undercurrent

The Private, Exclusive Guide for Serious Divers

May 2019 **Vol. 34, No. 5**

Truk Odyssey, Chuuk, Micronesia

great rooms, food, and wreck dives, but an unattentive crew

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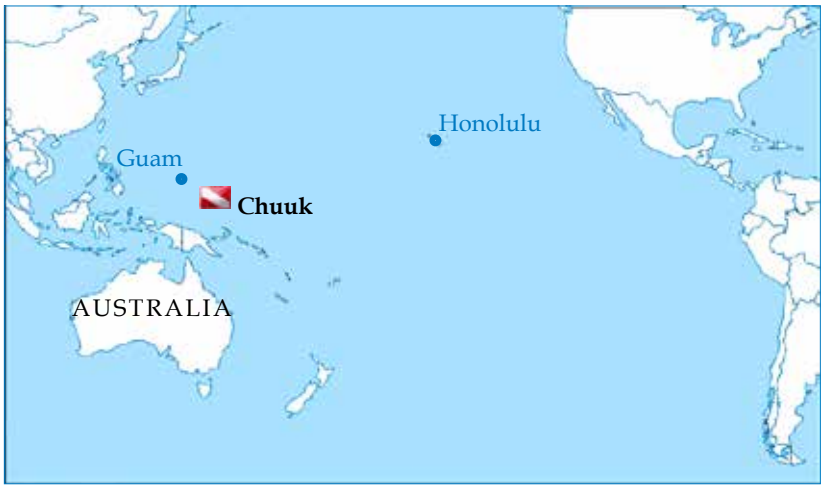
Dear Fellow Diver:

The 132-foot Truk Odyssey arrives at the dock at Blue Lagoon Resort every Saturday at 5 p.m. sharp to pick up guests. My dive buddy and I were ready to be loaded onto a skiff with our luggage for a seven-day charter. The other two with us were a Canadian couple in their 50s who had dived the world but had never been to Chuuk (the island's official name, although Truk Lagoon is what the world-famous dive site is typically called). They weren't technical divers, but as I mentioned in last month's travel story (I wrote about my three-day stay at Blue Lagoon Resort so I could compare Truk's land-based and boat-based diving), many of the dives, featuring wrecks of Japan's WWII fleet, are within sport divers' depths. Still, would they have the skills to handle diving down deep into dark, cramped ship holds? And could they do that all easily with an 80-cu-ft aluminum tank, and without dive guides there to monitor them? As I found out, my fellow divers on this trip were a great example for showing the pros and cons of sport diving on wreck dives below 100 feet.

The Odyssey crew gave us four a cordial greeting, then showed us to our cabins -- the ship has seven doubles and two single for up to 16 guests. Captain Mike Gerken, who gave up the corporate life in New York City to become an Asia-Pacific dive pro, cheerfully went through the formalities of waivers and delivered a safety briefing. In his early 50s, Captain Mike is also

Truk Odyssey



a photographer and documentary maker who has been in Truk Lagoon for 16 years.

As an early boarder, I took first dibs on dive stations, and started setting up gear. The dive deck was a spacious one, with storage bins under the seats and room for two tanks in racks at each station. My buddy and I were doing side-mount diving (read John Bantin's story last month about why it's so great). With side-mounted tanks, the one on my left side is set up with a standard valve, while the right has a valve with the handle on the opposite side, so that the two valves are mirror images of each other. The Odyssey carries sets of double tanks, each with right- and left-hand valves connected together, that can be taken apart to make two tanks with the proper side-mount valve configuration. But on my trip, the not-so-great crew (more on them later) was reluctant to split them up. Fortunately, I brought my own nonstandard valve for the right tank, and the crew fulfilled my request by installing it on one of their 80-cubic-foot aluminum tanks. Nitrox was included for those certified, and it ran at 29 percent.

The remaining 12 divers, a group from Louisiana, had arrived in the middle of the night, so I met them when breakfast started at 6:30 a.m. They were quiet and sluggish over coffee and toast (those are available all morning), but remembering the jet lag involved with my three flights and two overnights to Chuuk, I empathized. The boat moved to the first dive site while I ate fruit followed by pancakes off the menu, while my buddy opted for an omelet.

Captain Mike always started his briefing with a little history of the ship from his documentary, The Wrecks of Truk Lagoon, then explained the best way to dive the wreck, along with what we would expect to see. Most of the divers had not been diving long, so Mike gave stern warnings about penetration and depths, and he recommended that they ask guides to come along. Although openwater certification is all that's required to dive Truk Lagoon, many wrecks sit at the deeper range of recreational limits. "That means you have to be extra diligent in watching your computers and pressure gauges," Mike said.

Dar, a native New Yorker originally trained as a chef, has been the Odyssey's lead dive guide and instructor for two years and was thrilled to meet us. I guess because he was constantly surrounded by recreational divers, he was excited to finally have some people to "really" dive with, so he offered us an engine room tour of the Nippo Maru. At 153 feet deep, that's one of the deeper wrecks on the Odyssey itinerary, so I opted for trimix. I put on my full wetsuit (to avoid cuts from jagged rusty metal), two tanks of trimix, a pony bottle filled with a deco gas, a helmet to protect my head from overhead hazards, and dive lights. Finning through Nippo Maru's tight, dark and silty passageways, I followed Dar into a small room that housed a steam-driven engine. He led me past three field artillery guns on the deck and into the aft hold, filled with huge gun turrets and anti-aircraft guns. We worked our way to the next hold, which must have been the hospital -- I easily recognized wheelchairs, hospital beds and lab equipment like petri dishes and vials. On our way out, I passed through the pilot house, where the captain's wheel still hung solemnly on its stand. I enjoyed that 58-minute tour, and not having to worry about narcosis because I was on trimix made it even better. What made me nervous was that Dar dived with 24-percent Nitrox, which had a high potential for narcosis. I wished the Odyssey's owners let their guides dive with trimix free of charge on the deeper sites -- divemasters can do it if they choose, but they have to pay the fill charge of $1.75 a cubic foot out of their own pocket.

The average depth of sites we visited was 80 feet, with the deepest being 165 feet to the deck of the San Francisco Maru (I had dived that while back at Blue Lagoon Resort). One morning's dives were to the Kiyosumi and the Yamagiri, both around 90 feet.

On those, most guests used standard 80-cu-ft tanks of nitrox and had bottom times of 30 to 45 minutes in visibility ranging from 30 to 80 feet. To show off his favorite parts of the Yamagiri, Dar led me through a mangled bomb hole and down a cramped corridor to the engine room, with cracked gauges, rusted valves, and tools still hanging where the engineer left them. After exiting, we were greeted by the skeleton of a sea turtle, along with 14-inch artillery shells and an intact light bulb. While waiting around on the hang bar during our 15-minute decompression stop, I heard the familiar squeaks and clicks of dolphins. I watched a pod of six make several passes under the boat, while Dar took off to swim with them. Using two tanks, my dives went over an hour, including deco time.

The other divers were comfortable in the 84-degree water, but most of them sure needed to work on their trim and buoyancy skills. Swimming in a feet-down position doesn't work well when penetrating silty engine rooms down at 100 feet. The guides I saw with other divers didn't do anything to help them -- after all, they were there to lead them through the ships, not teach skills. Odyssey Adventures doesn't have any dive rules, other than to dive within your limits. If you're trained in decompression procedures, they allow deco diving. But I could see these divers were nervous about deep dives, and most of them tended to stay on the shallow ends of the wrecks. They all had buddies or made buddy teams when other divers didn't want to dive, but the crew never mentioned having to stay together, and teams didn't have to go with a guide -- which could spell trouble.

There's an Easier Way to Dump Air from Your BC

At the risk of trying to teach a grandmother to suck eggs, here's something to think about: During an ascent, do you lift the corrugated hose of your BC alongside your head to release air through the oral inflation valve? If so, why?

You may be familiar with old film footage of Jacques Cousteau's divers, using triple tanks and wearing little else than their Speedos, a mask and fins. That was in the 1970s, when recreational diving really took off, and one of the first things sport divers demanded was neoprene wetsuits to keep the chills at bay. Before that, divers wore sufficient weight to stay down, but because bodies are incompressible, their buoyancy stayed constant. Alas, the introduction of neoprene insulation with its tiny integral bubbles introduced a variable into the equation: buoyancy changed as the diver went deeper, and those bubbles got smaller.

This was when -- and why -- the buoyancy compensating device, or BCD (later abbreviated to BC), was introduced. It first came in the form of a horse collar. The diver removed the regulator from his mouth and blew into a mouthpiece at the end of a corrugated hose to add air to compensate for loss of buoyancy as he went deeper. That expanding air had to be released the same way as the diver ascended, so he raised the oral inflation valve on its corrugated hose to the highest point, to allow air to escape. Diving instructors taught their students that technique, and when those students went on to be instructors, they taught their students to do the same, and so on. It became enshrined in scuba diving practice.

