ambient pressure underwater with varying depth, divers may experience symptoms that range from tooth, jaw and gum pain to loosened crowns and broken dental fillings. So, you may want to stop by their dentist's before taking your next dip in the ocean.

Vinisha Ranna, lead author and a student in the UB School of Dental Medicine say, "Divers are required to meet a standard of medical fitness before certification, but there are no dental health prerequisites."

The study, entitled "Prevalence of Dental Problems in recreational SCUBA divers," was published last month in the *British Dental Journal*.

The research was inspired by Ranna's experience learning to scuba in 2013. Although she enjoyed it, she couldn't help notice a squeezing sensation in her teeth, a condition known as barodontalgia. Of the 41 people who participated in her initial research, 42 percent experienced barodontalgia, 24 per cent discomfort from holding the regulator mouthpiece too tightly and

22 percent reported jaw pain. Five percent noted the loosening of crowns and one person suffered a broken dental filling.

The study also found that pain was most commonly reported in the molars. Active dive instructors experienced dental symptoms most frequently of all, likely attributed to more time spent at shallower depths where the pressure fluctuations are the greatest. With more than 24 million certified divers around the world, Ranna hopes to see oral health incorporated into the overall health assessments for diving certification.

She says that patients should ensure that dental decay and restorations are addressed before a dive, and mouthpiece design should be evaluated by qualified dentist practitioners to prevent jaw discomfort, particularly when investigating symptoms of temporomandibular joint disorder in divers. TMD is a problem affecting the 'chewing' muscles and the joints between the lower jaw and the base of the skull.

Ranna is conducting a follow-up study with an expanded group of more than 1,000 participants. "An unhealthy tooth underwater would be much more obvious than on the surface," she said. "One hundred feet underwater is the last place you want to be with a fractured tooth.

Ironically, many dentists are scuba divers.

Our Bilikiki Confusion

Getting really sick on a dive trip can change your whole perspective on what should have been the holiday of a lifetime. It's at times like this you really want to be surrounded by the familiarity and comfort of your own home instead of being in some strange land.

As we reported last month, Deborah Berglund (Bozeman, MT) fell sick when she was in the Solomon Islands. But we erroneously reported that she was on the *Spirit of Solomons* — a craft no longer running — when she was in fact aboard the *Bilikiki*.

Maurine Shimlock and Burt Jones of Secret Sea Visions wrote to *Undercurrent* that they were both on board *MV Bilikiki* at the time and noted that two-thirds

of the passengers went down with an illness, but many rallied and enjoyed the trip and the craft, one that gets fine reviews from *Undercurrent* readers.

Indeed being sick, stuck in a cabin, and not feeling well and not getting any proper sleep colors anyone's impression. Deborah is a well-traveled diver with more than 1000 dives, and as she said in her report, lamenting being sick, exhausted, and with ear problems: "There is always one negative person on a boat, and this time it was me."

With that kind of self-awareness, she can be my buddy anytime.

— Ben Davison

But they served up lobster and fish dinner for under 10 bucks. With a cold beer and frequent chats with passing locals - they're largely Garifuna, and everyone speaks both English and Spanish -- who were happy to share their life stories, it was great fun. Surely, this is the old Caribbean, with no mail service, no bank, no ATM, minimally reliable phone, internet and electrical service, and no doctors. There is one upscale bar/restaurants where the youthful backpackers hang out, and while lodging is mostly simple and inexpensive, a yoga retreat extracts \$400/night from its guests.

The diving is good, but not fantastic; you will see better coral reefs in Bonaire, for example, but nowhere near as many sharks. Nonetheless, if you like a low-key, uncrowded environment, with small groups of divers, like to mix with the locals, meet new friends of diverse cultures, and enjoy the tasty haute cuisine of fresh, local seafood daily, Little Corn can be a journey's end.



Sunshine Hotel Little Corn Island

-- M.A.

Our undercover diver's bio: *I started free diving for abalone and spearfishing in Northern California in the late 70s. In the 80s, while on my honeymoon at an all inclusive resort, I was very bored – not with my wife, but with the activities – so I got certified and found that as a free diver I enjoyed actually staying underwater. I took a real class back to the States and have logged more than a thousand dives. Currently, I volunteer with Reef Check in Monterey, California, and take a couple warm water vacations each year.*



Divers Compass: La Costena flights from Managua to Corn were \$184 RT. There is 30-pound limit on checked luggage, so additional bags may arrive the day after you do, especially during busy season (December to May) ... To avoid online booking fees (\$18/ticket), call La Costena in Managua airport (505) 2298 5360 ... We had no bug problems, but the Zika virus and dengue fever appear in Nicaragua ... Since there is limited night lighting and power can go out, bring a flashlight (I brought an LED headlamp) ... A 10-dive package runs \$280, plus a 5% discount from

the hotel ... Check for recommended vaccines at: <http://wwwnc.cdc.gov/travel/destinations/traveler/none/nicaragua> ... Dolphin Dives has an informative website: <http://dolphindivelittlecorn.com> Another dive shop, Dive Little Corn (<http://www.divelittlecorn.net>) has much the same equipment and prices ... U.S. dollars are accepted everywhere, provided they aren't ripped, torn, or defaced. An ATM on Big Corn dispense Nicaraguan cordobas only ... Some hotels, restaurants, and the dive shops accept credit cards, adding a six-percent fee ... Book the hotel directly to avoid booking fees. (www.sunshinehotellittlecorn.com). See the panga to Little Corn (<https://youtu.be/3UUNUNKY7i8>) ... Comedor Maris Danet's Phone: (+505) 2575-5135

Would You Opt For In-Water Recompression?

when remote dive sites mean there's no alternative

Every dive you do, whether or not it needs a staged decompression stop, is a decompression dive. That's because as you go deeper, your body is subjected to more water pressure and the gas you breathe is delivered at that increased pressure. DCS, as you know, is caused by the nitrogen that you have inhaled and absorbed into your tissues, coming out of solution and forming bubbles in your blood before it re-enters your lungs and can be exhaled.

The treatment for DCS, of course, is to recompress the diver so that that gas is re-absorbed and then bring him back out from pressure in a controlled manner. Breathing oxygen while recompressing flushes out the offending nitrogen quicker. While recompression is best conducted in a hyperbaric chamber, they are often not available in the remote places we commonly dive. So, recompressing by re-entering the water is an alternate treatment — and a controversial one, at that.

