

undercurrent

The Private, Exclusive Guide for Serious Divers

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Sub-Tropic Adventures, St. Helena, South Atlantic

Incredible diving in the middle of nowhere

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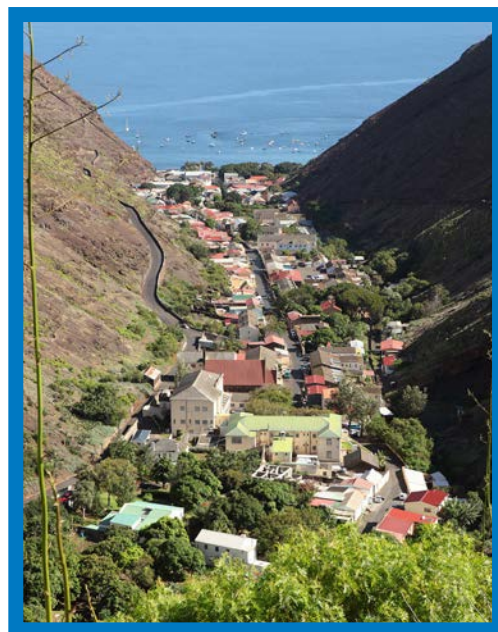
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Dear Fellow Diver,

When prompted by the dive operator, Anthony Thomas, I back-rolled off the crowded and well-worn 20-foot Rigid Inflatable Boat (RIB) and was instantly met by cold disappointment. After catching my breath from the punch of 75°F water rushing through my 2.5mm shorty, my first thought was that the visibility would be great if not for all the damn fish. "That must be what it's like inside a snow-globe," my wife/buddy later stated.

My head soon cleared and my next thought (right after "explain to me again why I didn't buy a full wet-suit for this trip?") was that fish were the reason for my lengthy journey to St. Helena, a British Overseas Territory in the South Atlantic, the most remote inhabited island on earth. Not specifically for the innumerable quarter-sized, view-blocking juvenile St. Helena butterfly-fish, one of 28 endemic fish species of the island, but rather for the whale sharks promised by the tour operator's advertisement emailed to our local dive club. My fleeting disappointment never did reappear during our week of diving St. Helena (Hell-eeen'-ah), because fish were everywhere. The cold, however, occasionally got to me (one dive, 72°F, 86 feet max for 58 minutes at Billy May's), fully testing my shorty, my Lavacore



Jamestown is set in a steep-sided valley



vest, and my resolve.

Our trek began at JFK on Thursday morning and ended Saturday afternoon, Leap Day 2020, at the nearly 3-year-old St. Helena airport. Fifteen hours to Johannesburg, an overnight, then a Saturday morning SAA AirLink flight to St. Helena; in October 2017, this once-a-week, same-day in-and-out flight replaced the five-day Royal Mail Ship journey from Capetown for travelers. Built on a cliff, the airport has been dubbed by the British press as both the most dangerous and most useless airport on the planet while costing 250 million British pounds

with the hope of bringing tourism to this island with less than 5,000 souls. After a British Airways subsidiary airline discovered the shear winds and challenging landings, it decided against establishing a permanent route, so a South Africa Airlines subsidiary (AirLink) uses an Embraer 190 to make the weekly journey from JoBerg, with a necessary stop in Namibia for refueling. You see, as St. Helena is 1200 miles from the African Coast, the flight needs to have enough fuel to perform six loops over the airport for visibility issues or attempt up to three landings before aborting and heading for an overnight to Ascension Island, 700 miles to the northwest, then making another attempt the next day. Thankfully, neither our arriving nor departing flights had any problems.

Our arrival flight had 47 passengers spread throughout the 99 seats; weight limits driven by the challenging airport winds preclude full flights. Most of the travelers were returning locals, known as "Saints", with some government workers mixed in. During my week, I counted 11 air-arrival diving tourists, as well as some yachties passing through on their way sailing around the world.