Most modern recreational BCs come equipped with dump valves placed at the shoulder and the lower back. They are designed to enable air to be jettisoned without letting too much water back in. Some divers worry these valves will dump all the air from a BC in one go, letting them then plunge to the depths. It patently isn't so.

So what's wrong with using the oral inflation valve to dump air instead, just like you were taught? Nowadays, divers tend to make a lot more dives per day, thanks to diving computers. Constantly releasing expanding air through the oral inflation valve also lets water enter. During the course of a week, a lot can re-enter, and your BC will have a lot less air than it should, just when you might need the maximum lift during a long wait to be picked up at the surface.

Of course, you can always fully inflate the BC at the surface and evacuate that excess water through a bottom dump valve, but how many recreational divers know that?

Better yet, get in the habit of using the valves the BC designer went to the trouble to add for you. Just because your diving instructor taught you to use the corrugated hose and oral inflation valve doesn't mean it's the best route to take, any more than you still need to start your car by means of the crank handle.

The oral inflation valve is simply for that -- inflating your BC at the surface when you don't have access to air from the tank.

-- John Bantin

One of the Staterooms

On our second day out, one Louisiana diver felt nauseous and fatigued, and sported a sore, purple blotchy belly. Another noticed a bruised-looking area under his ribs. The crew diagnosed them with skin bends, then put them both on oxygen and told them not to dive for 24 hours. When their symptoms subsided, the divers were allowed back in the water, but both had relapses and missed the rest of the week's diving. While they had paid attention to their computers and stayed within their no-deco limits, it goes to show how Truk Lagoon's deep diving has side effects.

The Odyssey offered up to five dives on two or three wrecks per day – I racked up 26 dives on 15 different wrecks. After Captain Mike's 7:30 a.m. briefing, the pool was open. I walked down six steps from the dive deck to the platform to enter the water with a giant stride. Exits were either up the ladder or on the electric lift. Diving side-mount, I didn't need it, but the lift was helpful for divers with back problems, and it became the favorite entry method for most divers -- it was just so easy to sit on it, slide into a BC and be gently lowered into the water. The liveaboard usually stayed on a wreck for several hours, so divers could stagger their entry times. I could easily do two non-decompression dives before lunch. Once everyone was back on board for the noontime meal, we moved to another wreck. Mike's next briefing was at 1:30 p.m., then it was time for two afternoon dives and a night dive after dinner. But because most of the Louisiana divers enjoyed wine with their meal, there weren't many takers for night diving.

On the upper level was a sun deck with loungers and a covered area with tables and chairs -- a relaxing hangout in the sunny, 85-degree afternoons -- and the galley and dining room, where Emeren, a quiet, reserved Chuukese woman, prepared superb buffet-style meals. I had seconds on hamburger and pizza nights, and her steak and lobster dinner got a standing ovation. Fresh produce was difficult to get on remote Chuuk, so Emeren often had to resort to canned vegetables and fruit, but she did her best to make them palatable. I couldn't wait till after the morning dive, when she served pumpkin bread or chocolate chip cookies hot from the oven. Between afternoon dives, savory snacks like sushi or chicken wings were up for grabs.

Unfortunately, I can't rave about the rest of the dive crew, local Chuukese men of varying ages and time spent on the Odyssey. The service I received on past trips aboard that boat had set a very high bar, but it fell short throughout this one. Early on, they neglected to fill my tanks unless reminded. The tanks weren't well-maintained, either -- the neck on my deco bottle leaked, as did one of my buddy's trimix tanks, and one of our Canadian friend's tanks was down to half pressure the morning after it was filled. More than once, no one was on the dive platform when I surfaced, so I had to haul my tanks out of the water and onto the platform, remove my fins and climb up the ladder. When I walked back to my seat, the guy on duty was playing games on his phone. Free wifi was a new addition on the Odyssey, and even though it was slow and unreliable, it still made for a less-attentive dive staff.

I can't complain about my cabin, the largest I've had on any liveaboard. I had plenty of room to walk around the large, comfortable bed (I had the two twins pushed together to make one king), storage galore in multiple drawers and shelves, and a cabinet

Truk Odyssey, *Chuuk*

Diving (Experienced)	✶✶✶✶✶
Diving (Beginners)	✶✶
Snorkeling	✶✶
Accommodations	✶✶✶✶✶
Food	✶✶✶✶
Services and attitude	✶✶✶
Money's worth	✶✶✶✶

✶= poor ✶✶✶✶✶= excellent

World scale

By Land or by Sea: What Makes for the Best Diving?

Our Truk Lagoon writer took 10 days to compare land-based (Blue Lagoon, featured in last month's issue) and shore-based diving on the *Truk Odyssey* to see if there was a clear winner. Now that you have read both stories, which would you do if you go to Chuuk? Stay on land or on a liveaboard? Because a lot of the time, it really boils down to that: a diver's personal preference for where to hang up his or her fins at the end of the day.

I regularly extoll the virtues of diving by liveaboard, where you spend a week or more with a close-knit group of like-minded scuba fanatics, doing nothing but diving, eating and sleeping. What could be better? Except for when you learn more about some shipmates and realize you can't get along with them, but there's nothing you can do about it in the confines of what now seems like a too-small boat, besides bailing ship. As our travel writer found out, the chances of spending your dive trip with a "Metamucil boy" are not that slim.

I love how a liveaboard gets me closer to remoter dive sites. I hate how my non-diving friends ask if the vessel can go into a little harbor for dinner at a local restaurant. The thought of not seeing land for the duration of a trip is bliss for me but is often returned with a stare of incredulity by them.

A liveaboard takes a lot of the slog out of the diving experience -- little to no hauling or setting up of tanks, which literally takes a load off my back. Stan Waterman, that grand old man of diving, always said, "When you get to my age -- liveaboard." On the other hand, you might suffer from the dreaded *mal de mer* -- and the only cure for seasickness is to sit under a tree. So there's one merit of shore-based diving.

Here's another: While it's true that when staying on a tiny island, you see the same people every day, the tiniest island is still bigger than any dive boat.

There are few places in the world where shore diving is still a viable possibility, so you'll usually have to endure something on the order of an hour each way by boat -- sometimes a small one with less-than-comfy seating and no shade -- to get to the majority of dive sites. But at least, you can come ashore, stretch your legs and choose to eat somewhere different each night or even not go diving at all some days.

Traveling with a non-diving spouse can mean land-based diving is a more viable option, and if there is local culture to consider, why not? If you're visiting Fiji or Papua New Guinea, for example, it would be criminal not to experience things other than the diving. If you're on Cozumel, it would be a shame not to visit the Yucatan mainland, or to even dive in a cenote or two.

It's different strokes for different folks. Sometimes, it's the destination that decides it for you. But give each option a try. Ultimately, for a diver, it's what lives underneath the waters lapping at the liveaboard or the resort's shores that matters most.

-- John Bantin

for hanging clothes. The bathroom had a full-sized shower with plenty of hot water and a real flushing toilet. The A/C ran quietly for a good night's sleep. The large flat-screen TV connected to a server with over 600 downloaded movies. One night, I found Jacques Cousteau's Lagoon of Lost Ships and saw what Truk Lagoon looked like 50 years ago, and I also watched Captain Mike's documentary in its entirety.

But while the diving in Truk Lagoon is remarkable, the wrecks are deteriorating rapidly. I noticed lots of sad changes since my last visit five years ago. Superstructures were collapsing, making penetration more dangerous. Funnels and stacks had fallen off, and many had piles of sand in companionways, probably blown in from Typhoon Maysek in 2015. The Shinkoku's pilot house, once beautiful with soft coral trees growing on its three telegraphs, was not recognizable with its roof caved in. The bathtubs on the Fujikawa were now exposed and covered in algae. And five years hadn't brought more life to the ships. Anemones were flourishing, but I noticed a definite decline in fish numbers, and only one shark, one turtle and one eel swam by during my nine dive days. Only one wreck had parrotfish on it. (Ironically, the fish and chips sold at Blue Lagoon Resort was parrotfish.)

I found plenty of advantages to diving Truk Lagoon by liveaboard. Riding to the wrecks was comfortable compared with Blue Lagoon's bumpy, long rides in small boats with no seats. Once the Odyssey moored at a site, we could do multiple dives there, with divers staggering their entry times. And I only had to set my gear up once.

The big drawback: Close proximity to everyone else. It's not easy to get away from other guests or crew, especially if they're annoying. The group was tolerable, but the noise level got so loud during meals, I couldn't hear anyone, even myself. And I heard some dialogue I wish I hadn't, like the diver I called "Metamucil Boy," who shared updates on his bowel movements every morning at breakfast. Sometimes dive sites were crowded because all 16 divers decided to get in at once. And the crew kept weird hours, with some going to bed late and others getting up early. I knew this because the door to their quarters was next to my room, and they slammed the door loudly and often.

As for pricing, it's a toss-up. The Odyssey has a big price tag upfront. Blue Lagoon Resort seems a great deal cheaper at first, but because everything there is charged separately, the price goes up in a hurry.