Years ago, John Bantin, *Undercurrent's* senior editor, made a serious error during a dive with an early Inspiration rebreather at Cocos Island. With no hope of evacuation to the hyperbaric center 36 hours away by boat, he opted for immediate in-water recompression breathing pure oxygen. He wrote about the experience in *Diver Magazine* (UK), yet was castigated by some readers for deciding against evacuation. That he suffered no ill effects afterward did nothing to influence his critics.

Bret Gilliam, the founder of the training agency SDI/TDI, has given this subject a lot of thought. He has run hyperbaric treatment facilities and recompression chambers as early as 1971. When recently diving in Raja Ampat, he was dismayed at the operators' lack of planning for such an eventuality. He wrote to *Undercurrent*, "Decompression illness is a statistical inevitability. It will happen regardless of the relative 'safety' of a dive profile and the algorithmic model in a dive computer. The

Hyperbaric Help Might Not Be Close At Hand in Florida

If you get bent in Florida, getting to a chamber is no easy matter. Many Florida hospitals have gradually stopped offering 24-hour emergency use of their hyperbaric chambers, requiring injured divers to travel farther and farther for treatment, says John Peters, head of the Undersea and Hyperbaric Medical Society in North Palm Beach.

As a result of a survey, UHMS found only 12 percent of hospitals with hyperbaric facilities in the U.S. offer a 24-hour service, down from around 90 percent in the early '90s.

Believing the trend to be driven by hospital economics, Peters has said, "For example, we've lost Panama

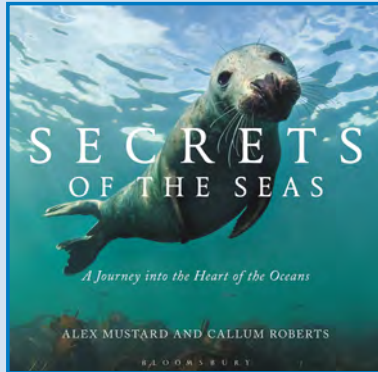
City, Tallahassee, and Jacksonville. The closest suitable Florida hospital to Tampa is at West Palm Beach."

Recently a Florida diver died, likely because he couldn't get to a chamber in time. He was taken to Springhill Medical Center in Mobile, Alabama, where their hyperbaric unit treats around a dozen or so divers each year, the majority from Northwest Florida. Julio Garcia, director of the Center, who has long feared a tragedy such as this, is reported saying, "We worry about the time to treatment. Currently, our average time to treatment from injury is anywhere from six to nine hours. That's incredibly long and can result in an unfortunate situation."

Book Review: Secrets of the Seas

There was a time when underwater photography was so difficult, there were few photographers good enough to publish coffee table books. Today, people buy a compact camera, a wide-angle wet lens and a strobe, and within a year are giving talks on how to do it. It has become easy to get good results, so why not? People even self-publish their work through computer programs such as iPhoto and produce good results.

This creates a problem for today's acknowledged experts such as Alex Mustard, pushing him to find ways to give his books market appeal beyond the straightforward collection of images. His last publication was sold as a master class in underwater photography. For his latest, he has teamed up with Callum Roberts, a professor of the underwater environment at the University of York and an author of two award-winning books on the oceanic environment.



Between the two of them, they've produced a worthy publication that is more than merely a tome of spectacular images. The commentary is both informative and enlightening, and Roberts' explanations about the undersea world draw on geological history, human history and the recent rise in human planetary influence. It's an unusual take.

The text covers areas from the Pacific's coral triangle to the seaweed cathedrals of the North Atlantic, and the photographs showcase Mustard's extraordinary skills.

Secrets of the Seas by Alex Mustard and Callum Roberts is 240 pages of interesting and vibrantly illustrated information in coffee table hardcover form. Listed at \$40, order through *Undercurrent* by clicking [here](#) and you'll get Amazon's best price — and we'll get a small commission that we'll donate to further the health of coral reefs.

important thing is assessing, recognizing the signs and symptoms, and making a responsible decision as to the best protocol to get the optimal outcome for the victim. Obviously, the first choice would be treatment at a hyperbaric facility with a PVHO recompression chamber and attendant staff.

“But, treatment is time critical. Delay in recompression of more than four hours risks permanent injury that will not be resolved. Diving in remote diving locations such as Cocos or Raja Ampat means that evacuation either takes too long or simply is impossible. If you don't have immediate access to an evacuation flight, the hard reality is that treatment where you are is the best option.

“Oxygen and pressure (from depth) are the necessary components, with trained staff to supervise the timed process.” [Bret makes these recommendations after 45 years' experience of procedures to treat patients in the field.] The outcome record, with prompt recompression and administration of oxygen, is hugely successful,” says Gilliam.

What's involved? To risk oversimplification, it would mean the symptomatic diver would be returned to the water (accompanied by another attentive diver) to a depth of 60 feet (18m) breathing pure oxygen for two periods of 20 minutes, punctuated by 5-minute breaks breathing air. He then ascends very slowly to 33 feet (10m) where

he breathes oxygen for 20 minutes. Then, while breathing pure oxygen, he makes a 30-minute ascent to the surface. As you can see, there must be precise control of depths, time and ascent rate, while keeping the bent diver warm and comfortable. Further treatment is then carried out on the surface.

Gilliam says that “The ultimate decision should fall to the patient... who should be fully informed of the risks and make an informed decision... But if unreasonable delays due to evacuation are foreseeable, it is likely that that in-water recompression treatment is the best route. The choice comes down to delaying treatment with inevitable repercussions, or in-water recompression immediately. There's no easy answer... but for most divers with an understanding of DCS, the path would be in-water recompression.”

Gilliam thinks it would be a good idea if the dive industry operating in such remote places embraced the idea of in-water recompression and adopted protocols to deal with it when needed; however, “controversy always arises in this discussion. But the same was true originally with recommendations on administering surface oxygen, using diving computers, and breathing nitrox. Most of the cautionary reactions come from issues of liability and risk management... not from the likely outcome of in-water

treatment. Nothing is perfect. There will always be a risk. But the reality of a situation is a huge influence on the practical response.”