The island's coastline is mostly high cliffs interrupted by steep weathered valleys that wash into the sea. We were met at the airport by the personable Anthony M. Thomas, the owner of Sub-Tropic Adventures, and our English tour leader, Christopher Bartlett, and driven to Jamestown. Our hotel, the Mantis, is a smartly renovated hotel occupying former officers' quarters, behind St. James Church (1774), the oldest Anglican church in the Southern Hemisphere. Down an open stairway, my room was spacious, modern, and well-appointed, with a safe, coffee and tea, and WiFi. There are additional rooms in the original garrison structure, upstairs from reception and bar/restaurant. The picturesque Castle Gardens was across the street, along with many centuries-old fortifications and historic buildings, making a scenic waterfront location like a British Colonial movie set. Of course, English is the language, however unusually accented.

That evening, the dive shop staff collected our gear, and we settled in for dinner and drinks with our cohorts. In the morning, after a full-English breakfast (eggs, beans, blood pudding, sausages, etc.), we walked down to and along the harbor to the dive operation housed in an old waterfront warehouse. Anthony, born on the island, started diving at age 15, and in 2000, at age 20, he attended a

Sub-Tropic Adventures, Saint Helena

Diving (Experienced).....	★★★★★
Diving (Novice).....	★★★★★
Accommodations	★★★★
Food	★★
Services and attitude	★★★★
Money's Worth	★★★★★

★ = poor ★★★★★ = excellent

Worldwide scale

PADI instructor development course in Cape Town and soon opened SubTropic Adventures as a part-time gig; since 2010, he has operated it full-time.

I had never seen 12-liter steel "stubbies" before and had to adjust BC straps set for aluminum 80s, retool valves from DIN to yoke, and perform calculus to equate lead into kg (the briefings were in meters and bar). Now I know how European divers feel in the Caribbean! They transported our gear down the pier to the RIB, loaded it with tanks, regulators, and BCs. Entering and exiting the RIB was sometimes a tricky affair due to wet pier surfaces, tides, and chop. Three knotted ropes hung from above for assistance, and one saved me the first time I boarded as the wet deck was surprisingly slippery, even in my sand sox. Going barefoot worked better.



Overhangs and swim-thrus among the basaltic ledges

Three knotted ropes hung from above for assistance, and one saved me the first time I boarded as the wet deck was surprisingly slippery, even in my sand sox. Going barefoot worked better.

All dive sites were a short ride with the twin Suzuki 115HP 4 strokes making quick work. The boat could barely carry 10 divers, with five seated on each pontoon, facing inboard, and secured by putting both feet under straps screwed into the deck: "feet belts," I surmised. The skipper and Anthony usually stood. The stored tanks were astride wood dividers running down the middle, with masks and fins stacked on top. Tight but manageable for two morning dives.

The boat captain, a strong, tanned, and stout carbon copy of Anthony, dropped us off and picked us up in open water. Most dives were long, one-way dives, led by Anthony, covering lots of terrain, essentially drift dives with no current. We could do as we pleased, but most tagged along behind Anthony. We rarely had more than seven divers aboard, so tracking individuals was quick and easy.

Although located at 16 degrees south latitude, about that of Fiji, St. Helena does not (really) have any corals, save for a few orange cup corals in some over-

Good News about Saving America's Reefs

It may be that scientists could save coral reefs from the brink of extinction. The Florida Aquarium in Tampa has made a breakthrough that might help to save the American Great Barrier Reef, the third-largest barrier reef in the world. They've successfully reproduced ridged cactus coral in human care.

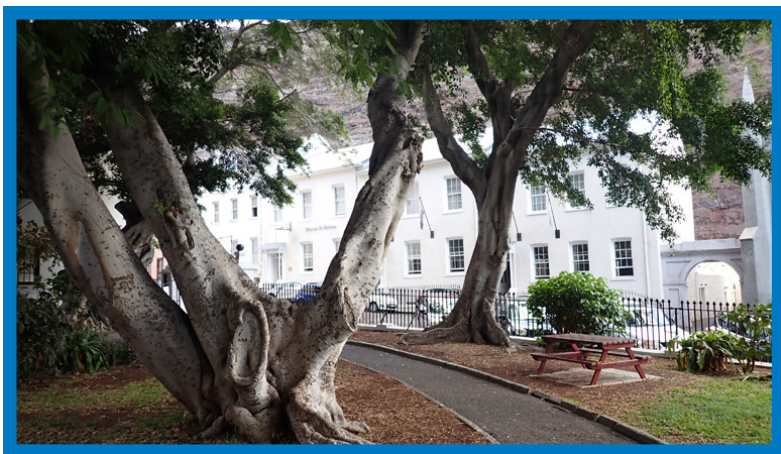
The disease that has been blighting stony corals throughout the region started in 2014. Scientists are now caring for rescued adult coral colonies to breed and reproduce them, in the hope of someday restoring the reefs in the future once the disease has gone.