So really, the choice is yours whether to dive Chuuk by land or by sea. No matter which way, if you plan on diving there, make sure you're comfortable in dark, confined spaces and that your trim, buoyancy and finning skills are tops. I recommend taking a wreck diving or cavern course beforehand. For repetitive diving, longer bottom times and added safety, Nitrox training is worthwhile. After turning around on a wreck dive five years ago due to a narcosis scare, I'm glad I took the proper training to enjoy Truk Lagoon's wrecks to the fullest and with no fear.

-- L.E.D.

Our Undercover Diver's Bio: *"I got certified to dive in Florida in 1998 and received my instructor credentials in 2000. I've done 1,200 dives in seven mainland U.S. states, more than 20 Caribbean islands, British Columbia, Hawaii, Micronesia and in Mexico's stunning cenotes. I enjoy researching new places to dive, and have been my own travel agent for the past decade."*

Divers Compass: My one-week charter aboard the Odyssey cost $3,395 for double occupancy, plus a five-percent tax and $50 for a dive permit; there is a $30 departure tax at the airport . . . Captain Mike sells his Wrecks of Truk Lagoon documentary on DVD sale onboard, and also through Amazon . . . The Odyssey has tanks with yoke or DIN valves in various sizes, and it supports technical diving . . . There's a recompression chamber right next door to the Blue Lagoon Dive Resort . . . Website - **www.trukodyssey.com**

Cozumel, Raja Ampat, Cuba, Grand Turk . . .

plus advice on wetsuits and resort options for older divers

From time to time, we publish select reader reports to bring unique possibilities, old problems, or generally good diving to your attention. Here's a fresh batch.

A Reader Speaks Up Aboard the *Komodo Aggressor* -- and They Listen. Rene Cote (Richmond, VA) headed off for great diving aboard the *Komodo Aggressor*. However, she encountered one serious problem and wisely took it upon herself to solve it. "The guides would not allow divers to dive on their own. Aggressor markets itself as providing 'ultimate service' by giving divers the freedom to pick a buddy and dive within proper limits, but this crew required everyone to follow the guides. When I pointed out to the lead guide that Aggressor usually allows divers to dive their own plan, he said, 'That's not in the Standard Operating Procedure.' However, the next morning, Diego (the cruise director) approached me to say he had reviewed the SOP, and I was correct. Here is the language: 'While in the water, you and your buddy are in charge. Every dive starts with a dive briefing from the yacht staff. However, as a certified diver, you and your buddy are responsible for planning and conducting your own dives within the limitations set forth by the briefing . . . (or follow the guide).' Despite acknowledging this was in the SOP, Diego said something about how the conditions here were much harder,and that we needed to follow the guides." Cote also produced a compelling two-minute film

on plastic waste that has despoiled once-pristine Komodo Island, home of the unique Komodo dragons. It's a must-see -- watch it at **https://youtu.be/TbccGV4QQh0**

Aging Divers and Wetsuits. Ed Noga (Akron, OH) who has made more than 1,000 dives, had a great trip to the Red Sea aboard the ***Emperor Superior***, but raises a point that aging divers must keep in mind. "My only complaint was about myself. I rented most gear and everything worked well, but I ordered a full 5-mm wetsuit. Back in the day, I'd dive comfortably in water down to 55 degrees in a 5-mil. Not anymore. In 72-degree water, I froze my butt off on most dives. Everyone else wore at least 7-mm suits. Live and learn." Yes indeed, and keep in mind that many destinations we think are "warm-water destinations," aren't always so. Some Indonesia destinations have upwellings in the low 70s, or even lower. Water temperatures in the Bahamas, and Turks and Caicos get into the low 70s in the winter, and the Sea of Cortez doesn't really warm up until late September. Multiple dives a day aren't fun when your teeth are chattering.

Attention, Cruise Divers. Going on a cruise and hope to dive? Apparently, some cruise ships have restrictions such as age (you can be no older than 79) and credentials (you must have Advanced certification), so get the details before you go. But you can get around the requirements by booking your diving directly with a local dive shop instead of through the cruise staff. Subscriber Michele Jacquin (Encinitas, CA) learned that if she wanted to dive on her upcoming Linblad Expeditions/National Geographic cruise in French Polynesia next year, she would need an Advanced Open Water certification, so she signed up with Kihei's **Maui Dreams Dive Company** and said, "Not one person was snotty or disinterested in this beginner. I dove 15 dives over seven days, mostly shore dives with two boat dives, including a deep dive to Molokini Crater, which had visibility over 100 feet. They respected my goals, listened to my experience (50-plus years of surfing, snorkeling, sailing and marine biology coursework) and tailored the guided dives to me. Besides earning her certificate, Jacquin enjoyed shore dives full of life. "An octopus popping its head above a rock, nudibranchs galore, butterflyfish, wrasse, surgeonfish, many eels and ulua jacks, turtles on every dive, and eagle rays. The highlights were the sleeping white-tip in a lava cave and watching three mantas feeding, with mouths and gills open, making 'S' patterns a mere few feet above us." **(www.mauidreamsdiveco.com)**

Budget Accommodations and Diving at Raja Ampat. The dive resorts and liveaboards of Raja Ampat have become extremely expensive, pricing many people out of world-class diving. However, Andrew Falconer, a well-traveled Australian subscriber who finds all sorts of bargains, let us in on how he gets a room and two dives for under $100 per day.

"In April, I dived from two locations, staying at homestays, which benefits the local population. From Sorong, I left by fast ferry at 9 a.m. to Waisai (a two-hour trip), then by pre-arranged local boat to Kri Island . . .**Wobbegong Dive Adventures** was fine, and I also stayed at its homestay, Koranu Fyak Bungalows. The accommodation was basic, as you would expect, but the meals were not good (fish -- never fresh -- with rice and veggies). The generator for lights usually only came on after dark; once I had dinner by torch light, as they had run out of fuel. Yenkoranu, the homestay next door, would have been better . . . I was Wobbegong's only guest and diver for the week, so I had personal dives with

Reader Reports: Easier to Write, and Now with Photos

A picture says a thousand words, and now you can let your photos do some of the describing in your Reader Reports. The quick and easy instructions for uploading photos immediately appear when you submit a report.

A good example comes from Andrew Falconer, whose Reader Report about budget dive travel in Raja Ampat we highlight just below -- **www.undercurrent.org/members/UCnow/dive_reviews/Indonesia/WobbegongDiveAdventuresandArborekDiveShop_RajaAmpat_report_10908.html**

And remember you don't have to write your Reader Report all in one go -- do a little today, add to it tomorrow, and edit it later. To save your work at any time, just click "Continue" on the bottom of the form, which will give you a preview of the report. To continue editing, just hit the "Edit" button at the bottom, and you're back where you were. All your input is saved and in the report.

When you want to get back to it, log in to **www.undercurrent.org**, and you'll see a link on your homepage, as well as on the "Submit a Report" page, to any unfinished reports you started.

Start your next report now by going to **www.undercurrent.org/members/UCnow/SubRRTopMA.php**

A Raja Ampat Homestay: The Cabin at Kayafyok

Matthias as my guide, who was good. We dived the top sites, including Cape Kri, Blue Magic and Chicken Reef, and had some fantastic close-up experiences with mantas . . .Visibility was generally good (it was the dry season), and the water warm (I dived with a sharkskin and stinger suit). Some sites, Cape Kri in particular, had strong currents, which attract barracudas and jacks in large numbers, plus trevally, tuna and sharks, which I could observe by hanging onto a rock . . . I did 13 dives from Kri, all boat dives except one on the house reef on Sunday, which is a day of rest, so no boat dives; they only accept cash.

"I did my second week of diving at Arborek, a small sand island (you can walk around it in less than 30 minutes) surrounded by reef and located at the western end of the Dampier Strait. It has a dive shop and a number of homestays. I stayed at Kayafyok, in a cabin on stilts over the water. The food was basic, but the fish was mostly fresh and the veggies more imaginative. I was the only guest and made seven boat dives with **Arborek Dive Shop**, mostly with two or three other divers. Dive guides Gita and Marcel were excellent. The diving continued to be great, especially on the Deep Rock, Citrus and Mayhem sites, which all had amazing amounts of fish, including schooling barracuda."