It is inevitable that some people vociferously object to Gilliam’s views on in-water recompression. In an exchange on an Internet diving forum asking for opinions regarding this subject, Iain Middlebrook, of HSM Engineering Technology (a supplier and installer of hyperbaric chambers), proposes that every dive vessel operating in remote locations be equipped with a transportable two-man hyperbaric chamber. They would be DAN approved with “each treatment to be paid for by DAN insurance carrier for the price of an average car.”

Fully critical of in-water recompression,

Middlebrook adds, “Have you any idea how much it costs to freight a dead body back air cargo? That’s 20 percent of the purchase price of such a chamber, for starters! Besides, if you continue with this ‘body on a rope’ stunt, even I would have [lawyer] Concannon’s number on my speed dial favorites. Can you imagine defending this position in Court of Law?”

“Diving at locations such as Cocos Island, Malpelo, Komodo, Socorro, Truk Lagoon, Bikini Atoll isn’t exactly cheap. The cost of a chamber would put prices up by around \$150 per diver and the chamber would be paid for within a year. Medically trained staff is a question, granted, but a 10-day diver medics course and a satellite phone

Sri Lanka Aggressor Cancels Early Trips

Did you have a good dive trip during the holidays? If you did, you were a lot luckier than subscriber Mike Jöst (Württemberg, Germany), and presumably all the other guests booked on a December *Sri Lanka Aggressor* trip. Twenty-eight hours before he was to depart from home, he was notified by Andrew Rachlin of the Aggressor Fleet that the newly minted boat was undergoing maintenance and his trip was canceled.

Aggressor apologized profusely for disrupting his vacation plans, and, unlike many other liveaboards we have reported on, offered Mike a refund of his airfare expenses, plus a \$500 voucher redeemable for another Aggressor trip within the next two years. If he does not want to reschedule, they say they will fully refund the charter fees already paid.

We might have assumed this was due to an unforeseen mechanical problem. Surely, Mike would not have appreciated putting to sea in a vessel that was likely to break down. So, we contacted Wayne B. Brown, president of the Aggressor Fleet, who told us, “The vessel is in no way unreliable. For every new build, there are always tweaks you want to make once you have everything loaded and a couple of charters completed.

“We commit to our guests the ultimate in liveaboards, and when that does not occur, we take immediate action. While we looked very hard at all options other than canceling charters, at the end of the day there are just not any down weeks where we could take

the time without affecting guests for the next two years, so the decision was made to take the next couple of weeks.”

Fair enough, but this is precisely why we have warned our readers not to rush off on new liveaboards and new itineraries, but to give the operator a couple of months to sort things out. Too often, it seems, new craft have early problems to address and get pulled out of service – or, in fact, don’t even get finished in time for their first scheduled trips.

Mike handled the cancellation well. With no time to make other plans, he decided to head to Sri Lanka anyhow, and as planned, spend his first week at Unawatuna Rockside Cabanas for some diving and sightseeing. “However, I’m looking frantically for some alternative; there are no other boats cruising, but I thought of a trip down to the Maldives, but still have to get flights.” He may also look for a place to stay and dive near the Kalpitiya Peninsula, “which would have been the target and turning point for the *Aggressor*.”

After Mike arrived in Sri Lanka, he told us that he contacted the owner of the *Sri Lanka Aggressor* (the boats are owned individually, and fly the flag of the Aggressor Fleet), who told him it was not their first cancellation and that it was connected with bureaucratic problems in getting all the permits required.

Hmmm ...



Sri Lanka Aggressor

would cover. Do you have medically trained staff for your Soap-on-a-Rope diver?”

Of course, outfitting liveboards and tiny islands won't happen in our lifetimes. There is no organization to legislate such, and few if any dive operators will take on such an expense. A fanciful idea, it is still a good one. Professor Simon Mitchell, an experienced technical diver and medical expert, known for his over-subscribed presentations at dive conferences, believes a small two-man chamber would be a welcome sight, and he'd be happy to see one installed on any vessel he was diving from in a remote location.

That said, he adds a valid point: “You would probably find that DAN would be just as worried about who was running the show as the chamber itself. Which leads me to point out that establishing and maintaining an appropriately trained crew and maintenance staff would be very expensive. . . .

“I have participated in four Bikini Atoll expeditions where we have occasionally used the chamber on board, and occasionally used in-water recompression, too. No one in their right mind would initiate a Table 4 (6 ATA) in a two-man chamber on a boat. Indeed, in this modern day and age, it would be incredibly rare to find one done in a comprehensive hospital-based facility.”

So, my fellow divers. What do you think? If you had a bends hit after surfacing from a dive in a remote location where it would take untold hours to reach a chamber, would you opt for in-water recompression, assuming the dive operator knew the rules? We'd like to hear your point of view.

BenDDavison@undercurrent.org

– Ben Davison

If you're interested in the full in-water recompression protocol recommended by Gilliam, click [here](#).

Judge Rules in Deceased Diver's Family's Favor

when the liability waiver doesn't hold up

A 2012 death of diver Bill Savage on the Big Island of Hawaii led to a law suit over the negligence of the dive operator. The diver had signed a waiver, but the court refused to uphold it. Is it the wave of the future or just an anomaly? Here is a summary of the law suit, followed by a commentary by legal expert Phyllis Coleman.

* * *

Inexperienced divers, Bill Savage, 49, his 17-year-old daughter Chelsea (a snorkeler) and 13-year-old son Nicolas, (a recently certified Junior Open Water Diver) and wife Sandra Hambrook, from Calgary, Canada, took a trip to Hawaii in 2012. Because they had not dived since a trip to Maui in 2010, the family took the precaution of enrolling in a refresher course with a local dive shop before they left their Calgary, Canada home.

In Kailua Kona, after explaining they were inexperienced divers, they booked dives with Hawaiian Scuba Shack. On the second day, they went to a site called “Suck 'em Up, Skull Cavern,” because someone had asked to see lava tubes.

Weather conditions were calm and Jay J. Smith, the owner Shack, testified in court that his boat skipper, Dennis McCrea, was able to enter the water to affect a mooring without difficulty. Throughout

the proceedings, the defendants maintained that there was never any intention for the divers to enter the tube, however, Smith testified that he planned to take the divers to the entrance of Skull Cavern, settle near the bottom, assess their skill level and competency, then based on the conditions decide whether the divers should enter Skull Cavern no further than the archways. Neither Sandra, Nicolas, nor Bill Savage had training specific to overhead environments.

