

# undercurrent

*The Private, Exclusive Guide for Serious Divers*

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## MV Kate, Tiger Beach, The Bahamas

*don't forget, you are still prey*

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Dear Fellow Diver:

On my fourth day of diving at Tiger Beach -- that's the once "secret" spot in the Bahamas where one is all but certain to be face-to-face with tiger sharks -- I made a mistake that could have hurt me, seriously hurt me. And then some.

I was only 45 feet (14m) deep, wearing 22 pounds (10kg) of lead to stay down because of the expected currents, but there was no current. Three active tiger sharks buzzed around as the dead fish smell was everywhere. I pulled my housed Olympus OMD with dual strobes toward me to photograph an approaching tiger chasing a fish our shark wrangler had tossed, but she missed the bait, and in the blink of an eye, she transformed from scavenger to predator and came at me. Our shark wrangler moved quickly to push her away. But, "Butters," an 11-footer (3.5m), turned around and came back again, this time chomping down on the strap between the two strobe arms and swimming away with my camera rig before dropping it a few feet away. I retrieved my camera, but she came back at me again, then again, and again, and each time I pushed her away. Unnerved, I headed to the surface to end the dive. She followed me up a ways, before returning to the feed.

After the dive, Mike



*Mv Kate Docked in Freeport*



Black, who has 10 years' experience as a shark wrangler, explained what Butters was doing. By pulling my camera back, he said, I caused her to become a predator, and I was her target because she perceived me as running away, as prey do. I managed to remain calm with his explanation, but the incident preyed upon my mind all night. So much for anthropomorphizing a half-ton tiger shark with the cute name "Butters." Jaws would be better.

On January 29, I had boarded the MV Kate in Freeport, Grand Bahamas Island, which departed for Tiger Beach once all the guests had arrived. While their website claims this is the "finest in luxury diving charterers," don't you believe it. Indeed, everyone sleeps in one dormitory area, where there are four single bunk/sleepers and two double bunk/sleepers, with only small curtains for privacy. Climbing in and out of the bunk left me with a knot on my head, as the 30-inch (75cm) clearance was just not enough for night-time bathroom calls (it would have been impolite to turn on an overhead light). Complicating matters, the floor is the only storage area, so having to negotiate everyone's luggage in choppy seas was no easy matter.

The first night, the weather was drizzly, windy, and cold, and the 30-mile crossing was rough. Of the seven divers aboard, three became seasick and hit their bunks early. I lasted until dinner, when the smell of chicken cutlets frying in oil did me in. Nauseated, I adjourned to my bunk as well. With 12 people, including crew, on the boat, the two bathrooms -- one in the dorm area, the other on the main deck near the kitchen/dining area -- got a workout, as they did again after dives when divers lined up to shower.

The MV Kate's crew also consisted of Captain Scotty, his son and mate, Brady, Margarita, the chef, and two experienced shark-feeders, Mike, a Texan, and Jamin Martinelli, who leads inwater Pilates for seniors when she's not wrangling. Both

### ***Keep Away from the Sharp End!***

Dutch celebrity biologist Dr. Freek Vonk (34) was flown to a hospital in Miami after a reef shark bit him on his upper arm during filming for a Dutch television series at the Bimini Shark Lab in the Bahamas in February.

"Unbelievable how well [the operation] went," Vonk writes. "Especially given the fact that my arm was in pieces and I could even see my muscles!" He sustained some nerve damage and still has no feeling in the skin of his forearm. "Nothing vital was hit; the tendons and muscles in my right upper arm are largely in order. I can move my hand, fingers, and my arm."

Vonk says he was in search of Caribbean reef sharks near the island. "This one was friendly. Sharks are

harmless to people," he says, "but it went wrong. One of the sharks made a mistake and took a big bite out of my right arm. I knew immediately that this was bad." He stressed that he had been bitten and that it was not an attack.

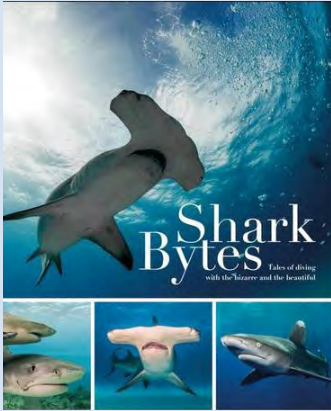
Guido Leurs from *Save Our Sharks*, an organization dedicated to sharks protection, said "Situations with Caribbean reef sharks can quickly be dangerous if the sharks are conditioned by feeding from a boat, so the sharks associate the sound of a boat with getting food. It can be very dangerous."

Of course, sharks have a mouth full of extreme shark teeth and are wild animals.

*(Source: NL Times)*

## Shark Bytes

John Bantin has been picked up by a large tiger shark and swum off with more than once. In this beautiful book, he recounts these and many other tales of his diving with several different species of sharks over three decades. Accompanied by his own photography, these captivating, spectacular and sometimes shocking



encounters show the reader what it is like to get up close and personal to these bizarre and beautiful creatures. The sharks covered range from the great whale sharks to the small blacktip reef shark, in locations extending to all corners of the globe.

“I don’t offer myself as an expert regarding sharks,” Bantin says. “I simply offer myself as a shark witness, and in *Shark Bytes*, I delve into the way my own attitude to and understanding of sharks has developed during the intervening years. It’s about how I grew to love diving with sharks.”

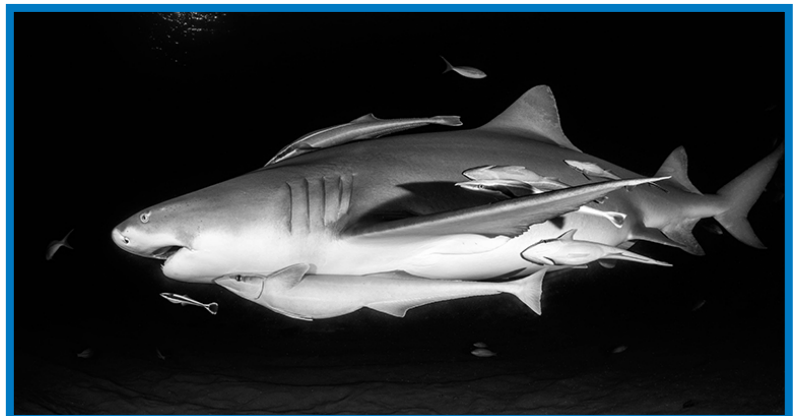
[Click here](#) to order through *Undercurrent* and you’ll get Amazon’s best price — and our profits will go to save coral reefs.

have appeared on the Discovery Channel Shark Week programs with Joe Romerio and have worked with shark scientists from several universities. That said, their initial briefing was short and succinct, such that I didn’t grasp the meaning and objective of their instructions to keep our arms out in front, with the camera between the shark and us. I learned, but too late.

While most of the divers come to photograph, the MV Kate has no separate room for camera gear. Photographers took over the dining room, which consisted of booths, a table and chairs, and set cameras and gear everywhere, including on towels on the floor. Because spots for charging batteries were at a premium, they should have forewarned us to bring a media bridge to hook up both chargers for our camera battery and strobes, as well as items such as focus lights. In fact, the entire craft was cramped, leaving the marine heads as the only place for privacy, and you sure didn’t want to stay in those smelly places long.

Our original plan was to dive Tiger Beach for two days, travel overnight to Bimini for two days with hammerheads, and then return to Tiger Beach for the final day. Unbeknownst to any of us prior to arriving at Tiger Beach, Bimini was hosting a fishing tournament, we were told, and that would attract bull sharks as well as hammerheads, so rather than be in the water with fishermen chumming bait, we opted to stay at Tiger Beach, where we hoped a hammerhead or two might appear.

Unfortunately, high winds and a stiff current caused us to skip diving the first day, so we worked on camera gear, watched a short video, napped, talked about sharks, and wondered if the new administration might gut the Endangered Species Act, as many speculate. The guests included an American couple, a Swedish marine biologist living in Australia and her friend who manages a Caribbean dive shop, a female attorney, and the trip organizer, Tanya Houppermans (Blue Elements Imaging) -- an award-winning photographer.



**A Lemon Shark Covered with Remoras**

## MV Kate, Tiger Beach, The Bahamas

Diving for Experienced  
(And not the faint of heart)..... ★★★★★

Diving for Beginners .....Don't go

Boat Accommodations..... ★★½

Food.....★★★★

Money's worth .....★★★★  
(Boat too spartan for the price)

★ = poor ★★★★★ = excellent

*Caribbean scale*

Tuesday morning, the diving commenced. Because of the shallow depth, the diving was pretty much all day long, as one shark feeder would descend, stay down for 90 minutes, then be replaced by the other. The Tiger Beach bottom is 22 feet (7m) down, and there was usually a heavy current, but one day it was dead calm, so sharks streamed in from everywhere. At the other site, 45 feet (14m) deep, we had the reef behind us -- and the current, which pushed us forward -- as we made a V-formation beginning from the bait box, from which the handlers pulled fish to feed the sharks. Smelling the fish, the sharks came from up-current, forming a conveyor belt as they headed to the bait.