Excellent information about these homestay options are at **www.stayrajaampat.com**; you can also send emails to Koranu Fyak Bungalows at **krfwda@gmail.com** and to Arborek Dive Shop at **arborekdiveshop@gmail.com**

How about a Sandals Resort? It could be a good option if you're looking to tone down your diving. Bernard Dubois (Barrington, NH) says that while he has made 300 dives since 1966, he is 72 and "I do not dive for challenges any more. So with my wife, a diver with 60 dives in three years under her belt, we went to Sandals in Jamaica, which is efficient and relatively inexpensive. We were able to go to the fitness center, use the sauna, have good lunches and dinners, and dive twice a day, enough to make my wife focus and for me to take pictures and laugh while relaxing. Twenty-one dives in two weeks was a little boring for me, but not for my wife! I am not looking for challenges any more; I enjoy simple, well-organized dives. Since then, we've been to Sandals resorts in St. Lucia, Nassau and have dived Tahiti. I would have found those locations quite boring 40 years ago. But back then, we had so much more freedom to dive. Thirty years ago, in Nassau, we were diving by pair on our own profile; my youngest son and I shook hands at 200 feet deep. Nowadays, you get called back if you go beyond 90 feet. And alas, 80 percent of the fish and coral are gone, compared to back then." **(www.sandals.com)**

Yucatan and Chinchorro Banks. Eric Williamson (Polson, MT) reports that when he dived in January with **XTC Dive Center** in Mexico, the four-hour, round-trip to dive Chinchorro Banks was well worth the time and discomfort. "Our dives were about two miles from the island. We saw large fish, and lobster as big as my leg. The boat ride was wet, so XTC provided neoprene parkas to wear over the wetsuits we wore. Adding a little excitement, a flying fish landed inside the boat. We docked at the park headquarters for the surface interval and lunch; there were three crocodiles next to the dock and five more below a viewing platform over a lagoon." Later from shore, Williamson had a great dive at La Poza. "We saw snapper up to 70 pounds, grouper to 90 pounds, several green morays, and 25 tarpon weighing between 30 and 90 pounds. The tarpon moseyed around us for 10 minutes while we just idled on the sand. That dive rates in my top five ever, and we repeated it the next day." (**https://xtcdivecenter.com**)

Technical Diving in Cozumel, Anyone? We wrote in the last issue about aspects of technical diving that sport divers may wish to pick up. Reader Christopher Morris (Calgary, Alberta) recently took his technical diving skills to Cozumel and **Deep Exposure Dive Center**. "Service could not be better for technical divers; this shop can easily service the most extreme dives, side-mount diving, multiple tanks and gases. The owner provides his time and vast knowledge, and makes his recommendations, assisting with all details of the dive plans. All my dives were tech dives except for the last dive. Day One, I went down to 150 feet; Day Two was 250 feet; Day Three was 300 feet; Days Four and Five were 400 feet; back up to 150 feet on Day Six; and Day Seven was a drift dive between 40 and 80 feet with nitrox. Two dives per day, except for the 400-foot dive days. Visibility

was 100 feet most days but can vary from 40 to 100 feet. There was a mild current most days, but it can vary from no current to a very strong one. It usually follows the coral reef, but sometimes the current could be going up or down the coral wall. Swimming left or right will eventually bring you to a place with the opposite direction . . . Roger, my dive guide, was excellent, always nearby and monitoring our depth, time and gas switches. Support on the boat by Pepe takes customer service to a new level – he helped me with all details of my gear and tanks, checking all hoses, regs, gear placement, and getting on and off the boat. When we were done, he rinsed all my gear with fresh water, including inside my BC and surface marker buoy. It's a large boat, with a big ladder on the back, and when I was ready to get out of the water, I raised my hand in the air and Captain Giovani backed it up.

"Very little fish life below 200 feet. I did see a couple of reef sharks at 400 feet, but they quickly scooted." For fish life, it was the shallow dives, Morris says. "At Palancar Reef, swimming around and through the towers must be one of the best coral reef dives in the world. The best fish life is from 40 to 100 feet. I did a drift dive a few feet above the bottom, floating a few feet above the coral floor, moving with the current and not even kicking, watching all the activities happening in fish town. Thousands of small and medium-size fish of all kinds, along with groupers, turtles, moray eels, rays, spotted eagle rays and nurse sharks." **(www.deepexposuredivecenter.com)**

"The coral, sponges, tropical fish and general reef conditions were healthy and plentiful. It is the best dive experience in the Caribbean."

***Avalon III* Launches in Cuba.** Frederick Michael Maisch (Okemos, MI), who was aboard in March, says "I can't overstate how wonderful the ship and crew were, as they have everything you could ask for aboard the boat. The dive deck was enormous, with plenty of room to change, a freshwater tank for cameras and wetsuit rinse, and even a bathroom. The sun deck has a bar, hot tub and lounge chairs. Our cabin was large, with a balcony, twin beds that were very comfortable, a large and functional bath, and storage -- and everything worked! The ship has a large modern kitchen, and the chef and food were extraordinary. There were 15 divers on our trip; the six who had the major camera equipment took a skiff, and the other nine took the 45-foot cruiser. Gear was always set up for us by the crew, and up to four dives a day were offered. Nitrox was US$100.

Got any Tales of Unexpected Dive Travel Bills?

Some years ago, I went to the Bahamas with Chris Boardman, an Olympic gold medalist in cycling, and we spent a week at Bluff House on Green Turtle Cay in the Abaco chain. The rooms were prepaid, thanks to *Diver* magazine, my employer at the time, but I planned to cover the cost of our meals in the excellent, but expensive, restaurant. What I was not expecting was an additional charge of $1,000 for "Use of the Facilities." Because we were out diving with Brendal's Dive Center every day, the boardwalk between our rooms and the restaurant was the only "facility" we ever used. But I paid without making a fuss -- I was on assignment and using *Diver*'s expense account, so it didn't hit my pocketbook, but still, it was an outrageous amount. Then I settled down outside the hotel's reception to see reactions of other guests as they went to pay their bills. The shocked look on the face of a father of four as he stumbled out of the lobby told me this was not a cost expected by any guest.

To be honest, it's the only time I've encountered such nonsense, although the restaurant bill for four people over seven days at Cobbler's Cove in Barbados 20 years ago was worth framing -- $8,000 just for food.

Today, every hotel seems to have a charge for any number of things, such as using the pool, staring at a sunset, or just staying at the hotel. And you can't assume that "complementary" means free anymore. (Ben Davison learned that the hard way after being told quietly by a staffer that the free fruit and cheese basket he received in his room upon arrival at a high-end Arizona hotel actually came out of a mandatory service charge. The money didn't go to people who served him -- part of it went to pay for his goody basket and, according to the staffer, each of the service personnel received $1 from one's stay, no matter how long.

What unexpected, and maybe unfair, additional charges have you been subject to on a dive trip? How did you handle it? And did it get resolved or not? We'd like to know. Send your tales of unexpected dive-trip bill shockers to **BenDDavison@undercurrent.org,** and include your town and state.

Suggested tips were around $400 total for the dive crew and boat staff, and they were worth it . . . Most of our dives were drift. I saw many sharks up close on every dive, plus huge eagle rays, tarpon, black and Goliath grouper, green eels and a couple of big turtles. The coral, sponges, tropical fish and general reef conditions were healthy and plentiful. It is the best dive experience in the Caribbean."

U.S. citizens can legally go to Cuba, but there are a few requirement (see our "Easy Travel to Cuba" article in the March 2018 issue). Maisch says, "U.S. Immigration asked for nothing more than my passport, which did get stamped in Cuba." You must book passage through a dive travel agency, but view details and photos of the boat at **https://travel.padi.com/liveaboard/cuba/avalon-iii**

Grand Turk Keeps Its Charm. Susan Mindock (Playa del Rey, CA) notes that longtime divers such as herself "know it's not uncommon to revisit places you initially loved and be heartbroken to find the coral bleached, the fish life decimated, and the island ambiance degraded. I had fallen in love with the diving in Grand Turk back in 2003, but hadn't been back since 2007, and I was amazed that the underwater state of health seemed to be unaffected, along with the topside charm. So after all these years, Grand Turk remains one of my top three Caribbean dive favorites! I dove with **Oasis Divers,** and the first thing I need to state is that Mackie is a national treasure for the Turks and Caicos. He has a genuine love for diving that has never diminished over the 30-plus years he's been doing it. The visibility was 100-plus feet on the wall, maybe 50 to 80 feet on the shallow dives, and driven by weather. We saw sharks, turtles, big puffers, grouper, big parrots and all the Caribbean standards. One thing we did not see was lionfish. Grand Turk is still a fantastic dive destination, and for me, it has the best of all worlds -- close dive sites, huge dramatic walls, healthy topography, and enough fish to entertain you." (**www.oasisdivers.com**)

-- Ben Davison

Yes, Sport Divers Get PTSD, Too

here's how to determine whether you're in that bunch

A bad scare such as almost running out of air, witnessing another person suffer a heart-attack underwater, or even being incapacitated by severe leg cramps, can make a diver hang up his or her fins forever. When you've witnessed someone recovered from the water but unsuccessfully resuscitated, the aftermath could make you reassess whether it's worth it to keep on diving.

Experienced divers can sometimes underestimate the stress a new diver goes through, and there are plenty of divers who haven't been battle-hardened by the slings and arrows of misfortune that await anyone involved in this adventurous activity.

In short, we divers should be more aware of simple post-traumatic stress disorder (Simple PTSD) that can affect all of us, says James A. Lapenta, a veteran dive instructor who runs UDM Aquatic Services in Canonsburg, PA, and has created multiple technical diving courses. Lapenta has also written two books on diver training and safety, and in his most recent one, SCUBA: A Practical Guide to Advanced Level Training, Volume 2, *he states that PTSD is a real possibility for those who have just been involved with a life-or-death situation in a recreational dive setting. Accidents that seem to have only caused injury to a diver's ego may actually have deeper, more damaging effects on all divers involved.*

Below is an excerpt from Lapenta's book about PTSD.