The surge and wave sets in shallow water can make entering Skull Cavern dangerous, even for experienced divers. Smith admitted that he did not give a specific warning about the waves and surge. He entered the water ahead of the other divers, who descended the anchor line together. Son Nicolas testified that Smith entered the cave, followed by his father. However, Nicolas was swept away from the entrance. Deciding conditions were too uncomfortable, he returned to the mooring line, with his mother Sandra following.

After exiting the cave, Smith followed Bill to the surface, where McCrea, the instructor on board, witnessed Bill letting air from his BC in order to re-submerge. A few seconds later, Bill was back at the surface without his regulator in his mouth, “thrashing about and looking panicked.” Both daughter

Book Review: Shark Doc, Shark Lab

Dr. Samuel Gruber, otherwise known as Doc or sometimes 'Sonny,' carries a somewhat ironic epithet due to his often-irascible nature. Against all odds, this former enfant terrible of the academic world managed to get his Shark Lab established on Bimini in the Bahamas, and after decades of research, has become the person who is probably among the most well-known of all the grand old men of the shark research world.

Shark Doc, Shark Lab, a very interesting tale, is an authorized biography, inasmuch as the Doc insisted Jeremy Stafford-Deitsch told it (with apologies to Oliver Cromwell) "Warts and all." Stafford-Deitsch, himself with a reputation as a noted shark author, wrote so boldly, it became unauthorized by the time it was completed!

For decades, the international media have revelled in sensationalizing 'shark attacks,' but what makes this book more than simply a book on shark biology is what the author calls "a story of a rambunctious, humane, driven, self-deprecating, irascible and warm-hearted paradox that is Dr. Gruber and who [undiminished by two separate battles with cancer] inspired so many."

It's a weighty 400-page tome, heavily laced with anecdotes and personal pictures (the captions of which are rather small and hard to read), including some taken during early special visual effects work on movies such as *Thunderball*. The Bimini Biological Field

Station, as it is properly known, has helped with endless numbers of movies and documentaries since then. The book is sponsored by the Save Our Seas Foundation, with a foreword by Pierre-Yves Cousteau.

It covers a period from when the Doc was less well known as a ballet dancer and high-board diver, through many decades of shark research, up to recent times. Thirty-two pages are devoted to reminiscences of other scientists who have passed through the portals of the Shark Lab and are equally devoted to the Doc. They are tellingly honest with some hilarious stories of encounters with sharks, sand flies, science and the illustrious man himself. It appears he is a very scary character who becomes a lot less scary once you get to know him. A person was said to have been 'Gruberized' after surviving a close encounter with his fragile temper.

Anyone interested in how scientists go about unraveling the secrets of shark's life, combined with how one particularly fearless biologist spent his career debunking the myths surrounding these sophisticated and equally vulnerable ocean predators, will learn a lot from these uplifting pages.

Shark Doc, Shark Lab by Jeremy Stafford-Deitsch is published by the Save Our Seas Foundation (SOSF) and costs \$29.95 plus shipping, with profits going towards support of a new energy-efficient Bimini Shark Lab. www.biminisharklab.com/book/thebook



Chelsea, McCrea, and Smith said they heard Bill calling for help. He was without his regulator or mask.

The Court heard testimony on how a diver may be swept upward by the force of hydraulic surge action in and around Skull Cavern, causing him to reach the surface abruptly and that the divers were given inadequate warnings about the conditions and entering a lava tube.

Smith rushed to the stricken diver, who had been underwater for "about a minute." He was about 15 feet (5m) deep. It took Smith another minute to get him to the surface and tow him to the swim step of the boat. McCrea, however, contradicted Smith's evidence saying it took around four minutes in total. Unfortunately, the dive computers that might have included information regard-

ing this timing had gone missing. Despite rescue breaths and chest compressions, Bill had no pulse. It took ten minutes to return to the harbor during which time there was no attempt to administer oxygen. An ambulance rushed him to the local hospital, where he was pronounced dead.

The Court found that Bill Savage was conscious of his impending death for up to two minutes. The wife and two children of the deceased witnessed the failed attempts to revive him.

One expert witness concluded that Bill would have survived if appropriate resuscitative measures had been taken while another expert witness, opined that he had already gone into cardiac arrest and that oxygen would have made no difference. The Court found that Smith and McCrea's failure to administer CPR with oxygen was unreasonable

and contributed to Bill's fatality.

So what about the liability waiver that was signed by each of the divers? The Court found that both Smith and McCrea failed by providing inadequate dive briefings, not having proper emergency procedures in place, and by not working together to administer CPR along with oxygen Bill. Moreover, the circumstances that led to Bill's death, including entering the lava tube, surge, breaking waves, and the depth change, presented a greater risk than the inherent risks typically encountered in scuba diving, which the defendants did not adequately warn about. Accordingly, implied assumption of risk by Bill would not apply, even under Hawaii law.

As to the waiver Bill had signed, the Court concluded that the Release documents signed by him and his wife that purported to waive negligence claims against Smith, HSS, and McCrea were unenforceable as a matter of admiralty law.

The total amount for damages awarded by the US District Court, D. Hawaii on August 17th 2016 to Bill's family was close to US\$1.5 million.

Post Script from Dennis McCrea.

"I was the Captain (and EFR Instructor) that used CPR. This wasn't a "diving accident", but resulted because of diver panic. 5 minutes into the dive he surfaced in 15 feet of water and neglected to inflate his BC and had his regulator out of his mouth. He swallowed water and sank, and cause of death was drowning and cardiac failure due to ingestion of salt water. It was a tragedy.

The way the lawsuit was filed made me liable since it was a summary judgement against all parties. My attorney suggested after the fact it would have been wiser to be tried separately. The Plaintiffs Attorney told me during video deposition that I wouldn't have been sued if I didn't have insurance. The law would have protected me under the Good Samaritan Law if I wasn't being paid."

A Legal Opinion on Liability Waivers

does the Hambrook case make a difference?

Undercurrent asked Phyllis Coleman, Professor of Law, Shepard Broad College of Law, Nova Southeastern University, Ft. Lauderdale, FL, for an opinion. An active diver, she is the co-author of *Sports Law: Cases and Materials* (West Publishing) and has written a number of articles on scuba diving.

* * * * *

When word spread about a federal decision from Hawaii that invalidated properly executed releases in a wrongful death case decided late last summer, divers and the industry questioned whether this was a death knell for waivers of liability for incidents that occur in the United States.