That first dive, I only saw reef and lemon sharks, but I didn't take my camera so I could test the currents and learn how the animals reacted. The water was clear

and 74°F (23°C), and I wore my snug 5mm wetsuit that kept me warmer than those who were in 7mm poor-fitting wetsuits. So that exiting would be quick and easy, the shark feeders kept us close to the boat, but moved the bait box frequently. I kept up with them in the stiff current by crawling, since I could not swim with 30lbs (13kg) of lead. I got my exercise on the trip for sure!

And that exercise helped burn calories as Margarita cooked up good, home-style meals -- in fact, creating two menus for each meal, as four guests were vegans. Breakfast were eggs, usually fruit, fresh muffins or breakfast cakes, and bagels, toast, cereal, and oatmeal. Lunches were things like chicken and dumplings, or tacos in her own homemade masa tortillas, while dinners might be pork tenderloin or flank steak, with sides like salads, green beans, or mashed potatoes. She also prepared daily deserts and between-dive snacks: carrots, celery sticks, radishes and a dip, once sausage, cheeses and crackers, another time hand-made chips and salsa. The Kate carries no alcohol, but divers may bring their own; however, it's best stored in one's bag on the floor.

On day three, we dove the shallow area in the morning and then moved to the 45-foot-deep reef, where, on my 600th dive, two tiger sharks and the sole hammer-head of the week showed up to congratulate me. On the reef, I cut my lead by eight pounds (3.5kg) because I could stay steady with lighter weight at that depth. Still, trucking around with either 22 or 30 pounds (10 or 13kg) added to my cur-

## Scuba Diving In His Living Room?

*Undercurrent* has taken a position for years against saltwater aquariums, because virtually all the fish in them are captured on reefs.

So we are not pleased with Eli Fruchter, who has built the ultimate aquarium within his home in Haifa, Israel. It holds a massive 30,000 liters (8000 gallons) of water, and he has stocked it with 50 tropical fish of 30 different species, together with a range of live corals, all of which have been gathered from living reefs. He even

scuba dives in it.

A decade ago, Fructer had a 1,000-gallon fish tank, but it broke and flooded his home. No doubt those fish died a nasty death. Undaunted by the experience, he constructed another aquarium, this time with the new house built around it. If the new aquarium breaks, he'll be able to scuba dive in his living room, too. Pity the poor fish.



rent fatigue, so I made just eight dives in four days, averaging 47 minutes. But they were, indeed, action-filled dives. A few guests made four a dives a day, while one diver seemed oblivious to it all, unable to get anything together on time, and once jumped in after the divers were already on the bottom, then swam around for 20 minutes with tiger sharks on the prowl and was unable to find them. Once, Mike sent her up because her computer was headed into the red; she skipped the safety stop.



### Butters, The Troublesome Tiger Shark

On the last two days, we stayed at the deeper reef, hoping the hammerhead would return. While as many as four tigers visited at a time, the hammerhead never came back, although a bull shark hung out at the edge of my sight. Of course, reef sharks and lemon sharks were everywhere, and several black groupers hung around. So thick in numbers were the yellowtail snappers, they sometimes blocked the feeders from seeing the tigers approach. And, it was here that Butters came at me.

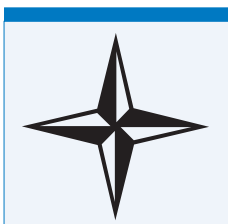
So, the last morning, I had to work through my fear and talk myself into diving, as I was afraid of what another mistake might mean. Knowing I must face my fear, I made one rule and got back into the water. I would not be in the water with more than two tigers at a time. When there was current, they came straight to the bait box in a nice line. But, on this dive, there was no current, and it was hard to keep track of them when they flicked their tails and took off. Regardless, I got fine photos on that dive, so I am delighted I did it. Any time Butters and the other tiger shark became too pushy I just shoved them away with my dome port.

That evening, the boat moored an hour out from Grand Bahamas Island. Saturday morning, the seas were dead calm, and after breakfast we packed our gear, arriving at the dock at 11 A.M., where cabs were waiting. I left, satisfied that I had the photos I wanted, and my arms were intact.

PS: While divers have love affairs with sharks, we sometimes forget they are wild predators. Nearly 10 years ago, an Austrian lawyer, Markus Groh, died after a tiger shark bit him at a Tiger Beach feed. Even the legendary Jim Abernethy was bitten by a lemon shark there. There will be others.

-- P.S.

Our undercover diver's bio: *"I started diving in 1999 because I was sure the world would end in 2000, so I figured, 'Why not, I could only drown.' Later, I committed the heinous crime of taking up underwater photography, and, obsessed with capturing critter behavior, I've buzzed around the Caribbean, where I've made most of my 600 dives (I've also dived in the Philippines). Photography has helped my fish, critter and coral/sponge ID skills, so now when I'm asked, 'What is that?' I no longer have to say, 'I dunno.'"*



**Divers Compass:** Blue Iguana Charters runs the MV Kate ([www.blueiguanacharters.com](http://www.blueiguanacharters.com)) ... Tanya Houppermans of hosted the 6-night trip, quite pricey at \$3200 considering the barebones craft ... There is no rental gear aboard, so bring everything you need ... Cabs are a flat rate \$70 plus \$5/additional person... fly nonstop to Freeport from Miami, Fort Lauderdale, Atlanta, Charlotte and others.

# Papua Explorers, Raja Ampat, Indonesia

*well worth the time and expense*

Dear Fellow Driver:

Raja Ampat has been on my to-dive list for a while, but it seemed elusive, mostly due to the high cost for two. However, the great 2016 bleach-a-thon in the Pacific, though disputed by some, made me realize that as a hardcore diver I had better get there before it's affected, regardless of the expense.

Yes, it does cost a lot, thanks to its remoteness, infrastructure issues, island-hopping nightmares, and supply and demand every diver wants to go there. But, the decline in the Euro, their billing currency, has helped, so seven nights today runs about \$4600 for two (\$4980 come October); add to that the nearly six days of travel to and fro. But for Raja Ampat, you suck it up.

After all, this is the epicenter of the Earth's fish and coral. After my first two dives, I'd already seen a dozen animals I'd never seen before. By week's end, that number was well over 100. Diving Cape Kri, for example, was all about the fish. Thousands upon thousands of jacks, trevally, sweetlips and pickhandle barracuda engulfed me in the mild current. The "Blue Corner of Raja Ampat" might be Sardine's Reef, on the edge of the Dampier Strait. It was a challenging dive because we clamped our reef hooks into a slope, then slowly moved up, leapfrogging and rehooking from bommie to bommie, into an increasingly strong current. But, everywhere were enormous schools of scissortail and blue and yellow fusiliers, with the occasional unicorn fish or jacks, as well as schools of butterflyfish and even a school of 50 spadefish. Incredible. Visibility ran 50 feet (15m) plus in most places, with Dampier straits exceeding 80 feet (25m).

Every dive I saw unique fish and critters, so many I couldn't possibly list or ID them all, but a few included a Batavia spadefish, a halimeda ghost pipefish on a sand patch, a peacock razorfish, an orangutan crab, wobbegong and walking sharks, and endless crustaceans, eels, and nudibranchs. Once, kneeling on a patch of dead coral, I accidentally slid into a dozen *Plankobrancus* slugs. Yes, I saw dead coral, significant patches on a couple of reefs, and some divers thought they saw signs of dynamite fishing. Regardless, this is gorgeous terrain, though without serious policing, it is not immune to civilization's bad impulses.

Raja Ampat comprises four large islands off the coast of what was once Irian Jaya but is now West Papua. Some distance separates the islands, so if you select a resort on Misool, you will be diving in the Misool area and most likely will never get near Waigeo or Batanta. If you go to Waigeo, where you stay will influence what part of Waigeo (or Gam or Fam) you'll be diving. I picked Papua Explorers, on the southern end of Gam Island, an easy travel distance to the Dampier Strait.

Upon arrival at Sorong Airport in late October, my buddy and I were met and driven to our hotel. We had arrived a day early because Indonesian airlines have a repu-



**The Dock at Papua Explorers**



tation for blowing flights and we didn't want to miss the noon resort boat, which departs only Sundays or Wednesdays (to charter the three-hour ride any other day will cost \$580). The boat was loaded with supplies, so the twelve 12 of us and our luggage made it a tight fit for the long ride. It was my first chance to meet the guests, many of whom were Americans, and two just happened to live 20 miles from me.

If one weren't looking closely, it might be easy to mistake Papua Explorers Dive Resort for just another village that dots the verdant shoreline every few miles. We motored up

to the long dock, staff grabbed our bags, and we ambled down to the attractive local wood-hewn restaurant/central meeting area/main office building on shore. To the right, a path runs behind the charming bungalows (both single and double) that perch on stilts above the water. The dive shop has a gear and wetsuit storage area, a small room to tinker with and curse at your camera outfit, an office and a place to fill tanks. Newish it may be, but they have things wired down nicely. In fact, at the end of our stay, we were given a log sheet with the location and nature of each dive, which helped me ensure I got the spellings correct in my own log book.

A Frenchman named Arno oversees the dive operation. Having lived and dived many years in Indonesia, he's also a marine ecologist and gave a talk on a manta survey they had presented to local officials to stress the need for renewed conservation efforts. Near the central dock, he oversees coral-growing stations that will be used eventually to restore dead reefs. We were encouraged to participate in their "citizen science" to help keep tabs on various species. This isn't just for show. The data collected is used to chart the population of certain species at specific reefs.