The rescue/recovery of a human being is a profound experience. Ask any firefighter, police officer or EMT. Any of them will tell you honestly that each rescue has an effect on them. That even though they may have performed thousands, there's often one that has affected them for a long time.

Members of our armed forces were the first to be diagnosed with PTSD. Previously it was called "battle fatigue," "shell shock," or some other term. Soon psychiatrists, psychologists and therapists began to see the exact same signs and symptoms in patients who had never experienced combat or saw the effects of it. What they realized was these people were experiencing the same effects of PTSD as a result of having been involved in traumatic events, or, in some cases, from witnessing these events.

Whatever the cause, the result can be summed up by saying that anyone involved in a serious rescue

Even Royal Family Members Are Dive Fatalities

A 61-year-old woman diver who drowned on March 23 in Malaysia's Perhentian Islands was a member of that country's Perak royal family. According to the *Malay Mail*, Raja Halimahton Shahrin Sultan Idris, sister-in-law to the ruler of the Malaysian state of Jophor, was at 60 feet in Pasir Hantu Bay when her air supply gave out.

She and her buddy started an ascent, and at 50 feet she signaled she was OK and decided to continue the dive, but she suddenly became weak. Other divers went to her aid with their alternate air sources, but they couldn't revive her.

Could it have been immersion pulmonary edema (IPE)? That's when a diver suddenly experiences difficulty breathing and often thinks it's due to the regulator malfunctioning, when in fact it is caused by body fluids filling the lungs. The consensus of medical professionals is that under these circumstances, it's imperative to remove the diver from the water. However, post-mortem examinations are inconclusive because IPE presents the same symptoms as conventional drowning.

See our articles "Why Divers Die: Part II" in the February issue, and "Maybe This is the Reason Why His Wife Drowned" from the March issue for more specifics about this mysterious cause of many divers' drowning.

scenario with a fellow diver stands a chance of being injured by that scenario -- not physically injured, but injured mentally.

What we are talking about here is PTSD that is brought on by a single event. Known as Simple PTSD, it is a reaction of the subconscious mind to a single violent or frightening event. For our purposes, this single event is a diving accident. It need not be a fatality or even a life-threatening event to shock the system and produce signs and symptoms of PTSD. Even an event with a successful outcome can have long-lasting effects.

So, what are the signs and symptoms that someone may be experiencing this?

Signs and Symptoms of PTSD

Repetitive Thinking: A frequent sign of PTSD is repetitively thinking about the event. These thoughts may suddenly come into your mind even when you don't want them to. They may come in the form of nightmares or flashbacks about the event, and can result in inflated reactions at inconvenient times. You may get upset simply by being reminded of what happened. You may react when someone mentions it, you see a picture of the place where it occurred, or you see another person who was there. You may also experience these episodes in small snippets of the event. You may see the face of the victim or others who were there.

All of these incidents have the potential to occur at any time. These are normal occurrences in the period immediately after the event, but when they persist and interfere with daily life, they need to be addressed.

Hypervigilance: Another common sign of PTSD, this state of heightened alertness is brought on by a mental injury. Many situations call for one to be alert and watchful, but the person suffering from PTSD is often like this constantly. They're not able to relax, and the smallest disturbance can create an overblown reaction. It may also lead to dangerous situations when an overreaction to a stimulus happens in a situation where that reaction presents the opportunity for injury.

Anyone involved in a serious rescue scenario with a fellow diver stands a chance of being injured by that scenario -- not physically, but mentally.

Insomnia: Thoughts and images of the event may cause you to lose sleep or keep from getting truly restful sleep. Insomnia may be a result of seeing the event when you close your eyes, it may be hypervigilance, or a reason you cannot identify. In some cases, medication may help, but only for a short time. Another common complaint is that while you are exhausted and sleep for what should be a sufficient period of time, you wake up still feeling rundown and lacking energy.

Avoidance: You may find yourself going to great lengths to avoid things that remind you of the event; the location where it happened, the people who were there, maybe even the activity itself in extreme cases. Some people involved in a diver rescue that did not have a good outcome may go so far as to stop diving. If the events are so traumatic and upsetting that recalling them

detracts from the dive-planning process -- so that diving itself now becomes unsafe due to inattention to detail -- then perhaps it is for the best that the diver stop diving.

> *Everyone knows and says it wasn't your fault. You may be able to accept that in your head fairly quickly. It's in your heart that can take a long time.*

Panic attacks: These appear as a feeling of intense fear, accompanied by shortness of breath, dizziness, sweating, nausea and a racing heart. Other physical symptoms may be chronic pain, headaches, stomach pain, muscle cramps or low back pain. If you are able to recognize this occurring, stopping whatever you are doing, closing your eyes, thinking of a calm setting or relaxing image, and breathing deeply and slowly may help greatly. Another valuable technique is to assess your current location. Look around, observe the area, focus on a few items and decide if they would truly be located in the place where you experienced the event.

Feelings of mistrust: This wariness may be directed toward strangers, friends, family, or the world in general, and can result in feelings of loneliness and isolation. In addition, you may lose trust in people you know and look at the world itself as something to be feared. This may result in errors in judgment or being overly cautious to the point of inaction.

Chronic fatigue: Another possible sign that something may be wrong, especially if no physical cause can be pointed to as the source of your feeling tired. It takes a great deal of energy to maintain a hyper-vigilant state. Not being able to rest or sleep only adds to that. The panic attacks also use up valuable energy.

Guilt: Another possible sign of trouble is a sense of guilt or responsibility toward others who may have been affected by the event. You may see yourself as being somehow responsible or not having done enough.

Don't Say, "I Know How You Feel"

Instructors, divemasters, assistant instructors and other professionals associated with the dive can be especially at risk here. They may feel that this happened on their watch, and while nothing they did could have prevented the event, they still may feel the need to make up for something. It may affect how and whether they will ever teach again.

Everyone is different and will react differently. But there is a huge difference in the theoretical versus the real-life experience of someone who has been through this. Those who have not experienced this really have no idea how it feels, and while support is appreciated, one thing to avoid saying is "I know how you must feel." Because

Snorkeler Gets Swallowed by a Whale

When Jonah of the Bible got swallowed by a whale, it was three days before he was finally spat out. Luckily, Rainer Schimpf of Port Elizabeth, South Africa, was released a lot sooner after he found himself inside the mouth of a whale.

Schimpf, 51, has been organizing trips out to the famous Sardine Run, 25 miles off Port Elizabeth, for more than 15 years. Sometimes they can be disappointing, others they can result in spectacular one-off experiences to be treasured. Austrian diver Heinz Toperczer got one of those cherished moments when he captured video footage of Schimpf being gathered up in the mouth of a charging Brydes whale while snorkeling in February.

Schimpf told the *Daily Telegraph* that there was no time for fear or any emotion. "I knew instantly what had happened. I knew a whale had come and taken me, and I instinctively held my breath, assuming it would dive down again and spit me out somewhere in the depths of the Indian Ocean."

But then he felt enormous pressure around his waist, which is when the whale may have realized its mistake, Schimpf said. "As the whale turned sideways, he opened his mouth slightly to release me, and I was washed, together with what felt like tons of water, out of his mouth, while the whale himself was swallowing all the fish in his throat."

OK, maybe Schimpf didn't actually get swallowed, but it certainly was a one-off experience to find himself inside the whale's mouth even for just 1.8 seconds. Brydes whales can reach up to 55 feet long and weigh 30 tons, so they certainly have big mouths.

you don't. An injury or death where a student is involved is like nothing you've ever experienced.

The diver may have been highly experienced and very well trained. They had all the right medical clearances. No one did anything wrong. It wasn't even a dive accident as far as the medical examiner and doctors are concerned. Everyone knows and says it wasn't your fault. You may be able to accept that in your head fairly quickly (a few weeks, months maybe). It's in your heart that can take a long time.

Why? Because you cared. You care about other divers and it annoys you when you see safety taken lightly. You have seen first-hand how quickly life can be completely turned upside down in every possible way, in a few seconds or feet, and it seems that others don't get that.

Those are the feelings you need to be aware of that can cause you to overreact or react too fast, too slow, or not at all. So we need to be sure we are ready before getting back in the water. That may take a little time and require the help and support of others we trust and can rely on.

Fly for Free to Your Dive Destination

how to play the credit card points game

Like many *Undercurrent* readers, I make dive trips once or twice a year, usually to the Caribbean. In the past few years, I've dived in Cuba's Jardines de la Reina, Cozumel, Honduras' Bay Islands, and Belize twice. Great trips -- especially because my partner and I didn't pay airfare for any of them. Actually, we haven't paid airfare on vacation for more than a decade.