Unfortunately, it was not. In truth, *Hambrook v. Smith* really broke no new legal ground.

Vanishing Warships

The wreck of the Royal Navy's heavy cruiser *HMS Exeter* was rediscovered by leisure divers in 2002. The ship had been a casualty of Japanese action during the bitter battle of the Java Sea in 1942. It lay at 195 feet deep (60m) south of Borneo, in Indonesian waters.

However, a survey carried out ahead of the 75th anniversary of the sinking has revealed nothing but indentations in the seabed where the wreck formerly lay. Three other ships have similarly disappeared; the Dutch vessels *HNLMS De Ruyter* and the *Java* and the *USS Perch*. A third Dutch vessel, the *HNLMS Kortenaer*, is reported with a large section now missing.

The inevitable conclusion is that these wrecks have

been salvaged illegally. Salvage ships often pose as fishing boats to disguise their activities, but it is remarkable that such large vessels have been removed without drawing the attention of the authorities.

The Dutch government has launched an investigation into the fate of the wrecks, which were classified as war graves and protected under UNESCO's Convention on the Protection of the Underwater Cultural Heritage 2001. The Indonesian government refuses to take any responsibility and is less than contrite, with an Indonesian Navy spokesman saying, "If they ask why the ships are missing, why didn't they guard the ships?"

Signing your life away . . . sometimes literally

Not surprisingly, divers hate releases. But it is likely, unless you are fortunate enough to be going out on your own boat (or, even luckier, on a friend's or relative's boat), you usually have to sign one before you can dive. While generally a properly executed release is valid, there are exceptions.

Therefore, it is important to know that, despite having signed a waiver in which they agreed not to sue, divers who are injured in the United States (or their heirs) sometimes bring a lawsuit after a death or serious injury. Whether they win depends on several factors.

Notably, the most significant may be *where* the claim is filed. State laws differ, and judicial sympathy for exculpatory clauses varies widely.

Indeed, legislators and judges in some jurisdictions appear almost hostile toward releases, while in others, the waivers are generally upheld. So, for example, Florida (where I live and dive) almost never met a release it didn't like. So we have cases that appear to be contrary to *Hambrook*.

Another consideration is whether the case falls within admiralty jurisdiction, because, if so, a federal statute may prohibit boat owners and operators

from using a release to shield themselves from liability for their negligence. The test is that the injury must occur in navigable waters, and the incident needs to have a potentially disruptive impact on, and substantial relationship to, traditional maritime activity. (Navigable waters of the United States are those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.)

Hambrook v. Smith – a new case but not new law

To begin, a few words about the tragic but simple facts of a family dive vacation that went horribly wrong. The mother, father, and son were all inexperienced, relatively newly certified divers at a site where “surge and wave sets can sometimes make entering Skull Cavern dangerous even for experienced divers.” Although she and her spouse had signed releases, the widow sued. The court found the environmental conditions and the vessel owner's multiple instances of negligence (including creating and executing the dive plan, failing to give a proper dive briefing, inability to use oxygen and CPR, and not having an Emergency Action Plan), all contributed to the husband's death.

An Appeal by a Shark Lover

You might disagree with shark encounters orchestrated by baiting, but it is widespread (even if it is outside U.S. territorial waters) and has an enthusiastic following by those who have enjoyed the spectacle.

One proponent is Jim Abernethy and his Scuba Adventures, whose vessel *MV Shear Water* operates from Fort Lauderdale. Since shark baiting, apart from the purpose of harvesting (killing) sharks, was banned in Florida's waters, Abernethy resorted to taking his passengers to the waters close to Grand Bahama Island, where he discovered a shallow area fed by the Gulf Stream with a large population of lemon sharks and a notable number of tiger sharks, too. He named it Tiger Beach.

Although research by scientists at the University of Miami (Neil Hammerschlag, et al. — *Undercurrent* October 2016) revealed that these tiger sharks have an enormous range, the same ones turn up regularly at Tiger Beach — and one of the largest, a female named

Emma, has become the star of the show. Abernethy has used his regular interaction with the sharks at Tiger Beach to do conservation work, removing fishhooks that the sharks have had the misfortune to encounter. He recently posted these comments on Facebook, accompanied by a photograph:



“Emma the Tiger Shark one month after I removed her third hook of four to date, using affection to gain her trust in order to remove hooks and all parasites. After opening her mouth every day for a month to watch her wound heal, I stopped after seeing only scar tissue...a complete recovery. The scar from this hook is just inside Emma's right jaw hinge muscle (on the left side of the picture.) She started opening her mouth when she was close enough; perhaps thinking

it was a game. Sharks are definitely sentient creatures that need our help to save them from their present course [to] extinction! Please do all you can to save our friends in the sea!”

A Social Media Lionfish Hoax

There was an old lady who swallowed a fly... We all know the song. She ended up swallowing a horse. She's dead, of course!

Tropical Australia is inundated with cane toads, thanks to the bright idea to import them from Hawaii in an attempt to control the cane beetle. Everyone asks whose idea it was to import the fearsome American signal crayfish to Europe. It now poses a threat to native species in lakes, rivers, and ponds. Someone released a Burmese python in the Florida Everglades, and now thousands threaten the wildlife in that wonderful national park. And so it goes on. Non-endemic species introduced to areas where they shouldn't be always cause more problems than they solve.

So when Internet news channels latched on to the latest bright idea from a St. Croix dive shop owner to introduce Indian Ocean anemone fish — you know, Dory? — to local Caribbean waters as an experiment to counter the invasive lionfish population, we sat up and took notice. The idea appeared preposterous, but knowing how stupid the idea seemed, we contacted an expert: Prof. Callum Roberts, awardee of a Hardy Fellowship in Conservation Biology at Harvard University, previously at the National Center for Ecological Analysis and Synthesis in Santa Barbara and now in the Environment department of the University

of York. His reply was unequivocal.

“All I can do is gasp in disbelief at this story! One destructive alien species in the Caribbean is bad enough. Releasing another potentially invasive species is recklessly irresponsible, flagrantly dumb and highly likely to be illegal. And no, clownfish are not going to solve the problem of lionfish. Clownfish eat plankton.”

Eventually, we contacted with Ed Buckley, owner of St. Croix Ultimate Bluewater Adventures, from where the crazy idea had emanated.