My package included four dives a day, and I intended to make the most of it, refusing to squander a day for a bird watching trip, or an island excursion --compelling as they were. But, I was at the most bio-diverse underwater spot on the planet. I would eat, dive, rest, dive, lunch, dive, rest, dive at night, eat dinner, go to sleep, repeat ... basically liveaboard conditions ... only on land. It wore me down, but I can't argue with the results.

At Manta Sandy, where oceanic mantas are hopefully the main attraction, we hit the water, swam to the cleaning station and waited. And waited, while a snake eel poked its head from the sand in the distance. Still, no mantas, which is my normal luck with mantas anyway. So, I turned my attention to the sea floor where a pair of Pegasus seamoths was making their way to nowhere in par-



**Papua Explorers' Restaurant**



## *Papua Explorers Dive Resort, Raja Ampat, Indonesia*

Diving for Experienced ..... ★★★★★  
 Diving for Beginners ..... Don't go  
 Accommodations ..... ★★★★★  
 Food ..... ★★★★★½  
 Ambience ..... ★★★★★  
 Dive Operation ..... ★★★★★  
 Money's worth ..... ★★★★★½

★ = poor ★★★★★ = excellent

*Worldwide scale*

ticular. They don't like walking toward you, so after a couple of maddening minutes of photography futility, I swam off with the other divers to the reefs. And there I was awestruck. Each mound was like an ecologically isolated island, each with its unique growth. First was a huge number of mushroom leather coral in a sea of Halimeda algae and octo corals with occasional branching hammer coral running hundreds of feet. The next mound was dominated by a forest of staghorn coral, then a mound with a massive cluster of cabbage patch coral intermingled with bird's nest and mantipora corals. A huge sponge group, some individuals nearly three feet tall, reminded me of Stonehenge as it stood out monolithically in that sea of cabbage corals. While reef fish were few, it was just mound after mound of packed corals and sponges, without even a sand patch. How do you stage a shot when the beautiful coral cover is that dense?

I didn't see many sharks, perhaps 10 blacktip or gray reef sharks, though I saw wobbegongs, and at night, other reef walkers. Ten large bumphead parrotfish moseyed by on my first dive, but they were scarce the rest of the trip, as were Napoleon wrasse. Regardless, I was more than compensated by the huge biodiversity, which made the trip well worth it. Besides, there are easier and cheaper ways to see sharks and mantas, but nowhere else to see the complex and complete biodiversity thriving here.

The dive staff at Papua Explorers knows that's why they get guests from afar and did a splendid job looking out for their customers, loading and unloading gear, and offering whatever assistance one might require. We were well briefed before each dive, -- too well, I might say, given the excessive specificity. Our boat, small and speedy, never had more than six guests, with a guide for every two divers most of the time, and my buddy and I had the same guide every dive. When my buddy caught a cold and had to skip several dives, it was just our guide and me. A local, he pointed out endless subjects I surely would have missed on my own. I had to retrain myself to look at the reef in a manner I had not needed anywhere else I have dived. I had to acquire macro-vision.

With all this diving, ya gotta eat, and I ate well. We sat at long tables and every buffet meal featured a wide variety. Breakfast: bacon and eggs to dried cereal. Lunch and dinner buffets were well prepared, and consisted of several dishes such as seafood -- baked, sauteed -- pastas, vegetables, locally inspired cuisine, and meat, cookies and baked goods, and always fruit plates, but not as sumptuous as one might expect and no rambutans or dragon fruit, which I love in the tropical Pacific. I also started cutting back on consumption because I found I was never hungry come meal-time because I'd eaten too much the previous meal.



**Dive Boat and Cottages**



## A New Way to Get Killed!

The social forums on the Internet are full of breathless postings regarding a new product that promises to allow people to swim and breathe underwater. Mini Dive tanks “are a lightweight, portable alternative to usually bulky and heavy scuba tanks. With one scuba dive tank like this, you’d be able to swim freely for 5-10 minutes underwater, admiring the underwater life or doing some repairs on your boat.” So says the advertising copy.



For \$159.95, it appears to be a small cylinder of compressed air that

the user wears slung around the neck in a “hands-free” harness, breathing from what looks like a conventional scuba regulator.

“There are actually four ways to fill the tank, but if you want to be able to do the refilling anywhere you want, then I have two words for you — hand pump. It works basically like a bicycle pump and will fill up your tank with nice, breathable air.”

The video accompanying the prose shows a man cleaning the bottom of his boat and then swimming freely beneath the waves with a promised duration of 10 minutes. There’s no mention of the possibility of a lung over-expansion injury or even a depth limit. It reminds us of the Mini Breather, a similar device offered years ago as an alternative to a full scuba set, but which found no place in the market due to the training necessary to use it. We haven’t included a link because we don’t wish to encourage anyone to get one.

Many nights before dinner, I’d make a night dive from the dock -- one could see big cuttlefish in the water -- on the ever-changing house reef. One night it was dominated by crustaceans, lobsters, and spotfin lionfish, while another night it was highlighted by many walking sharks, and I even witnessed a mating attempt.

It was always a treat to return to my spacious bungalow, which had a covered deck/porch with a hammock and two reclinable sun chairs, and for snorkeling, a most convenient ladder leading down to the water. The shower had plenty of hot water. The beds were enshrouded with mosquito netting; I saw few bugs, but my buddy had plenty of bites from just walking around. In the absence of air conditioning, a portable fan handled the heat and humidity to some degree, and at night, pointed at me from the foot of my bed, it was ok.

Our dive package included an excursion to the Passage, a high-speed drift dive through a narrow channel that separates Waigeo and the northern tip of Gam. Supposedly it’s the owner’s favorite dive, but I must have caught it on a bad day. While I was not impressed with the drift dive, I was wowed by a few sheltered underwater alcoves that were overrun with soft corals and large barrel sponges. I could have spent the entire dive just scoping those out. A macro nut would have had a fine time. The one downside is that it’s an all-day deal, with only two dives, not three.

I should note again that when traveling to such a remote outpost, one must leave some slack in one’s schedule since airlines are frequently late and may even change the schedule after you’ve booked (I had to reschedule my return to Bali because Garuda broke the itinerary I had). In fact, though many divers prefer --- even insist upon --- arranging our own trips via the Internet, using a knowledgeable



**Bedroom with Mosquito Netting**

travel agent for Indonesian islands will surely save you time and hassles. For example, I decided to make my first Indonesian stop in Bali. Now I've learned that Jakarta, while a greater distance, has better flights and probably cuts travel time. Because of the extensive travel time and the expense of the trip, every day counts. And seven days at the resort wasn't quite enough. Ten would be better, if your pockets are deeper than mine.

-- D.S.

Our undercover diver's bio: *"Before 2008, I saw myself as a tech worker who just hit the ski slopes every few years, and that's it. Then I got bit by the diving bug. Now I can't see past the ocean. I've made more than 200 dives in the cold and rugged waters of Northern California while shuttling off to various South Pacific and Indian Ocean venues, where the waters are much more comfortable."*



**Divers Compass:** One can rent all equipment for \$145/week; they also rent reef hooks, and sell souvenirs like shirts and hats ... Nitrox was included in diving packages, but the tanks weren't clearly marked ... Take what you want from a refrigerator stocked with beer, sodas, and wine, then write it down, and it's billed upon departure; drinks travel thousands of miles to get here and aren't cheap ... Upon arrival, each guest is given a voucher for a short massage; one can purchase longer massages; my sloppy sunscreen application the first day ruled out any massages out for

the duration ... They have a large library of sealife ID books ... they offer a wide variety of nondiving excursions ... WiFi is in the main area and extended to my room, but it was spotty; having a Paypal account was very helpful in paying ... They have a kitty jar for tipping the staff ... In Sorong, we looked for ways to kill time before we departed to Raja the next day, but were warned against venturing out on our own and exploring outside of our Swiss Belhotel, because "it's not safe." ... [www.papuaexplorers.com](http://www.papuaexplorers.com) has excellent information about what you need, prices, etc.

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## Kill 'em but Don't Feed 'em?

*a campaign to ban shark feeding!*

Should shark feeding by divers be banned in federal waters? John L. Russell thinks so and even started his own Association in order to pursue his obsession.

Way back in 2002, after a spate of shark bites on swimmers along the panhandle coast of Florida, the State government, driven by the powerful angling lobby, banned shark feeding (by divers) for the purpose of observing sharks, rather than just for harvesting them. So Jim Abernethy's Scuba Adventures with his vessel *Shear Water*, along with other operators out of Fort Lauderdale, relocated their activities to the nearby Bahamas — hence the ongoing reputation of dive sites like Tiger Beach, this month's feature article. These operators use bait or chum to attract sharks so their customers can get an up-close and personal encounter.

Other operators simply headed out beyond

Florida's waters. Randy Jordan with Emerald Dive Charters (Jupiter) and Calypso Dive Charters (Lake Park) are notable among those doing so, but Russell, of the impressively named Florida Association of Diving Instructors, the self-styled "Shark Detective," is trying to stop them. For some years Russell has been actively fighting for a bill to be introduced in Congress that would make all shark feeding by divers illegal.

Russell alleges that Emerald Dive Charters facilitates shark feeds illegally in Florida's waters and wants to see the law more rigorously enforced, with greater penalties and with jurisdiction widened to encompass all U.S. waters.