Before this discovery, very little was known about how ridged cactus coral reproduce — until scientists at the aquarium successfully reproduced them while

catching the "birth" on video.

Cactus corals are a brooding coral, meaning when they reproduce, only the sperm is released into the water; the eggs are fertilized, and the larvae develop within the parent coral. When the time is right, the parent ejects the baby corals, which "swim" to the reef where they stay for the rest of their lives.

So far, over 350 of these babies have been released by the aquarium. About a year ago, scientists at the aquarium were the first to get Atlantic Ocean coral to successfully reproduce. The aquarium is also taking part in "Project Coral" with London's Horniman Museum, a program designed to spawn coral to ultimately repopulate all the world's reefs.



The Mantis hotel was a former garrison

hangs. The sea bottom is every geologic variety of weathered remnants of island volcanic activity, as St. Helena is resultant of two volcanoes last active 7 and 12 million years ago. Dive sites have huge pyroclastic boulders, while others have vast fields of tumbled stones. There are overhangs and swim-thrus, lava tubes, leaning slabs, and piled boulders. There are basaltic ledges, layered lava flows, fissured walls, layers of compressed volcanic ash, collapsed cliff faces, and every other manner of eroded volcanic

formation. Vast areas are covered in a short, varied, and thick layer of life with which I was unfamiliar, but learned too soon that the 1.5-inch-long white feathery cute-looking things have a painful and itchy sting and leave marks visible after two weeks.

While our particular reason for going – and my promise to the wife – was whale sharks, some divers make the trek to St. Helena solely for photographing the endemic fish species such as the St. Helena parrotfish; the males are a splotchy gray and deep blue, while the ladies are a deep yellow and black, both pretty but dressed in foreign parrotfish paint jobs. A gent from Germany sported a huge, ludicrous-looking, homemade, cumbersome plexiglass camera case and strobe system, which he wielded with abandon while pursuing yet another perfect picture. On more than one occasion, I, as well as other divers, were run over by his camera rig and verve. All in good photo fun and no offense taken.

The endemic fish were indeed beautiful, and some were different takes on familiar species found elsewhere. I spent the first couple of dives looking for an endemic flameback angelfish, as briefed, then several dives into our trip, I inquired what were the small and beautifully colored purple fish with bright red/orange along their tops. "Oh, that's the flameback angelfish." I was thinking Caribbean-sized angelfish, but these were a mere two inches, yet stunning. The other endemic species I spotted included the St. Helena butterflyfish, hedgehog butterflyfish, St. Helena parrotfish, St. Helena damselfish, St. Helena Gregory, red scorpionfish, St. Helena wrasse, marmalade razorfish, yellow razorfish, St. Helena pufferfish, and the St. Helena flounder.

Several dives featured a fly-by from large Chilean devil rays (mobulas), a graceful sight as they appeared out of the ether; some moved in close and hung around. I was told that the week before, the devil rays were charging through clouds of the nickel-sized St. Helena butterflyfish, huge mouths agape. I spotted octopuses on almost every dive; with few nooks-and-crannies to hide in, they were easy to follow as they would jet a distance, then suck tight to a rock and change color and texture. It was a spectacle to watch and a challenge to video. My octopus-recording persistence was rewarded with a voluminous inking I caught on video.

A caution to photographers: serious shooters would not be happy with the boat or shop setup. We lugged all our camera equipment back to the room daily for rinsing, drying, and servicing on the desk in our room.

Many of the fish species were similar to Caribbean reef dwellers (but no lionfish). The number and variety were reminiscent of "the good old days" of Caribbean diving. Trumpetfish were everywhere. Yellowfin tuna flashed by overhead

on many dives. I watched a wahoo feeding strike; an indescribably fast fish. I spotted a normally lethargic soapfish lazily attack and consume a juvenile butterflyfish on a night dive. I saw many large spotted morays, known locally as congers (and available at the grocery). Under one ledge, I saw more than 50 spiny lobsters, ranging from jumbo-shrimp size up to dinner-for-two size, but they weren't on any menu in town. Pantropical spotted dolphins often escorted us to dive sites. And, during one surface interval of tea and biscuits, I watched huge green turtles mating. St. Helena's sea life is truly remarkable.