We use airline and credit card points -- I can score a round trip to the Caribbean for as little as 30,000 points -- but not by being frequent travelers. We churn Visa, Mastercard and American Express cards for freebies, and "earn" thousands of dollars in free tickets each year. In the past few years, my partner and I have had 119 credit cards, about 17 a year between us. Some of my friends enjoy free trips as well, and we trade info via our own little network.

You, too, can join the fun, scoring flights to just about anywhere. Though flying business class may take many times more points than flying coach, it's still possible via credit card points. Moreover, some airlines allow you to buy a basic fare and upgrade with far fewer points. So while I'm sure many of my fellow *Undercurrent* subscribers play the mileage points game, I'll explain the basics in case you're not among them.

Two Types of Credit Cards

There are two types of cards. The first are these sponsored by an airline and offer points on that airline or their partners. They are very good if you usually fly from an airline's hub such as San Francisco (United, which partners with Singapore Air, Air New Zealand, THAI and many others) or Atlanta (Delta, which partners with airlines like Garuda, Aero Mexico and Virgin Atlantic).

The second choice is a bank card that awards miles, which are then converted to dollars to purchase tickets.

Both types of cards offer special deals, such as five miles for every dollar spent on specific airlines, three miles for every dollar spent at grocery stores or gas stations, or 10 miles for every dollar spent shopping online at a given store (United recently offered 30 miles for every dollar spent at an FTD florist, and 15 miles for every dollar spent on New Balance shoes).

With continual spending on one card, you can accumulate points, but the real game comes with constantly applying for a new card that offers big bonus miles after you spend X amount of dollars. For instance, United's Chase Business cards recently offered new cardholders 80,000 miles after they spent $10,000. Delta's AmEx cards are always attracting new users by giving 30,000 to 80,000 miles after they spend $10,000. I just received an Alaska Airlines card awarding 40,000 miles and a free companion ticket after spending just $2,000. Some cards require you to meet the minimum limit in three months, others whenever you get around to it. Of course, it means you have use the card, and hopefully, not by making unnecessary purchases just to accrue points.

The essence of the points game is to choose the best offer of points from the banks (Chase, Citi,

Barclay, US Bank, Bank of America and Wells Fargo are the big names), meet the minimum spending requirement, and then move on to the next freebie. For example, one good option is the Chase Sapphire Preferred Card. Spend $4,000 in three months, and you score 50,000 Chase Rewards points. Those are worth $625 for airfare booked through Chase, or you can transfer them to Southwest, United or some other carriers' frequent flyer programs.) Of course, there are some details and a few rules to remember, but the game is played by millions of people -- in fact, so many that airlines continue to require more and more points to get freebies, much to the chagrin of their loyal customers.

So if you want to play so you can get that next trip to Roatán or the Red Sea, here are a few tips.

* Start simply by getting one card, scoring the bonus and moving on.

* Accumulating points works best if you get both personal and business cards because you can then double your money. For couples, you can get twice as many cards, but have one person manage things to keep organized. Start a spreadsheet to track the exact name of the card, date opened, bonus and date that should cancel. My two-person spreadsheet has 119 cards on it, although the great majority of them have long been canceled.

* Don't cancel right after getting the bonus -- the banks' algorithms don't like that, and you may lose your privilege to get more cards.

* Most cards do not require a fee for the first year, so keep a card about 11 months, before the fee kicks in, because there's no need to spend on the card once you have earned the bonus. But an annual fee is not a disqualifier -- even though I once had a card with a $495 fee, I still earned rewards in the $1,200-$1,500 range, plus freebies like free entry into airport lounges.

* Know a few rules. Chase has great offers, but it also has a rule that if you opened five cards with any bank in the past 24 months, no deal. American Express has a rule that you can only get a bonus from a specific type of card just once. Both companies have some exceptions, but you get the idea. Not to worry, however, because there are loads of other options.

* Of course, initially you need to have good credit, and you should maintain it by paying off your cards each month and on time. Curiously, churning cards increases your credit rating. Why? Here's my real-life example to explain that. I just checked my FICO score and overview via my Chase account. My score is 804, which is very high (and, believe it or not, I have never made more than $40,000 a year in my life). Equally important is another fact FICO showed me: My average credit usage is $1,822, and my available credit (on a card or two I'm using, and several others waiting to be canceled) is $88,200. As FICO helpfully pointed out, my "card utilization" is only two percent of my credit. So the banks see that I'm no risk.

* Don't get hung up on loyalty to one airline. Take good deals wherever you can. And branch out: British Airways points are great, and they can be used to book most American Airline flights. A few tricks like that will extend your reach.

* Another reason not to get hung up on one airline: They are constantly degrading their programs, thanks to the billions of miles being collected by credit card users, not frequent fliers. A couple years ago, Delta jacked up its requirements for long-haul flights and business class. United will do the same starting this fall.

Dragon Smugglers Forcing a Shutdown of Komodo Island

The allure of Indonesia's Komodo Island for divers is the massive manta rays gliding around underwater, and the massive Komodo dragon lizards walking around topside. It is threats to the latter that may shut down the island entirely to tourists starting in January 2020.

Smugglers are stealing the dragons due to demand in other parts of Asia for dubious medicinal purposes (their blood is packed with antimicrobial peptides, a built-in defense against infections by all living creatures). The decision to close the island came just days after nine men were arrested on suspicion of selling more than 40 Komodo dragons for about $35,000 each. The temporary shutdown is expected to give officials an opportunity to increase the dragon population and preserve their habitats. Some reports indicate there are just 6,000 of the dragons left in existence, and fewer than 500 of those are females capable of breeding.

But there's still a glimmer of hope for divers wanting to see Komodo's manta rays: We still don't know how or if this would affect liveaboards operating close to the island's shores.

* Check out what the "nerds of churn" say. There's a good "Top 25 List" of bonus cards on MileNerd.com (http://milenerd.com). Another useful site is MillionMileSecrets.com (http://millionmilesecrets.com). These guys are the pros.

* Create a group of friends, share information and enjoy friendly competition. Then gather up your points and get a group dive trip together.

Incredibly, I have friends who decline to get free tickets. The idea of getting something free from the banks -- the same Wall Streeters who crashed our economy and laughed in our faces -- somehow rubs them the wrong way. I just don't understand them. Maybe on my next dive trip, after I and all my dive buddies arrive on our free flights, we'll figure that out over beers.

The author of this piece, a longtime, anonymous Undercurrent *travel reviewer who goes by the initials M.A., has been diving and exploring the Caribbean and its islands with his partner for 30 years. He loves Cozumel but usually dives the less-traveled outposts. His next piece will be on Glover's Reef, Belize.*

Your Letters to the Editor

health hazards, airline issues and divemasters' responsibilities

We always welcome your letters, and we recently got a good batch of them that are worth sharing with all readers. (Keep them coming.)

Lowering a Diver's Risk of Lung Infection

Shawn McDermott (Melbourne, FL) has a useful tale to tell about catching a bacterial infection in one lung after returning from a Cozumel dive trip in 2016. "Nasty stuff -- the medics suspected pneumonia and put me on antibiotics and steroids. I made a full recovery, but I didn't figure out how I might have taken sick until later." He guesses it was due to accidentally inhaling from his BC.

His advice: "When rinsing your BC after your last dive, fill it up several times with fresh water and squeeze it dry, and even inflate it with tank air to dump all the water out. For some reason, on that December 2016 trip, I actually sucked the air out of the BC, got some into my lungs, and bingo! A week later, back in Florida, I had to go to the walk-in clinic. Coincidence? I don't think so. Was there some bacteria in Cozumel's fresh water, which isn't potable?"

Ben Davison's reply: *Although there have been cases of people suffering aspergillosis caused by a common mold, it has usually been associated with some other lung condition. Shawn was very unlucky to suffer pneumonia, but it could have resulted from a number of sources – like sitting near someone who had it on the plane ride home from Cozumel, for example. Even so, we suggest you avoid inhaling from any BC that hasn't been rinsed out. For extra care, use an over-the-counter cleansing solution mad specifically for BCs, like McNett B.C. Life or Gear Aid Revivex.*

Confusion --and a Correction -- about Discover Scuba Diving

There was an element of confusion surrounding instructor-to-trainee ratios in our February article, "Discover Scuba Diving Is Deadly," regarding two tragic fatalities during Discover Scuba Diving (DSD) outings. We should've written, "ought to be" rather than "supposed to be."

Ken Kurtis, a NAUI instructor and owner of Reef Seekers Dive in Beverly Hills, CA, was quick to call us out on it, and wrote, "While I agree with your underlying point totally, when you've got someone uncertified under the observation/care of an instructor, the instructor has no job more important that doing everything in his or her power to guard the safety of that person. But you've got the ratio wrong, and, bad as this was, it makes it sound even worse. You state the ratio is one to one, but it's not. NAUI standards (2019 version) allow for the four-to-one ratio, and six-to-one with a qualified assistant. I believe PADI is the same.