"I think feeding wildlife is ridiculous. Only irrational folks would lead you to believe sharks are the only animals on the planet not influenced by food," he says.

Randy Jordan is defiant. His web-site says, “At Emerald Charters, we know how to find the sharks. Here in Jupiter, we see a variety of sharks on a regular basis. While we can’t guarantee that you’ll spot sharks on every dive (since they are wild pelagic creatures), we almost always see a variety of sharks. Some of the species we’ve seen include Bull Sharks, Hammerheads, Tigers, Lemon sharks and more.”

Russell has worked hard on the shark feeding issue, and bill S.3099 is now claimed to be before Congress. Russell is asking for donations of \$100 or

*“Russell says Florida Law has kept divers safe for 15 years and wants to extend that to include all Federal waters.”*

more to promote the bill to help stop shark feeding tours at a gofundme page.

We had difficulty finding any members of the Florida Association of Diving Instructors other than Russell himself, who PADI dropped as an instructor in October 2012. He says, “Do not publish shark

feeding photos. Boycott boats, captains, instructors, divers and businesses that break Florida law by feeding or baiting fish for amusement and to avoid shark education awareness scams. Be a Shark Detective, file charges/report all violations of law to the FWC by calling the Wildlife Alert hotline at 1-888-404-3922.”

Dubbing it the ‘Markus Groh Law’ after an Austrian diver who was accidentally bitten by a shark in The Bahamas and died while diving with Jim Abernethy’s Scuba Adventures, he illustrates his cause on his GoFundMe page with a picture of Scarface, the tiger shark that’s a regular at shark feeds in Beqa Lagoon, Fiji. That doesn’t do a lot to help his cause to ban the activity in U.S. waters!

Russell says Florida Law has kept divers safe for 15 years and wants to extend that to include all Federal waters. But most of these activities occur outside Federal waters. So what is his intention? Does he want to ban shark feed dives from U.S.-registered vessels? That would probably please the Bahamas operators, who see American operators contributing little to their local economy. In fact, those same operators would most likely switch to the Bahamas for their base of operations.

### ***Three More Popular Wrecks Lost Forever***

Three more historic wrecks have been lost to illegal Chinese salvage operations. Three Japanese ships that sank off Borneo during the WW II have been destroyed. The sunken cargo transporters, the *Kokusei Maru*, *Higane Maru* and *Hiyori Maru*, were torpedoed in 1944 by U.S. forces in the South China Sea and may still hold the remains of dozens of crewmen.

Collectively, they were known to divers as the Usukan wrecks, and their near-pristine state and rich coral and marine life have attracted recreational divers to Malaysia’s Sabah state. All three were within a kilometer of each other.

The looting of Australian, American, British, Dutch and Japanese warships for scrap metal in southeast Asian seas has already caused outrage, with veterans and governments arguing that the vessels must be preserved as underwater war graves for sailors. (*Undercurrent*, January)

Scuba diver Monica Chin said local fishermen called her last month to say workers on a large Chinese vessel were using a crane to tear apart the Japanese wrecks. Ship-tracking websites describe the vessel as a “grab dredger.”

Chin arranged for divers to visit the site, which she said “was until last year in a beautiful condition. It was an underwater museum.” When they surfaced, they showed her the photos. “It totally broke my heart,” she said. “It made me cry. I just can’t believe it.”

Locally, the three wrecks are known as Rice Bowl Wreck — named after its cargo of hundreds of bowls — Upside Down Wreck and Usukan Wreck.

Another diver, Mark Hedger, who is an instructor and managing director of Diverse Borneo in Sabah’s capital, Kota Kinabalu, used to make the 75-minute boat trip to the wreck sites with customers.

He wrote a statement on what he found during a recent dive, saying the Usukan and Upside Down wrecks were “98 per cent and 99 per cent gone.”

There is an increasing demand for pre-nuclear-age steel for use in the manufacture of scientific instruments and with it a growing concern for the continuing existence of the wrecks of the *HMS.Repulse* and *HMS.Prince of Wales*.

(Source: *The Guardian*)



Clearly, many divers enjoy these events — they see the sharks that turn up for a free handout of food as ambassadors for all sharks and say that they are not the mindless predators so often depicted. Monetizing live sharks also gives them protection from the burgeoning shark finning industry. Shark-feeding dives are orchestrated in the Bahamas, Cuba, Fiji and French Polynesia, to name but a few locations outside the U.S.

At a time when the diving world is mourning the untimely demise of *Sharkwater* director and shark conservationist Rob Stewart while filming sharks in the Florida Keys, it's appropriate to consider this topic. Many people form opinions about sharks merely based on what has been portrayed by the movies and sensational press coverage.

Many shark dive operations put fish scraps in

tight boxes that only leak blood and scent so the sharks aren't fed. Others hand out tidbits of bait. Divers occasionally are bitten, albeit accidentally.

Scientists studying sharks in the Bahamas and Florida found that shark feeding, and scuba diving with them, had no significant effect on their natural behaviors, such as the range they traveled. (*Undercurrent* October 2016)

Have you actually joined a shark feed dive as a diver anywhere in the world? If so, what's your informed opinion? Should shark feeding by divers be banned? Are you sympathetic to John L. Russell's cause? Vote YES or NO and tell us what you think.

<http://www.undercurrent.org/UCnow/SharkFeedingSurvey>

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## Toilet Paper, Dirty Money, Tiny Cockroaches

*Undercurrent subscribers tell it like it is*

*Undercurrent's* Reader's Reports have become something of an institution, simply because they provide both an up-to-date insight into the actual impressions people came away with after their trip and a long-term perspective on how things might have improved or otherwise. When it comes to dive resorts and liveboards, this sort of reliable information, found conveniently in one place, is almost impossible to come by elsewhere, but *Undercurrent* subscribers are well-served in this regard, with more than 9000 travel reports filed to date.

Of course, everyone wants to have a great time on a trip-of-a-lifetime — and most people do. Mainstream diving media is rich with the wonderful experiences to be had, and *Undercurrent* reader reports are no exception. However, often some small detail can spoil things for you, and to be forewarned is to be forearmed. Well-informed travelers can cope with the inevitable imperfections of life.

Jennifer Bowers (Bellville, TX) offers a simple example, the absence of toilet paper during her trip to Cuba, a trip on the *Aggressor I*. A toilet roll packed in your bag can make the difference between an unfortunate drama and a sublime experience. Jeanne Reeder (Columbia, MO) didn't like the idea

of raw sewage being dumped into the calm lagoon waters of the Gardens of the Queen either.

The travel agent or destination should explain things like this shortage of toiletries in Cuba to a diver at the time of booking, along with straightforward things like diving certifications and medical certificates that may be required. When they don't, divers can miss dives.

### ***Medicals and Certifications***

Richard Bruch (Durham, NC) was disappointed to find that three out of four in his group "failed the South Pacific Underwater Medical Society (SPUMS) dive medical clearance utilized in Queensland, Australia." They eventually sorted things out, but it required hurried emails. Bruch says that DAN advised him that SPUMS has the world's strictest fitness-to-dive criteria.

While checking in with Ocean Encounters in Curacao, Sterling Levie (Holmdel, NJ) learned that "My daughter and I both had problems involving PADI's medical forms. She had had sinus surgery years before, and I have a stent in a coronary artery. PADI requires a doctor's approval for diving in both instances. Although it satisfied the PADI require-

ment, my daughter's approval was challenged for not being on a doctor's letterhead," but she eventually still got to dive.

David W. DeBoer (Duncanville, TX) wrote that Special D Diving in Anguilla appeared to want everything but a DNA sample! "He declined that foolishness" and went elsewhere.

In French Polynesia, Lindsay Battles (Los Angeles, CA) discovered they use the European

CMAS system, which does not necessarily translate directly to American expectations. "You want at least PADI Rescue certification. Rescue divers are limited to 160 feet (50m). PADI OW and AOW are limited to 100 feet (30m), regardless of whether you have the deep diver specialty." Tim Schiaff's wife (MO) "has advanced open water and around 100 dives but was classified as a CMAS one star diver" and was limited to 100 feet (30m).

## *Vivid-Pix JPEG Picture-Fix*

Anyone who has a digital camera that can be taken underwater will be aware of the RAW file option as opposed to a JPEG converted by software in the camera. Most keen underwater photographers shoot RAW files so they may make a huge range of adjustments to their photos when editing. But my wife refuses to do that. She wants to get JPEGs directly from her camera, without any work to do later. She's not alone.

A problem can arise if she gets the camera setting wrong. I often get it wrong, but it's got to be very wrong indeed for me to be unable to transfer a RAW file to my laptop computer before I save it to a final JPEG.

I nag my wife to shoot in RAW format, but she is steadfast in her refusal. So what to do with those JPEG pictures she takes that are almost the right color? Underwater colors can be very wrong at times.

Vivid-Pix has come up with stand-alone software called Picture-Fix, and I loaded the Land & Sea+ version onto my laptop to see how easy it was to use.

You select the image you want to modify from your computer's memory, and you

can choose from nine alternative treatments. You can then tweak the colors by adjusting red, blue and green values, change the contrast and brightness, and alter what they call "depth removal" that seems to be the equivalent of vividness or color saturation.