Snorkeling with a whale sharks

The Mantis has a bar with an abbreviated menu, and the hotel was the only fair restaurant option in town, but with fantastic service, which carried throughout the entire Mantis team during our stay. The chef was gracious enough to prepare a champagne dinner for our anniversary on his night off. Lunch was usually the only meal challenge due to time constraints and restaurant operating schedules. We were forced to consume bland offerings for several lunches that were at least inexpensive. It seemed that everything was fried. Fresh salads and vegetables were rare, as the resupply boat is on a three-week schedule. Every piece of fish I had was overcooked, even fresh tuna and wahoo. It was once necessary to use a knife on a piece of fresh-caught tuna. At Anne's Place, a "local" fish cake was made of dried salted cod served with mushy fries. When on a tight schedule to have lunch before returning for an afternoon whale shark snorkel, I was told "nothing" when I asked Anne what menu item would be quick. Rosie's was very good for our one meal but doesn't open until 3 p.m. and is above town, not in town. We went back for a Tanqueray and tonic while touring one afternoon to enjoy their panorama. They offer good burgers.

Our package included two afternoons of snorkeling with whale sharks. After our morning dives, we had a mad scramble to procure edible lunch before the 1:30 departure. The afternoon RIB trip was full – yachties joined in for a trip to the east side of the island within view of the airport. The RIB abruptly slowed, and Anthony pointed and simply stated "there." I saw nothing but ocean with the island in the background and asked: "where"? Anthony quietly answered, "right there!" Not ten yards from the boat was a large rounded dorsal fin with the top of a large tail fin trailing 10 feet behind with an indigo shadow below. I was one of the first to slip off the RIB and excitedly barked "it's right [freaking] here" into my snorkel as the large spotty fish came into full view. The ocean was crystal-clear with a deep shade of bottomless blue, and the huge fish moved quickly with just a lazy tail wag. Huge remoras, one an albino, sped along to keep up. I spotted my wife on the opposite side of the large female. "Whale shark promise kept, long trip justified, I rock, all is perfect," I conveyed with a nod.

After 20 minutes, out of the abyss, an indigo apparition transformed into larger whale shark. As they circled us and each other, it was difficult for me to maintain the marine-park-mandated three-meter stand-off. Many times, I found myself directly in front of the behemoths, another marine park no-no. My frantic finning

and their lethargic loll resulted in no bumping of me, but some close passes where I could look right into their tiny blank eyes. Soon, one chased the other off and then followed into the deep soon thereafter. Our second whale shark snorkel tour yielded a swim with three whale sharks, two of which were adolescent males. Much more jostling between the boys. When queried, the proprietor told me that he had once seen the dorsal fins of over forty individuals on one tour. Sub-Tropic Adventures also does an afternoon dolphin tour to visit a resident pod of 400 to 500 pantropical spotted dolphins. I think it rather amazing that a tour operator almost guarantees to deliver wild animal encounters to tourists daily, but such are the waters of St. Helena.

And, there's just as much of interest on land. The story goes that the Portuguese came upon the island in 1502 during a return leg of the India trade sailing route. The rugged island had water and no mammals; only bugs, birds, and botanicals. They planted fruit trees and released animals to be harvested during future stopovers. The Portuguese kept the island's location a secret, the story goes, until Japanese Catholic converts hitching a ride as Vatican pilgrims leaked its existence. Without much, if any, violent changing-of-hands with the Dutch, the British eventually established a colony in 1659, second after Bermuda, and the British East India Company constructed fortifications to guard their trade route stop. The remains of many moated fortresses, gun emplacements, stone wall battlements, fortifications, batteries, garrison buildings, and barracks still populate the island's high-points, rock cliffs and potential landing beaches with some still in good condition, which evoke a great military history where little actual combat/confrontation occurred. At one point, a thousand ships per year made port at Jamestown, a bustling and booming outpost until the 1869 opening of the Suez Canal dealt a death blow to the St. Helena economy. Shipping and the strategic importance of the island instantly waned. The economy was later propped up with the planting of New Zealand flax and the resultant industry of string production, made exclusively for the British postal system. The popularity of the rubber band dealt a second death blow to the St. Helena economy in the mid- to late twentieth century.