It was a hoax. He apologized profusely and told us that it was a silly story fabricated to prove people would believe anything posted on Facebook. He proved his point, but didn't think as many people would take it seriously as they did.

“Our local Department of Fish and Wildlife had their phones lit up all afternoon with calls about it. I even went back to the original Facebook posting when someone asked if we had conducted true aquarium testing on this, and I answered yes, the trials started April 1. A few people caught on to that. I've had calls from California and as far away as Korea.”

If you're one who gets his news from social media, and the last election shows many do, you'd better check your sources before you repeat it.

The federal district judge actually had little difficulty deciding there was admiralty jurisdiction. “[T]here was no dispute” the death occurred in navigable waters, and plaintiff alleged, “resuscitation efforts on board the vessel were negligent, and the administration of first aid at sea has been found to be a traditional maritime activity.” As a result, the releases “purporting to waive negligence claims against [defendants — all of whom were persons covered under the statute] are unenforceable as a matter of admiralty law.”

Further, the judge noted the releases would have been invalid under Hawaii law as well. This is because defendants failed to 1) disclose inherent risks associated with the dive; 2) take reasonable steps to ensure divers were physically able to participate; 3) give divers instruction necessary to participate safely; and 4) take reasonable care to eliminate or minimize danger. Additionally, some of the dangers associated with the dive resulted from defendants' negligence, which meant the risks were greater than the inherent risk typically encountered in scuba diving.

People who dive regularly on commercial boats have probably been warned that these releases are generally upheld, so striking this release (under both federal and state law) seems like important (and great) news. But it really is not “news.” There are several other, earlier diving cases where the court found admiralty jurisdiction and invalidated the releases. There are others where state courts rejected the waivers under their own laws. And, of course, there are others where providers were able to avoid liability.

Shultz v. Florida Keys Dive Center is illustrative and actually provides an excellent analysis of what constitutes “traditional maritime activity” in this context.

Patricia Shultz and her family surfaced too far away for them to swim all the way back to the vessel. The boat could not get them because other divers were still in the water and there was no small boat aboard to deploy. By the time the divemaster swam out to help, she was unconscious and died.

After discussing previous cases, the court concluded the federal statute prohibiting releases was not applicable as there was no admiralty jurisdiction “because the activity at issue was scuba diving, not boating.” In other words, what is important is “the role played by the boat in causing the injuries.” Thus, for example, admiralty jurisdiction did exist when recreational scuba divers were hit by boats or where, after the diver was back on the craft, the crew did not provide competent medical assistance.

Because federal law did not govern in *Shultz*, Florida law applied and upheld the release, barring the action.

The Takeaway

So what’s the bottom line?

It depends. But, typically, if you want to dive with a commercial scuba operator, you are going to have to sign a release, and it will probably shield the provider from liability for negligence.

Nevertheless, although *Hambrook* did not change the law or make waivers any more vulnerable to challenge, it does raise important issues for divers (and their lawyers) by highlighting the fact that there are circumstances where waivers of liability are not valid.

A release needs to be signed voluntarily. It must also be unambiguous and explicit and has to express

a clear agreement not to hold the released party liable for negligence.

In situations where admiralty jurisdiction applies, a federal statute that prohibits waivers of liability might cause a court to refuse to enforce a release that meets the other criteria for validity.

State statutes might provide additional requirements for waivers, and the attitude of lawmakers in that jurisdiction might be more open to carefully scrutinizing the release.

Signing a release generally means giving up the right to sue. However, there are ways around them, so check with an attorney if a waiver appears to present an obstacle to litigation. Most important, of course, is to only to dive with careful, reputable providers.

“The reports of my death have been greatly exaggerated.” *Mark Twain said it. (Diving releases could borrow it.)*

– *Phyllis Coleman.*

www.law.nova.edu/faculty/full-time-faculty/coleman-phyllis.html

What’s your opinion of liability waivers? Good or bad? Write and tell us: BenDDavison@undercurrent.org

Six Deaths in Five Days Call for Tougher Aussie Standards

Older divers need medical examinations, and Australian training standards should be reviewed after six diving and snorkeling deaths in the space of five days during November 2016, says the president of the Australian Underwater Federation, Graham Henderson. As the diving industry is ageing, older people have the will and money to take it up as a hobby, and he is concerned about the variation in dive course quality.

To be honest, some of the courses ... are pretty minimalist,” Henderson said. “The Australian standards need to be looked at and talked about more. Probably an age requirement to have a diving medical [exam] would be well worthwhile.”

Henderson said people were moving away from diving and snorkeling in large groups or clubs [and diving independently], which increases the danger if something went wrong.

The Aussie deaths included a man in his 40s, snorkeling with two people when he got into trouble and was assisted onto a boat in New South Wales, but died at the scene. Another man who was scuba diving with his friends in Victoria died after he was reported to be in distress, a 49-year-old Tasmanian man died while diving, while a 60-year-old Englishman died during a Queensland diving trip.

Deadly jellyfish stings are being touted as a possible cause of the mystery deaths of two French tourists snorkeling on the Great Barrier Reef. Jacques Goron, 76, and Danielle Franck, 74, were found floating motionless in the water at Michaelmas Cay within minutes of each other while snorkeling. They died in front of their relatives, not long after the pair entered the water. While it’s believed they suffered heart attacks, Sydney cardiologist Dr. Ross Walker has speculated an Irukandji jellyfish could be to blame because it was unlikely two people would die of heart attacks so close together. (*Australian Associated Press*)

Those Little Blue Pills Offer Risk to Male Divers

It's not recent news but it might bear repeating: Divers who take Viagra for erectile dysfunction need to be aware that it may increase the risk of decompression sickness. The active ingredient is sildenafil, originally licensed to treat pulmonary hypertension. It was just a coincidence its side effect benefited the male member.

Scientists initially thought that a vasodilator such as sildenafil might protect against DCS in divers. However, those hopes were crushed when experiments on animals proved that the converse was true.

The test rodents underwent a simulated dive to 290

feet (90m) for 45 minutes in a hyperbaric chamber before undergoing staged decompression. Thirty minutes after the 'dive,' blood samples were collected for blood cell counts and the level of circulating bubbles in the right cavities was quantified. There were more cases of DCS in the group administered with sildenafil than in the control group. Bad news for some divers!