I gave Vivid-Pix a tough test by loading an underwater picture I had shot by natural light without any in-camera white-balancing. Picture-Fix didn't do a bad job of correcting the color and getting rid of the awful blue cast, but I'm afraid it didn't stand the test of comparison with the subtlety of the JPEG that I transferred from the RAW file that I had corrected in the Photoshop RAW converter.

However, you get what you pay for, and this software is certainly a lot more attainable at \$79. And, there's a version for every computer operating system. (You can't buy Adobe Lightroom; you subscribe to it for about \$120 per year.)

You can easily download a trial version of Picture-Fix to find out if it suits you. It will certainly improve the look of the JPEGs from your camera, though it falls short of professional standards that can be achieved by starting with raw files. [www.vivid-pix.com](http://www.vivid-pix.com)

—John Bantin



**Original**



**RAW Conversion**



**Vivid-Pix**

## A Long Swim to Safety

Last October *Undercurrent* reported two cases of divers being separated from their boats and drifting in the ocean. In November we told you about yet another case, prompting us to publish an article regarding surface markers that can do a lot to alleviate the stress and reduce the risk of a diver being lost at sea. However, that didn't stop these incidents continuing to happen.

Toward the end of the year, a 46-year-old British diver survived eight hours in the Indian Ocean off the coast of Western Australia. He and his buddy were left to swim for it after the anchor line of their unmanned vessel broke and allowed it to drift away. One man finally reached the drifting boat and was able to raise the alarm. It was just as night was falling. Leaving a vessel unattended while you scuba dive is a very risky business.

Rescue boats passed the lost diver several times

in the dark and rough seas, but he was able to see the flashlight beams of his desperate family members scouring the shoreline and used them as a beacon to swim 10 miles (16km) to safety. The swim took him eight hours.

Ian Beard, from the Geraldton volunteer marine rescue group, later said, "They found him on the beach at around 3:20 a.m., and you can imagine what a reunion it was. It was a big swim."

He added that he thought the diver's boat was too small for the conditions. It had no viable radio, and the divers should have had personal locator beacons. They had an EPIRB (Emergency Position Indicating Radio Beacon) on the boat, but that was not much use to the divers in the water. Ten miles is a long way to swim. We don't recommend it for *Undercurrent* readers.

In Jamaica, George Lynch (Duxbury, MA) wrote that Scuba Carib was evidently accustomed to very inexperienced divers. "A bit officious and self-important, [demanding] excessive paperwork, perhaps more interested in potential liability than customer satisfaction."

### Prices and Money

Your booking agent should give you fair warning of any idiosyncrasies to expect, but too often they overlook important information. Linda Dunn (Riverside, CA) wrote that the liveboard *Raja Ampat Redux* "emailed us a week before departure that no

*"We were emailed a week before departure that no credit cards could be used."*

credit cards could be used. This was a problem, as we were already in Asia and couldn't get cash from our U.S. bank. So, we visited ATMs in Indonesia to garner enough cash, which was a huge hassle, because we didn't bring our own dive equipment and needed to rent."

In Roatan, Rik Pavlescak (West Palm Beach, FL) pointed out that shops and restaurants only accept immaculate dollar bills. You can't use well-worn or torn bills, and often you can't even exchange them at banks. William G. Bain (Marietta, GA) wrote that few places in Montserrat accepted credit cards, so

take cash. This happens in many parts of the world, we should add. Mae L. Ding (Anaheim, CA) wrote that in Fiji, one is charged a fee to use a credit card, but the cards are readily accepted.

And, of course, those excess-baggage charges on small airlines can be a real surprise. Laurie Pemberton (Arroyo Grande, CA) had to pay extra because she faced a miserly 10kg (22 pound) weight limit flying between Jakarta and Sorong. Bruce Versteegh (McKinney, TX) found Solomon Air limits carry-on weight to 15 pounds (7kg) and charges for checked bags over 40 pounds (18kg).

We've noted in the past that even with nitrox essentially the go-to gas on liveboards these days, it's often considered an extra, and we're surprised at how much divers may get tagged. John Miller (Lubbock, TX) says that the *Turks & Caicos Explorer II* charged him and his partner each \$150 for a week of diving EAN32. "Then, a heavy hotel tax and a fuel surcharge caught us by surprise, and for the two of us, amounted to an extra \$500 or so."

But while there are unexpected costs in some places, there are still bargains to be had elsewhere. Carol L. Cohn (Livermore, CA) rightly pointed out that tourism in Egypt is down due to the country's [undeserved] reputation for terrorism. "That means the cost of the trip [to the Red Sea] is a fraction of what it would be anywhere else. It's great value." Taking a trip aboard *Heaven Saphir* (via an Austrian operator), Ann Firestine (Durham, NC) found Egypt to be very safe, the diving was amazing, and



she was left puzzled as to why more Americans don't make the trip.

Flying from London, an all-expenses-paid trip for one week (including return flight) on a top-quality Egyptian boat like *Whirlwind*, booked through British operator scubatravel.com, can be as little as \$1500.

### ***Climate and Seasonal Weather***

It's amazing how often booking agents fail to point out that traveling in the low season means one may risk bad weather. Hurricane or typhoon

*"A resort like this tends to attract people who don't mind roughing it a bit."*

season varies in different parts of the world, and it is easy enough to check. You may not encounter a disastrous storm, but you may be put out by rain and heavy seas. There's nothing worse than trudging around a tropical island in your raincoat, dodging the puddles, while you hunt for something to do because your diving has been canceled.

Damage left by big storms underwater can be variable but subject to misinformation. That's where the on-the-spot experiences reported by our readers are crucial. For example, we had varying reports of the damage left by Hurricane Winston in Fiji, but the smart liveaboard operators took their divers to where the famous colorful reefs had survived intact. Peggy Goldberg (Citra, FL), diving with *Nai'a*, wrote, "As it turned out, we did see some areas badly damaged, but not far away, the reefs were still pristine."

In the Caribbean and Atlantic, hurricane season runs July through November, with September and October being especially chancy (though not as far south as Bonaire). Calvin Sprik (Wausau, WI) left Freeport, Bahamas, just before it took a direct hit from Hurricane Matthew and learned afterward that it took days for the utilities to get back on line and that the resort and dive shop sustained a lot of damage.

Writing about Little Cayman, Lori Ann Krushefski (Verona, NJ) said, "I suspect that November may be a dicey period each year, so if you have your heart set on Bloody Bay, choose a different time." Paul Barrett (Albuquerque, NM) confirmed this when he wrote, "The Southern Cross Club was great, but unfortunately the seas were rough, so we were only able to dive the north side of the island including Bloody Bay once." During the winter, the *Cayman Aggressor* frequently can't make its promised trips to Little Cayman and Cayman Brac, instead devoting the full cruise to the reefs and walls of Grand Cayman.

While everyone loves warm tropical waters, many don't like the heat and humidity topside. While good air conditioning mitigates it, readers are quick to point out when it's not efficient. That said, Blake Hottle (Los Angeles, CA) was philosophical about Papua Explorers in Raja Ampat, writing, "The lack of air conditioning might be an advantage, because a resort like this tends to attract people who don't mind roughing it a bit, and those people, in my experience, tend to be more fun and less maintenance." But oh, that humidity. Mike (MI) giving no surname on his report but diving in Bunaken, North Sulawesi, was just not able to get things dry at the end of the rainy season. If it's your dive gear,

## ***Now Kelp Forests Take a Beating***

*Undercurrent* gave the oxygen of publicity to the plight and imminent demise of the corals of Australia's Great Barrier Reef due to global warming, but upset a few readers who harbor the opinion that humans are not involved in climate change. Regardless, next on the destruction chain are forests of kelp, seaweed-like algae, which are under attack by invasive fish species moving into warming waters.

"Kelp forests provide vital habitat to hundreds of marine species, including fish, lobster and abalone," says Dr Adriana Vergés of the Sydney Institute of Marine Science. "As a result of climate change, warm

water fish species are shifting their range and invading temperate areas. We found that two warm water species – rabbitfish and drummerfish – were the most voracious, eating the [kelp] fronds. Over-grazing by these fish can have a profound impact, leading to kelp deforestation and barren reefs."

Of course, California's Pacific Coast is warming up faster than it has in millions of years, and all sorts of fish found normally way down the coast of Mexico are beginning to call it home as the kelp declines. (Source: *Proceedings of the National Academy of Sciences.*)

give it a good washing and drying when you get home.

John L. Hosp (New Hartford, NY) wrote, “The Maldives are one of the muggiest places I’ve ever been.” They’re in the middle of the Indian Ocean, and at times the sun shines unmercifully. In fact, it’s wise to dive with a hood, not for staying warm underwater, but for sun protection while waiting at the surface to be picked up after a dive. George S. Irwin (Bloomington, IL), diving from *Blue Voyager*, wrote, “With these currents and 21 divers, people were spread far and wide, and the single dive vessel was hard pressed to get everyone back on board in a timely fashion. I spent 40 minutes waiting at the surface in a blistering sun after several dives.”