The island attained some notoriety and importance during the early 19th century-

Diver and Instructor Fitness

Dear *Undercurrent*,

There was some important safety information in your excess weight article that I once questioned while taking the PADI Rescue course in Puget Sound back in 2007, at the age of 53. The course instructor used a divemaster who was quite obese, and considering the strenuous conditions, it occurred to me that such a diver may not have the stamina to perform a safe rescue. After the class was complete, I asked the instructor about PADI professional requirements on fitness; I was told that being fit and maintaining fitness was one for divemasters and instructors.

Assuming from his reply that PADI had some program for validating dive fitness for active professionals like PADI has for liability insurance, it wasn't until 10 years later when I took the PADI divemaster and instructor courses that I discovered that was not the case. Not only that, what constituted fitness in the PADI professional standards was a self-evaluation.

I believe that dive professional standards should be detailed, codified, documented, and verified by the associated organization regularly, just as all licensed pilots do through the FAA. That would include an annual or biannual physical exam with the physician's statement of approval to dive (preferably a dive-knowledgeable physician), a swim test similar to the professional exams, and basic rescue skills demonstration.

I also believe that recreational divers, regardless of skill level, should have to renew their certification regularly to participate in any professionally led dive excursion.

These ideas, if enacted, would go a long way toward really professionalizing scuba diving and giving the recreational diver a strong desire to continue diving regularly, while enhancing the bottom line for the industry. Most of all, I believe, doing such will greatly improve the health, fitness, safety, and confidence of every diver.

- David Steinberg (Portland, OR)

ry as Napoleon Bonaparte's final exile. His residence at Longwood and his (now empty) lavish tomb at St. Paul's are popular tourist attractions, yet to visit it, you have to pass up morning dives, since it is open only between 11 a.m. and 1 p.m. hours some weekdays. The storage building for Napoleon's personal wine is alongside one of the main roads. St. Helena's history as an island prison continued with a Zulu chief exiled in the late 19th century, and for Anglo-Boer War POWs and the Sultan of Zanzibar held there during the early 20th century.



A view of the rugged island

We did not get a chance to play the island's scruffy nine-hole golf course, but we did hike to the top of Halley's Mount, named for Edmund Halley of the comet fame who stayed on St. Helena to study the stars of the southern sky. And Charles Darwin also visited, documenting some of the endemic fish, bugs, and plants that comprise fully one-third of all the UK's endemic species.

Our travel/dive package included a full-day 4WD tour of the entire island with the affable and informative Aaron of Aaron's Adventure Tours driving, narrating, and naming every local encountered when queried. He was only stumped by the child names of third-cousins. Beyond the aforementioned Napoleon sites and the Boer campgrounds, we saw many of the island's listed Seven Wonders, and some that came up short:

1. Jacob's Ladder, built in 1832, 699 tall-riser treads climbing 900 feet up from Jamestown to the fort above.
2. Birdwatching for the wirebird, a skinny-legged plover variant endemic to St. Helena. I also spotted Madagascar fody's, red-billed tropicbirds, fairy terns, Java sparrows, and brown boobies.
3. Heart-Shaped Waterfall which would be much more of a tourist-attracting romantic and beautiful natural vista if the upstream reservoir actually allowed water to flow and fall. The waterfall is kind of lame without water falling.
4. High Knoll Fort, Sandy Beach fortifications, Jamestown fortifications, etc.
5. Bell Rock – a large stone on the side of the road that "rings" when struck with a hand-held rock. Different strike points affect the bell tone on this (assumed) geode. Pretty cool little tourist item.
6. Coffee-growing areas that produce the most expensive coffee on Earth, which you can buy online for \$56 for 4.4 oz at www.seaislandcoffee.com.
7. Jonathan the Seychelles Tortoise, the oldest living land animal at a reported 188 years young, resides at Plantation House, the Governor's Mansion. Tourist tip: he is more active and observable when the sun is shining bright.