The researchers of this study conclude that pre-treatment with Viagra or other PDE-5-inhibitors promotes the onset and severity of DCS. Don't mix your pleasures! [www.ncbi.nlm.nih.gov/pubmed/ 23580342](http://www.ncbi.nlm.nih.gov/pubmed/23580342)

The Terror of the Irukandji

is a tiny invisible jellyfish the most lethal?

Deadly jellyfish stings are being touted as a possible cause of the mystery deaths of two French tourists snorkeling on the Great Barrier Reef in November. It's believed they suffered heart attacks, but Sydney cardiologist Dr. Ross Walker has speculated an Irukandji jellyfish could be to blame, because it was unlikely two people would die so close together.

The Irukandji may become more populous, because while sea turtles feed on them, they are an endangered species thanks to fishing and egg gathering.

In March 2002, an American tourist was snorkeling near Hamilton Island in the Whitsundays when he received a tiny sting. He couldn't see anything that might have caused it. After some minutes a headache set in and he retreated back to the boat. After another ten minutes the pain began to spread, with severe muscle cramps until he could no longer control his movements. Airlifted to a hospital, the doctors were almost helpless in what they could do for him. There is no antivenom for the Irukandji syndrome. They could only give him powerful painkillers to help alleviate the agony, but he 'continually climbed the stairs of pain.' Within two weeks, he was dead from a brain hemorrhage. He had been killed by a tiny, almost invisible jellyfish weighing just a few grams.

A few months later, a second tourist suffered the same fate after being stung near Port Douglas. He suffered headache, shooting pains in the muscles,

chest, abdomen and back. Other symptoms included nausea and vomiting. What usually killed the victims of the Irukandji jellyfish was hypertension and heart failure due to the excruciating and continuing pain.

These animals had been undiscovered until 1964, when Dr. Jack Barnes, an emergency room doctor who had attempted to treat numerous people suffering the same, proved their existence. He routinely searched the coastal waters near Cairns, Queensland, Australia, until he found what he was looking for. Nobody believed that such a modest-looking creature could throw such a deadly punch. To prove his case, he let one sting himself, the local lifeguard and his son. Within the hour all three were in the hospital with Irukandji syndrome, but luckily all three survived. In honor of his dedication, the jellyfish was named *Carukia barnesi*.

Unlike the well-known and almost as equally deadly box jellyfish, the Irukandji jellyfish can be found in deeper waters, offering a hazard to divers and snorkelers who don't wear a full covering of neoprene despite the waters being very warm.

Divers are usually immune to such attacks. They tend to go into the water clad in rubber, often with hood and gloves. If you think that that can keep you safe, think again. If you think that if you never dive near the region where the most stings have occurred, such as in North Queensland, think again.

The news gets more disturbing. Cases of Irukandji syndrome have cropped up far beyond the warm tropical waters of the Far East and the Pacific. An American military combat diver on a routine training mission in Florida, completely covered in neoprene from head to toe apart from maybe a small area of cheek between his regula-

tor and his mask, got stung and suffered Irukandji syndrome. There have since been reported cases in Japan and even one in the rather cold or even frigid waters off the coast of the UK. It seems these jellyfishes can exist almost anywhere! (*from Amazing Diving Stories*)

– John Bantin

Get Off the Air, Will You?

it's time to dive with nitrox

Do you find that you are annoying other divers because you run out of no-deco-stop time long before they do? In groups of divers, those who don't use nitrox often cut short the bottom time of divers who do. If the divemaster running a group makes everyone rise when the first person runs low on no-deco-stop time, it's inevitable that air divers will be the first. Those diving nitrox will then end their dives when they could have stayed longer. It ain't fair.

Thirty years ago, ex-NOAA scientist Dick Rutkowski suggested that divers visiting deep wrecks off the coast of Florida could reduce the hazard of decompression illness (DCS) by increasing the proportion of oxygen (thereby reducing

the nitrogen levels) in the air they breathed, And that's when nitrox for leisure divers was born.

It was inevitable that modern leisure divers would see nitrox less like an additional safety measure and more as a way to get better-value-for-money with more time underwater. With dive trips getting ever more exotic, and therefore, expensive, time in the water had become more precious.

However, the popularity of nitrox has produced conflict when divers who do not know each other are required to dive as a group at a dive resort or from a liveaboard. Nitrox divers are often disappointed when an air diver runs out of no-deco-stop time and needs to curtail the dive long before the nitrox divers, thereby cutting short their dive.

How You Use Your Tank Valve May Be Wrong: The Quarter Turn That Can Kill

We divers are creatures of habit. We like to do things the way we always have. Instructors who teach their trainees exactly what their instructor taught them exacerbate these habits. Outdated techniques and theories are handed down like gospels. Sometimes, a better way presents itself, but there is often a reluctance to step off the well-trodden path into the undergrowth of a new experience.

Take the tank valve. It's like a faucet. 'It's lefty loosey, righty tighty.' One shouldn't need to know more than that. However, with a tank valve, you'll want it either fully open or fully closed. This is where old habits can interfere with good practice.

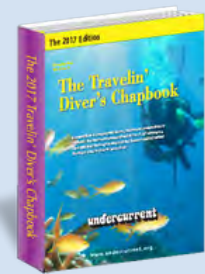
Back in the day, tank valves could jam if they were opened too far. Older divers were taught to open the valve all the way and then close it a quarter of a turn. All well and good if you are precise in your habits, but what of the diver who does that and then forgets he's

opened the tank and closes it by mistake, turning it back open a quarter of a turn? His air supply will be uninterrupted at the surface, but as he goes deeper, it will become harder and harder to breathe. If he's lucky, he'll see his pressure gauge drop to zero on each inhalation before returning to the full-tank position. If he's unlucky...well?

Today's tank valves don't jam in the open position, so open the tank all the way and leave it there. When you want to shut off the gas, close it all the way. No half-measures, no quarter turns, and you'll stay safe.

If you are using higher percentages of oxygen, you should know to open a tank valve cautiously, especially the O₂ tank on a rebreather. A sudden rush of oxygen could cause a fire.

This outdated habit simply refuses to die. Changing the habit of a lifetime can save your reputation as a serious diver, maybe even save your life.



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Several *Undercurrent* readers have written us about this, in a way surprising us that there are still so many divers who are not yet nitrox certified. An air diver may argue that he's always used air, so why change, but he's ignoring three strong and simple reasons.

First, nitrox is safer, much safer, especially for an aging diver.