### ***Insects and Repellents***

Looking at a photo of a tropical island paradise, one may be left unaware of the downsides, and insects are one of them! Roatan is famous for

*“Figure out what you’ll do about sand fleas before arriving.”*

its sand fleas and other no-see-ums (invisible little bugs). Rik Pavlescak (West Palm Beach, FL) wrote, “Figure out what you’ll do about sand fleas before arriving. DEET or non-DEET? There’s an environmental angle/debate, but the sand fleas are horren-

dous.” Of course, studies show that DEET (at least 25 percent), is clearly the most effective solution.

Harvey S. Cohen (Middletown, NJ) seemed unfazed that the *Infiniti*, cruising in the Andaman/Nicobar Islands, was infested with ant-sized cockroaches “that appear harmless, but are unpleasant.” Gross, but harmless.

After an Eastern Australia dive tour, Henry O. Ziller (Conifer, CO) reminded us, “You may not know about the fly problem. In some areas, they were really bothersome, so much so that we purchased hats with screens over our faces. Well worth the 10AU\$.

West Africa has a serious malaria problem. Michael Jöst (Wurtenberg, DE) was reminded to take prophylaxis, insect repellent and long-sleeved shirts and long pants against malaria mosquitoes. And that also applies to Papua New Guinea and some other countries.

### ***Food and Facilities***

Everybody’s tastes differ. Some travelers expect to be treated to food the same as at home, whereas others relish culinary adventures. Reader’s reports give good guidance as to what you might expect. If you have particular requirements such as vegetarian food or you suffer celiac disease, you must be sure to confirm at the time of booking that your needs can be met, otherwise they may not be, and you can’t expect them to provision at the last minute just for you.

Staying in Grenada, Matt Overholt (Dayton, OH)

## ***Stop Critter Manipulation Photos***

At the recent Anilao Underwater Shootout, organizers dropped categories prone to critter manipulation, since previous participants had raised concerns about the handling, manipulating and relocating of critters. British underwater photographer, Alex Tattersall, must be feeling vindicated after he returned the second prize he was awarded in the super-macro category at an underwater photography competition held last year in Israel. He alleged that the first-place winner had manipulated two shrimp on the back of a nudibranch — not something that could be proved beyond doubt. We told the sad



tale in last April’s *Undercurrent*.

However, Tattersall says he feels disappointed that, while the World Shootout competition this year added rules that stated “each participant is asked to sign an environmental conservation commitment form, according to which he/she is obligated to follow environmental conservation regulations and to share respect for the underwater world during the process of taking images,” it then awarded the first prize in the super-macro category to an image that is quite clearly in contravention of this rule, despite having had this pointed out by at least one expert at the judging.

told us, “The best food we had was home-cooked food sold by locals from tents on Wall Street across the street from the Allamanda. Grilled Jerk chicken and homemade “oil down” [the national one-pot dish] were delicious, and you can have dinner dirt-cheap (US\$10-15).”

At the Sipadan Water Village in Malaysia, Robert and Laura Mosqueda (Pasadena, CA) said, “food was OK at times and just plain bad at other times.” Angela Richards (Honolulu, HI) said of Cooper’s Beach, Palawan, “Having been to the Philippines before, we knew that getting vegetarian food would be a challenge.”

Facility standards cover a wide range, both onshore and on liveboards. For example, David Madorsky (Littleton, CO) wrote of Blackbeard’s *Morning Star*, “They say it is like camping at sea. Be prepared to do all of your personal grooming with as little fresh water as possible”.

Richard E. Heath (Murrells Inlet, SC) said of the Queen’s Gardens Resort in Saba, “There is no water system on the island — so your hotel collects rain water or has water delivered by tanker — drink bottled water.”

If you have never been on a liveboard, be aware that they rock and roll at the whim of the ocean, and there is usually a lot of noise if the vessel is underway. Even when at anchor, there will be the continuous hum of a generator, as there is at some small island resorts. If the noise is intrusive, you can be sure our readers will mention it.

## *Diving Conditions*

Archipelagos such as Raja Ampat, Komodo, Galapagos, French Polynesia, Cocos Island and the Maldives are known for their strong currents, so don’t always expect swimming-pool conditions. The information you need is in those reader’s reports. Chrys Martin (Portland, OR) wrote, “Raja has rockin’ currents at most dive sites that can change instantly or stop to calm, so learn how to use a pointer or reef hook.”

And currents swirl garbage. Douglas (IL) (no surname supplied) says, “You hear a lot of talk about trash in Lembeh Strait, and we certainly saw some trash on every dive site, but nothing overwhelming. Considering how often the dive sites are visited, why aren’t the guides picking up one piece of trash apiece, per dive trip?”

Larry Smith, the famous pioneering Kungkungan Bay dive guide (now deceased), used to say, “If you see a piece of trash it might be an animal that looks like trash, but if it is a piece of trash, it will almost certainly have an animal living in it!” That’s what the Lembeh Strait is all about!

So, keep your reader’s reports coming. We and your fellow divers thank you. Subscribers can file a report here: [www.undercurrent.org/members/UCnow/SubRRTopMA.php](http://www.undercurrent.org/members/UCnow/SubRRTopMA.php) and you can check out a destination report here: [www.undercurrent.org/UCnow/dive\\_reviews/all\\_destinations.html](http://www.undercurrent.org/UCnow/dive_reviews/all_destinations.html)

– John Bantin

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# **Tweaking the Inwater Recompression Protocol**

*medical experts share concerns about safety*

While divers writing to *Undercurrent* generally indicate that in case of bends symptoms, they would seriously consider underwater recompression in remote places, two medical men, a DAN physician

*“Most DCS cases improve with therapeutic surface oxygen which avoids the risk of drowning.”*

and the clinical director of dive medicine at Duke University, find serious fault with the protocol presented by Bret Gilliam.

Petar J. Denoble MD, of DAN (Diver’s Alert Network) wrote that although most diving medicine experts recognize the value of IWR in selected cases and in special circumstances, most physicians specializing in diving medicine have serious caveats.

Denoble pointed out that some DCS cases progressively deteriorate regardless of treatment, which raises the specter of a diver in treatment becoming dangerously ill while underwater. To re-immers him quickly, as Gilliam’s protocol suggests, would mean no opportunity to ask him questions and evaluate him properly. However, if treatment began on the surface with 100 percent oxygen for one cycle



of 20 minutes, most of these progressive cases could be identified.

He says that most mild cases will resolve regardless of a treatment delay, so IWR would be an addi-

tional risk. In fact, he says, most DCS cases improve with therapeutic surface oxygen, which avoids the risk of drowning.

Denoble issued this dire warning: "What is most

## *A Day in the Chamber and I Wasn't Bent*

While recently aboard the *Cayman Aggressor*, I dived four times a day using nitrox, well within the limits to avoid DCS. Lying in bed the night before my last full day of diving, I had light vertigo whenever I rolled over on my left side. I dismissed this as being caused by the rocking boat, fatigue, or ear infection. I tried to ignore it, feeling it would eventually go away.

My last full day of diving went without a hitch, but I still had some vertigo when lying on my left side. The next day, we I planned to make the two offered dives before we headed to port, but halfway through the first, I looked down between my legs and vertigo hit me. It quickly passed, but I figured that I had better get back to the boat and pack my gear.

When we reached port, the captain suggested that I visit the Cayman Clinic, which has a couple of doctors who specialize in diving medicine. I figured I probably had an ear infection and would get an antibiotic, and all would be well. The doctor gave me the equivalent of a field sobriety test, which I failed. She then told me that there were several things that could cause my condition, one of which was an inner ear DCS hit. She suggested a five-hour treatment in the hyperbaric chamber. I was shocked, but felt it would be a wise course of action, so at 3:00 in the afternoon on Friday, I headed over.

I thought that I would just sit in the chamber for the five hours, maybe read a book, and catch a nap. Was I mistaken? I did not realize that I would have to breathe oxygen through a mask for 20-minute intervals, with only a five-minute break between. I also did not realize that someone must be with you at all times, which turned out to be in one-hour shifts by five different people, all volunteers.

I got through the process with the admirable help of the volunteers. Getting in and out of the chamber took an additional 30 minutes for them, and each had dropped what they were doing to help out on a Friday afternoon. I told them to talk about anything, just tell me whatever you want, life story, your pets, your last trip, anything, just keep the boredom down for us both.

When the treatment was over, I went back to the boat and went to bed. The next morning, I went to the clinic for a follow-up. Dr. Hobday did the same sobriety tests with me, and I failed again. She had me lie on an examination table, slightly tilted down, and turn my head to the left. Vertigo hit me like a brick. She then told me that I had a condition called benign postural vertigo. It is more likely to occur in older people (I am 52) and is caused by the inner ear not "bouncing back" well after one moves into an unfamiliar posture. It seems that my enjoyment of weightlessness underwater usually involves hanging upside down, looking under ledges, doing barrel rolls, etc., but this wreaked havoc on the balancing mechanisms in my inner ear.

She described a few exercises and told me to do them until my vertigo went away. After doing them three times a day for a day-and-a-half, my vertigo disappeared completely.

I wanted to share this experience with *Undercurrent* subscribers for several reasons: 1) Stay well within the limits to avoid DCS, because going into the hyperbaric chamber, even in the best of circumstances, is extremely uncomfortable and really boring. 2) Be sensible about your positioning in the water, especially if you're older than 40, because your inner ear does not bounce back like it did when you were a kid on a trampoline. 3) The doctors at the Cayman Clinic are topnotch, and I didn't have to wait long to be seen. They took my DAN insurance card and handled everything, not one dime out of pocket. 4) And finally, the volunteers who operate and maintain this facility are great people who deserve my gratitude.