"What may be upsetting the apple cart slightly is there's a requirement in the PADI standards that if you are using a vertical descent line no deeper than six feet in water where shallow water is not available (that's why you're using the line), then the ratio for that specific descent skill is one to one. But the ratio for the dive itself (and it sounds like this is what the 13-year-old boy was on) is still four to one. Whether that makes any sense or not, and while many of us argue that two-to-one is the limit of our comfort (we've only got two hands and can hold one diver in each hand) and that one-to-one is best, a four to-one ratio is still within standards.

"That all being said, having 20 people in the group -- if they were all in the water at the same time, let alone with one instructor -- is way outside the standard."

"Also, although you mention DSDs are to be done in "shallow or confined water," the specific limit is 40 feet. It sounds like the conditions, specifically the visibility, should have precluded the dive, or at a minimum, forced the instructor to go with a lesser ratio. From an older version of the PADI standards, "Good environmental conditions can enhance the experience, while marginal conditions may detract from new diver enjoyment and safety. It's important to make conservative decisions and use good judgment."

The Real-Time Data Every Dive Computer Should Have

Max Weinmann, an *Undercurrent* subscriber and a critical care specialist in Atlanta, GA, writes, "I am grateful for John Bantin's timely thoughts on computer reliability and DCS avoidance (*Undercurrent* March). The challenge does, indeed, go beyond the ability to achieve mathematical manipulations of algorithms, which have always been difficult to test in humans, and in particular, those of us who present ubiquitous but growing challenges; namely aging, at least in physiological terms.

"This has been clearly demonstrated recently by the increasing morbidity and mortality of older divers. Change in weight, fitness, cardiovascular and organ health, and the indignation of a growing medicine cabinet replete with blood pressure, cholesterol, prostate and hormone replacement medication, to name a few. All of which collude to alter our physiology and the nature of gas uptake and release as we dive. Since the introduction of computers, we have largely become passive travelers of a tour governed utterly by the laws espoused by these algorithms, where personalization is based upon standard deviation manipulation rather than on the increasingly complex diversity of our own body physiology."

"Hence, adhering to computer-driven dives is not a guarantee of avoiding DCS. Specifically because our physiology is a dynamic environment constantly changing from moment to moment and compensating for changes in body fluid balance, chemical intake, hormone levels, external temperature, cardiac health, vascular sufficiency, etc. This leaves many computer algorithms wanting. "Indeed, as Bantin points out, 'The problem with all of this is no algorithm writer can write one specifically tailored for you. It's all based on hypothesis and Haldane's original research from more than 100 years ago.'"

As a diver and critical care/hyperbaric physician, I've seen firsthand the vagaries of DCS and the incredulity of divers, both young and old, who have developed the condition, despite adhering religiously to a computer profile a statistically-derived calculation that is incapable of taking into account individual factors such as dehydration; previous injury; the increased work the heart must perform in the setting of high blood pressure -- these are all important determinants of gas exchange, and hence, personal DCS risk.

"Only recently has Scubapro incorporated the monitoring of health factors, which brings this dynamic personalization much closer. By monitoring heart rate and air consumption (indirect measures of body 'work,' and hence, gas uptake and consumption), the algorithm that will determine Joe Diver's underwater profile is based upon actual biologic measurement and not statistics. For the first time, the profile will be based upon dynamic real-time measures of the individual diver's physiology, and not just the average of accrued statistical data. This is highly impactful in terms of safety, especially for the over-50 age group."

"While I have no commercial interest in this device, I am invested in diver safety. I sincerely believe the future of safe diving lies in real-time monitoring of an individual diver's physiological determinants of gas handling. That requirement transcends mere statistics. Diving is itself a dynamic and highly variable experience, as is our physiologic response, both between different divers, and with different dives for the same diver. It therefore demands a similarly dynamic computer able to integrate our own unique physiology in order to avoid morbidity and mortality."

John Bantin replies: *"I absolutely agree that not enough divers bother to understand how their computer works or what it is really telling them. Too many people buy one, take it out of the box and blindly use it, without even appreciating what might be displayed. I met a diver recently who wanted his computer sent back to the manufacturer because it went into 'Error Mode.' He assumed it had gone faulty because it had locked him out from using it for 24 hours. I'm not entirely sure he believed me when I told him it was telling him that he was in error mode. He must have come up faster than the prescribed ascent-rate limit and not done the added time required on the safety stop. Luckily it had not been sent into 'SOS mode' -- although I once witnessed a diver try to hide his computer after it displayed SOS."*

How This Diver's Coastal Cleanup Plan Has Turned Him into a Hero

Canadian diver Shawn Bath is fed up with the coves and harbors of his home, the Twillingate Islands off Newfoundland's northeastern shore, being used as dumpsites. So he has taken it upon himself to start cleaning them up, and he has taken a year off work to do it.

"Everywhere I've dove has been pretty much the same thing -- garbage, tires, rubber boots, rubber coats," he told CBC News.

And that's what Bath, a 21-year commercial diver, recovers from the depths. He had been waiting for years for someone else to take on the clean-up effort, but realized he'd better do it himself before he gets too old. In the 10 months since he started, Bath has pulled up more than 1,000 car tires. He also formed a non-profit group called Clean Harbours Initiative (**www.facebook.com/Clean-Harbours-Initiative-267997527329891**)

His work has not gone unnoticed -- Clean Harbours has had donations from the U.S. and Australia - but Bath is especially buoyed by the local support. Local mayor Philip Wood got his town of Bay Roberts to chip in $500, and the Lion's Club wrote a check for $859 so Bath could replace the zippers in his drysuit.

"There is an awakening happening all over the world," Bath says. "People like myself are starting to clean up the oceans, and starting to raise money for that purpose."

His next goals: acquire a boat, a trailer and a team of at least three divers to travel to harbors all over Newfoundland and Labrador.

Thanks for the corrections, Ken. And we still stand by the point made in the conclusion of the article by Bret Gilliam, founder of the dive training agency TDI/SDI, that DSD's current standards are potentially dangerous, and it's time the scuba industry woke up to that.

Should Dive Guides Be Responsible for Your Safety?

Regarding our death-by-narcosis-focused article, "Rapture of the Deep," in the March issue, John Miller (Lubbock, TX) took issue with our implication that perhaps the dive guide, who didn't descend to save the sinking diver, was partially responsible for the man's death.

"First, we need to consider every dive agency's Rescue Diver training philosophy, as well as that of Public Safety Diver instruction and other emergency first-response training: to only have one victim."

"During the briefing, the divemaster most likely told everyone the maximum depth and time. Certified divers need to pay attention to the briefing, and follow the limits set for the dive by paying close attention to their pressure gauge or dive computer. The wife and divemaster put their own lives at risk by chasing a narc'd diver.

I do not believe it was the guide's responsibility to save this man and his wife. I understand the wife's desire to do so -- but three people could have died. As dive professionals, we will do what we can to 'save' bad divers, but not at the risk of our own lives or that of other divers. One victim is bad enough."

We asked Bret Gilliam to reply to Miller's take: "It's a tough call for the divemaster, with several factors in play that have to be a matter of personal experience and tolerance for stress, narcosis and high PO2. If it was me in that situation, I'd have gone for the rescue and considered the risk to be minimal. But Miller's comments about divers taking responsibility for their own actions if they don't follow the dive briefing are also valid. In today's world, a huge percentage of divers are not trained well to a level of independent capability, and lack much practical experience. That's a fault built into the dumbed-down curricula, and limited ocean dives in training."

"The bottom line: Divers should be responsible for themselves unless they specifically request a supervised dive outing. But I could not leave a diver behind in obvious distress."

Causes and Remedies for a Dive-Related Pulmonary Edema

Swimming-induced pulmonary edema (SIPE) is a medical condition that presents similar symptoms to drowning, but in fact it is the diver's own body fluids that are filling the lungs. Joan Eggert (St. George, UT), a physician now retired from Intermountain Dixie Regional Medical Center Wound Clinic and Hyperbaric Chamber, developed her second case of SIPE on a dive while

fighting a current. She surmises it was triggered by a switch from one prescription drug for high blood pressure to another, and suggests that divers with chronic hypertension need frequent evaluations of the cause and prescribed medications.

"Evidently, 10 years ago it was not appreciated how many hypertensive patients had a disease in which the adrenal glands make too much aldosterone, which leads to high blood pressure and low blood potassium levels. A beta blocker is the wrong drug and may harm those diving. Fighting a current may also lead to 'racehorse hypertension,' which is why racehorses get pulmonary edema. Divers who have exercise-induced hypertension should see their physician about medications to reduce it."

"The treatment for SIPE includes oxygen, a diuretic (usually furosemide) and pulmonary-end expiratory pressure, or PEEP for short. One key point we don't teach divers, but I recommend, is an upright position, rather than a lying-down position, allows for easier breathing. Another one is, you can start "self-PEEP," even in the water, by pursing your lips as you slowly exhale, feeling like you are pushing back to keep the air sacs open. It is hard to self-PEEP when all you want to do is gasp air, but you will improve much more rapidly. And finally, evaluate when you want to trade rugged, cold-water diving for easy, warm-water diving with no possibility of strong currents."