With not much else to do, we did wander the "downtown" streets admiring the old buildings and drainage structures/bridges over The Run, the original stream/

sewer/gutter through Jamestown. We visited the Tourism Office – no help or inspiration; Sirina's Gift Shop for the requisite shot glass, postcards, and Ben, my wife's new smiling ceramic sheep figurine; the Post Office for commemorative bird stamps and whale shark postcard stamps and the St. Helena Museum at the base of Jacob's Ladder, housed in an old warehouse structure with a charming collection. We walked into the museum near the jail, and the nice woman behind the front desk welcomed us with a "let me turn the lights on for you," and then she did. The donations-only museum has a lovely and varied collection of historical, cultural, military, geological, and biological artifacts simply displayed, that included the island's first bicycle, a huge earwig, a noose from the island's last hanging in 1905, and an original indoor plumbing unit invented by a Thomas Crapper. The Standard was a serviceable saloon with a true local flavor run by Bobby "Goose" serving quality and value with a smile across the bar.

Our lone night dive was on the wreck of the SS Papanui, a triple expansion steam-engine-powered passenger/cargo vessel launched in 1898 for the New Zealand Shipping Company. Shortly after crossing the equator on her last voyage, a fire broke out in her coal bunkers. On September 11th, 1911, after burning for almost a week, the ship was run aground in James' Bay, in an attempt to save her. An earlier explosion and the subsequent raging fire doomed her, creating an interesting and easily-accessed snorkeling and night dive wreck site. The maximum depth was 40 feet, and we called it a night after 61 minutes. Several lobster species were represented, including the brightly colored red reef lobster, which looks like a red and orange crayfish only way cuter. Beyond the macro and night creature photo opportunities, was a beaten/salvaged wreck with part of the bottom strewn with champagne bottles. Some seemed intact, and the mythical occasionally found full bottle is the stuff of local lore. I didn't pick up a champagne bottle or an ancient-looking rum (?) bottle found on another dive site, near some cannons, as the local historical/maritime rules were unknown to me and better left untested. We also visited the Frontier wreck for 42 minutes at 88 feet max, a nice but largely nondescript steel shipwreck lying on its side and containing lots of fish and critters.

All dives were good or better, never with current, poor visibility, or any other detractor. Water ranged from 75 to 77°F; average dive depth was 81 feet. Air temperature ranged from high 70s in the day to low 70s at night with high humidity.

St. Helena is not an easy trip for most divers and definitely not for Americans, but the great diving is fairly easy and worth the effort. (A caution: There is no hyperbaric chamber, but one is supposedly in the UK awaiting shipment). For now, a bends hit would require a MedEvac flight to Capetown, South Africa, hence there is a travel insurance requirement.

Visiting St. Helena involves an overnight stay in Johannesburg coming and going. While jokingly expecting District 9 conditions (you haven't seen the film?), our JoBurg hotel, with an "airlock" sliding-gate, double and electrified perimeter fence system and barred windows, reminded me of my time working on Rikers Island, an NYC jail. We only got to see a small piece of Joburg suburbs, and for many divers traveling this far, it would be



The dive center in a waterfront warehouse

sensible to add a safari.

A week before I traveled, I learned of the government requirement that proof of medical-evacuation insurance must be produced at immigration. The tour operator recommended travel insurance, as standard, but never mentioned "required" to enter. (The government tourism website fails to note this important tidbit). I purchased a trip-specific travel plan with medical evacuation for our dive vacation from DAN for \$493.

Our tour group, traveling at the very beginning of the pandemic, included three middle-aged couples, one each from England, Italy, and USA.

On Tuesday, St. Helena police interrogated the Italian couple, a retired OB/GYN and his wife, at our hotel. The authorities, evidently, were rather put off that this lovely couple had failed to identify themselves at the airport on Saturday as being from one of the countries suffering early from the virus spread. Their brusque manner toward the passengers seemed uncalled-for. The tour operator, hotel, and the airline had all passport information on Saturday, yet the authorities decide on Tuesday to harass precious and rare tourists. Saints need to embrace tourists if tourism is to be the economy's savior.