– Paul McFall (Cumming, GA)

Dr. Jim Chimiak, MD, Medical Director, DAN, commented: "Always report vertigo to your divemaster when it first occurs. Prompt first aid and medical treatment may be indicated. There are medical conditions that present in a similar fashion to DCS and can make diagnosis difficult, especially if following a dive. It is sometimes prudent to proceed with recompression therapy when there is significant doubt."

dangerous with Bret Gilliam's protocol is that he recommends treatment at depth of 60 feet (18m), 2.8 ATA (bar) of oxygen, which carries a high risk of oxygen seizures, much higher in immersion than in a dry recompression chamber. The excessive pressure of oxygen in such conditions cannot be justified in any way."

Eric Hexdall, Clinical Director at Duke Dive Medicine, said that Gilliam's protocol greatly exceeded the generally accepted immersed oxygen exposure limit of 1.6 ATA (bar) absolute. Citing U.S. Navy tables 5 and 6, he confirms that while

*"Not perfect... but an acceptable risk under the circumstances."*

patients treated on these tables routinely breathe oxygen at 2.82 ATA in a hyperbaric chamber with no adverse effect, these patients are at rest, on the surface and dry.

"Immersion and diving greatly increase the risk of CNS O<sub>2</sub> toxicity due to CO<sub>2</sub> retention and other mechanisms that are still under investigation. The risk of CNS O<sub>2</sub> toxicity while breathing 100 percent O<sub>2</sub> under water at 60 feet (18m) is much higher than at the same partial pressure of O<sub>2</sub> in a chamber. Further, the protocol referenced in your article recommends that the diver use an open-circuit scuba regulator. Should a diver on this protocol suffer a seizure under water, he or she would almost certainly drown. All of the established protocols for IWR that I'm aware of recommend use of a full face mask and do not exceed 30 fsw (9m) on 100 percent oxygen."

He, too, adds the warning, "The in-water recompression protocol outlined in your article presents an unacceptably high risk for divers and should not be attempted. There is no controversy about this statement; rather, it is grounded in medical science and well-established best diving practice."

Hexdall offered that "IWR should only be undertaken by divers who are equipped, trained and experienced in doing so, and should be part of an overall well-considered emergency plan. There are safer, established protocols for IWR."

More information can be found at: <http://rubicon-foundation.org/in-water-recompression> and <http://www.navsea.navy.mil/Home/SUPSALV/00C3-Diving/Diving-Publications>

### ***Bret Gilliam's Rebuttal***

Gilliam replied, "I was surprised to read the response from Petar Denoble, especially since I had discussed this subject fully with both Bill Ziefle (President of DAN) and him in a telephone conference before I wrote the material. I also provided them with the protocol I was suggesting.

I believed Denoble essentially agreed with me on the practical need for IWR when evacuation was not an option. That included my suggestion that the easiest path to resolution was a Table 5 that only required a total of 40 minutes at a depth of 60fsw (18m), split with an air break. He expressed concern only about the potential controversy among clinicians who were not experienced with innovative treatments for DCS in the field. I agreed ... noting that controversies always arise, but the reality of options in a remote location mandated action, and some minimal risk was tolerable. I did not think he expressed any disagreement at the time."

Gilliam says he endorses the use of full-face masks as well as thoroughly assessing a diver to evaluate the symptoms prior to putting him back in the water, plus an initial surface breathing period of 100 per cent oxygen while on deck to see if symptoms resolve. Only if symptoms were not relieved was there a primary priority in getting the diver back under pressure in the ocean and on O<sub>2</sub> within the hour. Gilliam says the risk of a CNS toxicity reaction for a diver at rest at 60 fsw (18m), whether in a cramped, confined, hot chamber or in the cool fluid weightless environment underwater, is extremely low ... around one or two percent.

"Not perfect ... but an acceptable risk under the circumstances. We've never had an incident, and it's been used by scores of people since the early 1970s."

It seems that the only real disagreement from clinicians like Denoble is based on an initial depth of 60fsw (18m) for two 20-minute periods on oxygen. Gilliam says he understands the concern of those medical professionals who are used to working in a hospital hyperbaric facility.

"An informed decision, and a practical intellectual discussion of the risks and outcome, advances science and can save people who would otherwise face disaster. I do hope that the diving pros on the remotely located resorts and vessels will get the necessary gear and training and be ready should the time come."

— John Bantin

# Those Dreaded Liability Waivers

*a reminder that the risk is all yours*

The victory of the family who sued on behalf of their deceased father, who had signed a liability waiver absolving a Hawaiian dive operator of responsibility, may not have changed waiver law in favor of divers in other states, as we reported in January. But it certainly prompted many readers to share with us their points of view.

For a diver, perhaps the best thing about a waiver

*“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.”*

is that if you read it when you sign it, it may encourage you to practice safe diving as well as alert you to making pre-dive checks, not just of your own gear, but of the entire diving scene.

As Bob Cottle (Berwyn, IL) says, “I always sign the waiver, because I know if I don’t, they will most likely ask me to get off the boat. But I also try to be aware of everything happening on the dive boat to see if I detect anything that might cause me or anybody else harm. If I do, I immediately bring it to their attention, whether it affects me or any other person on the boat. It’s just common sense to speak up if you notice something is amiss before it becomes a serious matter.”

## **Businesses Need Protection**

Certainly, businesses do need to protect themselves from frivolous court cases. Jerry Loveless (Las Vegas, NV) pointed out that although he wished he didn’t have to sign a waiver, he recognizes that running a dive operation is financially a high risk, low-profit proposition. “Most operators I’ve known do it much more for love than for money. We live in a more and more litigious society.”

But, Travis Pierce (Cleveland, TX) protests that too many companies (not just in scuba) no longer accept responsibility for anything, their fault or not.

“When you put your life in somebody else’s hands, there should be some acceptance of responsibility on their part to keep you safe. You’re paying them, but they don’t want to incur any liability to

keep you safe or guarantee your safety if they make a mistake or injure you. You’re on your own. If you don’t sign the form, you don’t get to go. I tried to refuse once in the Bahamas just to see what would happen and was told in no uncertain terms that if I refused to sign I needed to leave immediately, I would not get a refund and would not be allowed to dive.”

## **But What About Gross Negligence?**

Many divers believe that if a dive operator is grossly negligent, they will have a case. A Florida subscriber says, “waivers are not accepted in legal circles, since you cannot sign away your rights. It is merely an attempt on their part to prove you knew the risks and wanted to participate despite them.”

A reader who ran dive programs in Colorado had people sign waivers, but she says her lawyers told her that, “it doesn’t matter if someone signs a waiver — in the U.S., at least, a person can always sue, and if the organizer/manager is clearly negligible, the waiver doesn’t matter.”

One would hope, but as Phyllis Coleman, Professor of Law, Shepard Broad College of Law, wrote in our January issue, “Furthermore, 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.” And, if you’re diving in Florida, she says, the courts there have never met a release they didn’t like.

## **The Opinion of a Judge**

Supporting Coleman’s comments, *Undercurrent* subscriber the Honorable Victor Kenton (Los Angeles, CA), a retired federal judge, writes, “Divers pretty much assume the risk. You can best protect yourself by picking an operator with a good reputation for safety. Operators likely could not get insurance without such draconian waivers. Ultimately, your chances (or your estate’s) in a U.S. Federal or state court will largely depend on that jurisdiction’s custom and practice as to the enforceability of waivers, which probably will be treated the same for skydiving, horseback riding, or other sports. There may be individual issues (for example, the waiver wasn’t clear, or wasn’t in boldface, or was buried on page 3 of a lot of boilerplate). Finally, as with many types of litigation, insurers will often settle to avoid a bad precedent.”

He continued, "If every diver spent more time accepting the responsibility of their own decisions and actions, there would not be an issue. I do not think a waiver should absolve the operator of all guilt, even in the face of gross incompetence, but our litigious society has driven them to this, and we all pay the price."

Well said!

### ***But, What About Modifying a Waiver?***

Some divers have marked out offensive clauses in waivers when the operator wasn't paying attention, but for the most part that doesn't work. David Stone (Venice, FL) says he has "yet to find an operation willing to let me modify it, with their excuse being that it is their lawyers or insurers who require it as written." Stone has tried to obtain a copy of the waiver before he books a trip, figuring he would have more leverage before they had his money. But even the threat of turning down the trip and explaining the reason has yet to yield him concessions. Perhaps the only way such a tactic would work is if everyone about to board a boat insisted on striking clauses. Would an operator accept the doctored waivers rather than lose all his customers?

Subscriber Jim Stephens, a Dallas/Fort Worth business consultant, told *Undercurrent* that in the U.S., "Corporations, by way of financial and legal resources, have essentially managed to nullify many consumer rights and protections. This is partially the fault of the consumer who continues to do business with these companies, sometimes due to having no other viable option; and also to the continued evolution of a litigious society in which consumers and the legal community seek to prosper inequitably."