Second, you can have far more time underwater — time for which you have traveled far and paid dearly.

Third, your stubbornness in sticking to the past won't be cutting short the dives of others.

Nitrox doesn't make the contents of your tank last longer, but it can make you last longer!

NRC (Nitrox & Rebreather College) was a German company that introduced a very much simplified nitrox course at the turn of this century, and bigger dive centers world-wide started to adopt it en masse. It was threatening PADI's dominance of diver training, so they bought NRC. There was a time, after that, nitrox training was included in PADI Open Water Diver training. Those days appear to be long forgotten.

So, of course, today PADI charges for a dry nitrox course, which can be undertaken at a PADI training facility or taken online by anyone with a PADI OWD or higher certification. After completing the on-line section of the course, you contact a PADI instructor or school for the practical experience of analyzing the contents of a tank. That should take you about 15 minutes at most.

The course cost to be certified as a nitrox diver is an exorbitant \$250, plus or minus. We don't believe it merits being a separate course, and, in fact, should be integrated into every basic course. Everybody should be versed in it. But PADI wants the additional income, and it's not going away.

Regardless, amortize the \$250 over your next 25 dives. Then, consider the price of nitrox. If you have to pay \$10/tank, your extra 25 minutes underwater at 60 feet runs \$20, about half as much diving time. And, you won't be pissing off our buddies who have to cut their dives short because of you.

Go to www.padi.com/padi-courses/enriched-air-diver. There are several other training agencies that also run nitrox courses. It isn't rocket science!

— John Bantin

Flotsam & Jetsam

Scuba Tank Explodes. A Melbourne, Australian man in his 40s was flown to the hospital in November after being seriously injured when a scuba tank exploded in his garden shed. The force of the explosion propelled the cylinder, causing it to break the man's leg. The man also had burns to his head, back, hands and legs as a result.

Lionfish — The War Goes On! Now that lionfish fillets are proving to be good eating, the problem is how to harvest them efficiently. It's labor-intensive to spear them conventionally, so scientists at NOAA and other organizations are experimenting with different traps that will target lionfish but not other

species. Some are high-tech, using photography and imaging software to determine whether it's a lionfish in the trap. Another, simpler device is left on the bottom where lionfish congregate, offering a habitat. After a month it slowly closes as it is pulled to the surface, allow faster-reacting species to escape. A good idea, but forget about these traps eradicating lionfish, unless someone springs for the hundreds of millions it might take.

Florida's Diving Museum. Have you heard about the History of Diving Museum in Key Largo? The exhibits explore the world of diving bells and early diving helmets. The museum's holdings are said to be one of the largest in the world for diving history. The collection is from the personal collection of two remarkable individuals who were the founders

of the museum, Drs. Sally and Joe Bauer, Jr. Sally is still active in the museum, but Dr. Joe passed away in 2007. www.divingmuseum.org

A Sticky Situation? City News Service reports that a diver went missing on Sunday, November 13th, near an L.A. sewage plant, north of Manhattan Beach. The diver, reported as being 45-year-old Jeff Holly, went missing three miles north of the Hyperion Treatment Plant's pier. He was last seen wearing a black diving suit and black fins and equipped with a black tank — not good for being spotted alone in the sea.

Give a Diver a Lift. In February 2016 we wrote about electric lifts that conveniently transport UK divers, often weighed down with multiple tanks and lead belts, from the water to the boat deck. The following March we reported Frank Wasson of the *Spre* liveboard explaining the legal ramifications, and hence, difficulties of installing such things on U.S. boats or boats that are flagged in one country but operate in another. Well, what he said may well be true, but the *Truk Odyssey* now sports such an item of equipment, meaning that divers can be retrieved from the waters of Truk Lagoon in double-quick time and with little effort on their part.

www.trukodyssey.com

Buck Naked Scuba. Cotton Tail Corner naturists who manage a nude beach near Devon Bridge near Edmonton, Canada, are planning a nude scuba event February 25th, after last year's successful event. It's all in the name of charity, with a collection for Parkland and Edmonton food banks, delivered by people hopefully dressed. www.cotton-tailcorner.ca

Giant Stingrays Found Dead. Late last year, the corpses of more than 70 giant freshwater stingrays were recovered from Thailand's Mae Klong River. These animals are among the largest fish living in fresh water and can exceed 8 feet (2.5m) in length

and 1000 pounds (454kg) in weight. Seems as if the mass fatality is due to excessive water acidity or poisoning caused by an industrial ethanol spill.

Grand Cayman Reef Damage. The 2,900-ton cargo vessel *Saga* ran aground in the marine park of Grand Cayman, outside the Eden Rock dive site in George Town Harbor, causing extensive damage, during late November. The Department of Environment is assessing the damage and will take legal action. Of course, Grand Cayman is building piers to continue to attract more cruise liners, so there is no lesson for the politicians here.

Historic Wrecks Robbed. American diver Robert Infante (48) and British diver Gordon Meek (66) have each been fined £18,000 (\$22,000) after pleading guilty to plundering the wrecks of German WWI battleships *Margraf* and *Kronprinz Wilhelm*, scuttled in Scotland's Scapa Flow in 1919 and preserved under the Ancient Monuments and Archaeological Areas Act.

Something for Nothing! Written by those medics who run London's hyperbaric center for divers and based on a broad sample of questions put to Dr. Oliver Firth and Jules Eden over 20 years, the answers in *FAQ Dive Medicine* are readable, informative, even witty. Get both educated and entertained by downloading it free. <http://londondivingchamber.co.uk>

Topsy Turvey in Bali. Sea conditions around the small island of Nusa Penida, famous for manta and mola mola encounters, can make diving difficult. A tragedy was narrowly averted at the end of last November when a dive boat from Two Fish Dive was capsized by large waves, sending all aboard into the water. Diver passengers recovered from the water included one French, one Australian, one Swiss and one British national. Nobody was hurt and the capsized boat was towed to shore.

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Letters to the Editor/Submissions

Editor BenD@undercurrent.org

Editorial Staff

Ben Davison, Publisher and Editor

John Bantin, Senior Editor

Dave Eagleray, Webmaster

Contact Us Call: 415-289-0501

Go to: www.undercurrent.org/UCnow/contact.shtml

or write: Undercurrent

3020 Bridgeway,

Sausalito, CA 94965

www.undercurrent.org