Check Those Indonesia Flights

"Thanks to the advice in the April *Undercurrent* (our article "Why You Had Better Confirm Your Flight Itinerary"), I checked all my flights for my November liveaboard cruise in Indonesia," writes Harvey S. Cohen (Middletown, NJ). "One flight was indeed canceled, with no notification."

"I booked Garuda Indonesia (on its website) from Bali to Maumere and from Sorong to Jakarta. "When I checked my booking on the website, there was a red notice that one flight had been canceled. The other was still scheduled. Now, the website still shows the canceled flight as scheduled, so any automatic monitoring service will be unaware of the cancellation. The only way to find out is to check a specific booking that's already been purchased."

"What have I learned from this? When travel involves flights on a domestic-only airline, book those flights through the dive operator at your destination. They are best positioned to deal with domestic airlines, and they have a direct interest in getting you there and back. This is especially important for liveaboards, where it's crucial to arrive in time for the boat's departure."

Lisa Evans (Fort Collins, CO) also told us she was notified by NusaTrip, an Asia-based online travel booker, of a Garuda flight canceled about a month before her trip last fall. "Notification was

Trinidad Diver Survives a 44-Mile Swim

A very lucky young man survived 16 hours in the water when he got separated from his boat while spearfishing off the coast of Trinidad on April 10, and ended up swimming 44 miles to shore.

Christopher Bugros, 24, blamed strong undercurrents and an unexpected encounter with a bull shark for his parting ways with three diving friends while on a 9 a.m. dive. He surfaced but was unable to make it back to their boat, and although he saw them searching for him, Bugros' friends were unable to locate him. He ended up a mile from the boat before his buddies gave up the search to go back to refuel. Even when he saw them return later, Burgos was unable to attract their attention with his whistle.

So he discarded his weights, wrapped his wetsuit around his empty tank to use as a buoyancy aid, and fashioned a makeshift snorkel from his regulator hose so he could rest his neck for periods. Burgos kept hold of his speargun in case of a shark attack, and also drank seawater periodically in an effort to stave off thirst (not necessarily a good idea).

As night fell, Burgos could see a small beam of light coming from a mountain, which he followed while fighting against strong currents. He finally made it to La Foret beach, on Trinidad's northeastern tip, around 3 a.m. Because of exhaustion, he lay on the beach till daybreak, then finally walked towards the nearest house. Bugros was taken to a local clinic to be treated for exhaustion and dehydration, but staff only gave him antibiotics (they were out of drips), so he collapsed immediately after being discharged. He was then taken to the Hospital, given intravenous fluids and antibiotics, and discharged a day later.

Authorities are now investigating why the clinic didn't have adequate medical supplies to treat Burgos. His family want the same scrutiny of Trinidad and Tobago's Coast Guard for not using air support in his search.

September 3 for an October 11 flight. The flight was from Luwuk to Manado, and they rebooked me on a flight that would take two days -- the original flight was around 45 minutes. NusaTrip customer support got me a full refund, which took a while, and I was rebooked easily."

Don't Ignore that Dive Injury

beware if you or the crew say no to medical assistance

February's article, "Bad Stories about the Bends," about divers who came down with decompression sickness and the professions who were supposed to treat them, got me wondering: Have you ever suffered an injury on a dive trip and either been in denial about it, or found that the crew was reluctant to get you medical help?

Bret Gilliam, a veteran dive professional and regular *Undercurrent* contributor, has operated recompression chambers for over 40 years. He says that, while DCS is a statistical inevitability in diving, "what concerns many of us in the business of treating divers is the unfortunate mindset of the sport diving population that consistently denies the possibility of DCS. A certain stigma to reporting symptoms has developed, and this trend flies in the face of all common sense and logic. Why would any intelligent adult ignore symptoms with the knowledge that DCS manifestations are progressive in nature?"

Intelligent dive managers do err on the side of safety, and even if their admonitions annoy you, you shouldn't wave them off. Back in the day, I dived with Peter Kragh, a top underwater cameraman who has shot footage for BBC's *Planet Earth* and various IMAX films, when he was a young dive guide on the *Undersea Hunter* at Cocos Island. Not then understanding the short decompression advantages of diving with fixed oxygen in a closed-circuit rebreather, Kragh strongly believed that I must have gotten bent after the long dive. (I would have been if I'd been using traditional scuba gear.) So just to allay his fears, I breathed therapeutic oxygen on the boat and spent another good hour hanging on a rope under the boat that night, breathing oxygen. (Kragh is a devoted rebreather user now.)

Cocos is a long way from hyperbaric treatment, and a bent diver would have ruined an expensive trip for everyone else on board, so in the light of his beliefs regarding deco at that time, Kragh made a brave decision, despite my insisting I was perfectly OK. However, denial is one of the common symptoms displayed by someone who is bent, so Kragh was taking no chances.

The flip side of that is when a diver is mysteriously taken ill after a dive in a remote spot, and the commercial pressures on the crew make them reluctant to call the trip and head for medical safety. That may have been a factor in the John Cody case we wrote about in "Bad Stories about the Bends," in which he thought he was bent but the crew of the *Palau Aggressor* disagreed. Cody was lucky to get back home to Saudi Arabia and get hyperbaric treatment without further damage to his nervous system. However, he did suffer DCS, due in big part to a massive hole in his heart known as patent foramen ovale (PFO).

I was on a boat in Egypt when one of the passengers was taken ill during the first dive of the trip. Despite my insistence that the man should be rushed to the hospital, the European cruise director preferred to wait to see if he got better. After a downward spiral of suffering, the poor guy was finally evacuated after three days. It turned out he'd suffered a stroke and could only fly home after some months of recovery. Back on land, the boat's owner was appalled when I told him what had happened.

When you've got a full boatload of passengers who've paid a lot of money to dive somewhere remote, canceling a trip and returning to port early can be an expensive exercise when it comes to compensating them. Should a passenger get injured in some way, no matter who is to blame, the crew will always be inclined to treat them where they are, continue with the cruise, and be spared the perceived wrath of the owner at the loss of revenue. It's not always that bad, but ultimately, who will suffer the most are the divers who aren't given the proper treatment or shrug off symptoms because they want to keep on with the trip that they paid and flew all that way for.

"Historically, denial of symptoms and treatment delays have been the rule in sport diver DCS injuries rather than the exception," Gilliam says. "The

enlightened diver of the 21st century hopefully will be pivotal in reversing this head-in-the-sand mentality. We have to remove the stigma of blame so improperly associated with DCS reporting."

You Tell Us: Have you been injured in some way or taken ill during a trip, and what did the crew do about it? Write us your story and send it to **BenDDavison@undercurrent.org**.

-- John Bantin

Flotsam & Jetsam

Best Military Diver? Have the Russians enlisted the best breath-hold divers to work on spying missions? Marine experts suspect a white beluga whale recently seen harassing Norwegian fishing vessels has been trained by the Russians for military missions. The whale behaved strangely, actively seeking out the vessels and trying to pull straps and ropes from the sides of the boats. It was wearing a tight harness, which appeared to be for a camera or weapon. What raised suspicions even more: Discovered inside the harness, after it was removed, were the words "Equipment of St. Petersburg."

Ocean Reef's Full-Face Mask Recall. Not to be confused with its Aria snorkeling mask, Ocean Reef is voluntarily recalling around 1,000 Neptune Space integrated diving masks made between March and November 2018, because a manufacturing glitch with the regulator could restrict airflow. Check if your mask is affected by comparing its serial number with those listed at **https://oceanreefgroup.com/recall-information**. If yours is included, return it where you bought it so it can be checked and adjusted or for a free replacement or refund.

A "Living Fossil" Rises Again. Nobody knows why great white sharks normally found around South Africa's Seal Island are in decline -- it could be overfishing, habitat loss, even predatory orcas. But their decline has allowed a "living fossil" shark species to take their place. A study in *Scientific Reports* details increased sightings of the seven-gill shark, unique for retaining the seven gill slits of its prehistoric ancestors rather than the five slits in modern species. "In 18-plus years of working at Seal Island, we had never seen [them] in our surveys," Chris Fallows, the report's co-author, told *The Independent*. "Following the disappearance of white sharks in 2017, seven-gill began to show up for the first time and have been increasing in number ever since."

Renowned Cave Rescuer Just Got Rescued on a Cave Dive. Josh Bratchley, part of the international team effort to rescue the 12-boy soccer team from a Thailand cave, was himself rescued after disappearing in a Tennessee cave on April 17. Bratchley, a meteorologist by profession, had traveled with other British divers to explore Millpond Cave in Jackson County; when his buddies couldn't locate him after an extensive search, they called for additional help. He was found 24 hours later, sheltering in an air pocket 400 feet from the entrance. Bratchley refused medical attention but requested an emergency pizza.

Baby Boom. A little bit of good news about the ocean: Seven newborn right whales were spotted swimming off Florida's Atlantic coast last month, with a further three seen off the coast of Massachusetts. No newborns were seen last year. There are thought to be just 450 of this endangered species left in the world.

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

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