It is true that in the unregulated dive industry, accident details seem to be shielded from divers. Eric Taylor (Cambridge, Ontario) makes an excel-

lent point about how dive industry safety is seriously lacking. He wrote, "I hear of accidents but can never find the details. This is the opposite of the aviation industry, where the data is shared as a learning and choice tool. In aviation, if you showed up at an operator and wanted to fly an airplane, they would demand a flight checkout to ensure currency and competence. In diving, the majority of operators seem to focus more on a card and waiver. The only visible difference to me is that in aviation there is a bigger fixed asset to lose."

### ***The Flip Side of the Coin***

But, before we condemn waivers, we must listen to those in the industry who need them. Ken Kurtis, the owner of Reef Seekers (Beverly Hills, CA), makes very reasonable points. "There's no doubt that dive professionals make mistakes, and sometimes these mistakes end up with a diver injured or worse. However, most dive accidents are due to diver error rather than professional malfeasance . . . Now, if it's a case where a boat ran over someone or the air was bad, or a dive guide said 'Just meet me at the bottom' not knowing the bottom was at 200 feet (60m) . . . they should suffer the consequences of their mistake. But, in my honest opinion, waivers are designed to protect us in the industry from bottom-dwelling chamber-chasing ethically challenged attorneys, using a family's grief to try to make a quick buck."

Gary Seguin (Albany, NY) operates a scuba business and suggests, "These forms are there for both the divers and resort/dive shop/boat owners to protect them from any liability that could occur. In my opinion, it is not the fault of the one taking them out to dive, but the mere fact that most divers have some sort of medical condition, lack of experience or limitation that could very well cause a catastrophic accident. . . . What about those who say

## ***Checking the Internet While Diving***

If you're sick of seeing people with their attention fixed on their phones, it could get worse! The Alltab underwater tablet is said to be fully operational underwater, and when connected to the outside world using Allhub, it's possible to get Internet and GPS connection even while scuba diving. It's said to bring data collection and underwater navigation into the 21st Century!

That's the promise made by the Finnish manufacturer Alleco, with sales to professional and military customers (including diving instructors) expected through

Aqua Lung International. It features a maximum operating depth between 290 ft (90m) and 485 ft (150m) according to the specific model and includes an 8-inch Samsung Galaxy Tab S2. For underwater photography, they recommend the use of an external action camera that can be connected wirelessly underwater if placed close to the tablet. No price has yet been fixed, but by going to <http://allecoproducts.fi/buy> you can request a quote. It's bound to be expensive. On the other hand, some of us might have taken up diving for some therapeutic peace and quiet!



they are in the best physical shape of their lives and die from a heart attack or stroke from high blood pressure because they have not been to a doctor in a long time?”

That’s a good point, and a review of American diving fatalities shows many are caused by unknown coronary disease, invisible because the diver never had a thorough physical exam to determine if he could handle the stress of diving. When did you last have a full physical examination that involved a treadmill test?

Well, if you want to dive in Queensland, Australia, you’re going to have to offer medical proof you’re fit to dive — and that may entail seeing an Aussie physician.

### ***Don’t Sign, Don’t Dive***

It may be that waivers keep the cost of diving down. Armando Menocal (Jackson, WY) says that the absence of waivers would probably increase the cost of operator insurance, which would inevitably be passed on to the customer. Furthermore, he says without waivers, operators may not be able to get liability insurance.

“No liability insurance almost certainly means no responsible person would invest in and establish a dive operation. Anything you own now and in the future is at risk. The only ones who would be those with nothing to lose. No assets, nor the prospect of income. Is that who you want to be your dive operator?”

He says that sports like diving with small pools of insured to spread loss claims or to provide solid actuarial forecasts are susceptible to price hikes or

denials of coverage after a few claims. Without waivers, the price of diving would increase. “Are you willing to pay more so you or someone else can sue?”

Sanguine in his approach, Eric Ohde (Redding, CA) wrote, “I don’t see a retreat from releases in diving, as it is inherently a fairly dangerous sport. If the operator gives a good briefing, has the proper medical equipment and training and an accident happens, they should be excluded from lawsuits, but if they are grossly negligent, then it is proper that they can be sued for the loss of life. It has always been my understanding, if you don’t sign the liability release, you do not participate in the sport.”

### ***And, When Not in American Waters?***

So, while a diver in American waters who signs a release may have given up much of his chance of recovering damages, a diver who goes abroad may have no chance. For example, Stuart Cove in The Bahamas never asked John Bantin, a regular visitor, to sign any waiver in 20 years. A full-time professional diving journalist, Bantin’s estate would have had a difficult job proving, under English Law, any diving accident was someone else’s fault.

Similarly, Jim Jenkins (San Francisco, CA) reminisced about Craig DeWit, captain of the *MV Golden Dawn* operating in Papua New Guinea. “After many other trips beginning with showing C Cards and signing our lives away, we arrived and boarded and started setting up. I asked Craig, what about the paperwork? Craig laughed and said, “There isn’t any. Just try to sue me in PNG!”

– Ben Davison

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## **Flotsam & Jetsam**

### **Exuma’s Famous Swimming Pigs Poisoned.**

Being given the wrong food — maybe rum — by clueless tourists has possibly poisoned a third of the 21 pigs familiar to divers to the Exuma Cays in the Bahamas. The government has outlawed feeding of the surviving pigs on Big Major Cay, and will implement that law as soon as it is practical, they say. (See our August 2016 review of the *Aqua Cat* in The Bahamas)

**An Illegal Reef in the Gulf of Mexico.** Fishermen at an illegal man-made reef about 10 miles off Bonita Beach, said they have been fishing it for years, but no one knows who dumped the mound

of concrete. It’s sitting in about 40 feet (12m) of water and rises to 20 feet (6m) from the surface. In early February, a dozen divers helped retrieve a huge shrimping net worth \$20,000 from the “reef,” noting that turtles will be arriving for mating season soon.

**Goliath Groupers at Risk.** Off limits since 1990, as early as next year Florida might allow anglers to start catching Goliath groupers. The Florida Fish and Wildlife Conservation Commission is studying how a limited harvest of the species might work. Some divers and fishermen say the mammoth fish is hogging prized crabs, lobsters and fish, sometimes snatching catches right off fishing lines. Ecologists counter that Goliath grouper still face way too many threats to allow killing them. And they shouldn’t be

eaten; even a medium-sized specimen would have excessive mercury levels.

**America Cleans Up!** Americans dominated the World Shootout, otherwise known as the UW Photo Olympics, in several categories. The competition is organized each year by David Pilosof in Israel. For the five best images, Steven Kovac won the top prize of a 24-night vacation for two in PNG (worth \$20,000) at both Tawali and Tufi resorts, plus 10 nights aboard the liveaboard *FeBrina*. Fellow Americans Renee Capozzola, Ron Watkins, and Jeff Milisen won the team prize worth \$34,000 in vacations and diving equipment. Talented underwater videographer Ed Shermann picked up \$1000 for the best video clip. [www.worldshootout.org](http://www.worldshootout.org)

**Wet Dining and Flat Champagne?** Brussels' Nemo33 is a pool designed for training scuba divers and as such is 33m (107 feet) deep. Now, if you dive 16 feet (5m) below the surface, you'll find a 2m-wide (6.5 feet) sphere, which serves as a restaurant. For US\$106 per person, you may enjoy foie gras, lobster salad, and champagne, delivered in waterproof containers by scuba diving waiters. You'll need to don your scuba gear to swim down before surfacing inside the sphere, and we suspect the champagne will taste a little flat served at one-and-a-half times normal air pressure.

**Grant for Turks and Caicos Reefs.** The T&C Reef Fund, the only active environmental non-governmental organization in the Turks & Caicos Islands, has been awarded a €50,000 grant from the European Union to study the coral reefs off the coast of East Caicos. Don Stark, Chairman of the Fund, says, "East Caicos' remoteness, the island's uninhabited status, and its limited use have historically protected the island's marine resources from significant degradation." *Undercurrent* awarded them

\$1,000 a few years ago, which is what we do with our profit from book sales.

**The Sound of Music.** A study by scientists at the University of California, Davis, demonstrates that the soundtrack accompanying shark documentaries can clearly affect viewers' perceptions of sharks. Participants who viewed a 60-second video clip of swimming sharks set to ominous background music regarded sharks more negatively than those who watched the same video clip set to uplifting background music or to silence. Notably, participants who did not watch the video clip, but only listened to the 60-second uplifting or ominous audio clip (or waited in silence for 60 seconds), generally regarded sharks less positively than those who watched the video clip. Luckily, we divers only hear the sound of their own breathing!

**The Power of Social Media.** Thefts from retailers are a problem everywhere, especially in big cities. When Ocean Leisure, a big dive store in central London, recently lost two Nauticam underwater housings with value approx \$2500 (NA-RX 100 IV Serial # A118003 and NA-RX 100 V Serial # A237881) to shop-lifters, the information was posted on more than a dozen underwater photography Facebook pages so that even the British Nauticam distributor, on vacation in Indonesia, immediately knew about it. Buyer Beware! Caveat emptor!

**Costa Rica Finally Gets Tough.** Taiwanese businesswoman Tsung has been sentenced to six months in prison in Costa Rica after authorities discovered her fishing boat *Wan Jia Men 88* loaded with illegally caught shark fins. Initially acquitted in 2014, she was found guilty on appeal. The sentence is a clear message that Costa Rica will not tolerate shark finning in its waters, says *DiverLife*. It has banned such activity since 2012.

## undercurrent

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