As for baggage, I only learned upon arrival that divers are allowed an extra 15 kg. I had spent several nights planning, weighing and repacking, as my normal travel scuba gear bag is 44 pounds. I stripped out every auxiliary, back-up, secondary, emergency and redundant item, packed clothes like a destitute hiker and put my regulator/computer and camera gear in my carry-on, only to find out I was under the limit by 15 kg. To head home, I packed my check-in bag with all the gear and wet/soiled clothing. The gate agent informed me that I was over the weight limit, and the cost was 10 British pounds per kilo. The tour operator leaped into the ensuing fray and convinced the agent and her boss of their airlines' scuba equipment weight allowance. I was required to show the gear, but as our bags had been checked through, I had to be escorted by the gate agent into the baggage handling area, interact with the baggage handlers, identify and retrieve my bags, open the bags, and prove they contained scuba gear. It took but a couple of minutes and was accomplished with smiles, laughs, and waves. Checking our bags for the JNB to JFK flight, the agent informed me my bag was overweight to the tune of US\$110. I tried to inform him of his airline's SCUBA equipment policy without success. Under his gaze, I moved my regulator/computer bag from my check-in to my carry-on and saved the airplane load 6 pounds in the transfer. I was happy to be on my way and have South Africa Airlines and their extremely poor customer service in my rear view.

- R.A.M.

PS from Undercurrent: In our last email to readers, we said we had a story coming up on one of the more remote dive operators on this planet. Subscriber Christopher Bartlett wrote, asking if it would be St. Helena? Turns out he runs Indigo Safaris, didn't know that he had our writer on one of his trips, and was



St Helena butterflyfish were everywhere

kind enough to provide some of his photographs of St. Helena, above and below, which you can access by clicking [here](#).

Author's bio: *"I was exposed to diving at a young age by my father and Jacques Cousteau on TV and got certified before university. Aside from dry-suit certification in Silfra, Iceland, I avoid cold-water diving, preferring the Caribbean, Micronesia, Hawaii, and the Philippines, always accompanied by my lovely wife/buddy. We recently had the honor to host a family return dive trip to Bonaire — 15 family members with 13 divers minus the impetus. Thanks for the diving thing, Dad, I miss you."*



Diver's Compass: We paid \$1,517 each to get to Johannesburg, and \$1,052 for the flight from JNB to HLE . . . It was \$2,074 each for seven Mantis nights, seven breakfasts, four dinners, a full-day land tour, five days of two-tank dives plus two nights at the Safari Club in JoBurg, with two breakfasts and two dinners . . . Rental equipment was available, but most dive tourists brought their own gear. Mask, fins, and snorkels were available for whale shark snorkelers. Repair facilities were minimal, at best . . . The currency is the St. Helena pound, its value fixed to the British pound . . . My tour company, Indigo Safaris, run by Christopher Bartlett, is located in London. www.indigosafaris.com . . . Sub-Tropic Adventures, www.stadventures.com.

Tough Times in the Dive Travel Industry

resort and boat owners to tell us how they are managing

Even if we manage personally to dodge COVID-19, few of us will escape the financial ramifications of the coronavirus crisis. With more than a hundred countries enforcing travel restrictions, it's not just losing of money we might have laid out on trips: Many people have lost their livelihoods.

With cruise liners docked for months ahead, countries locked down, and far fewer flights, the travel industry has been particularly hit — and the dive travel industry even more so. Why? Well, when you consider that their income has disappeared, it's apparent that, unlike big corporations, many dive businesses might not be able to weather this storm.

After we spoke with Peter Hughes, a previous leader among liveaboard operators, who expressed the thought that he was happy to get out of the travel industry when he did, *Undercurrent* wrote to some of the dive centers and liveaboard operators in the remoter parts of the world to ask how they were coping. (Peter reckons his old Dancer Fleet partner who now operates *MY Galapagos Sky* has enough resources to survive and has his fingers crossed for him.)

In La Paz, Baja California, Luke Inman (*Cortez Expeditions*) told us that his few staff remain and receive their salaries, and meanwhile, he will offer

discounted eLearning courses, workshops, and online conferences. James Curtiss (*The Cortez Club*) was more specific, saying, "As you can imagine, this is not only the worst ever scenario for a traveling scuba diver, but even a worse one for an owner of a dive resort where no one is allowed to travel, nor is there even an indication of when travel will reopen or when travel bans are to be lifted.

"It is my opinion that with being so close to the U.S., this will largely depend on Americans, and I am hoping and optimistic that this will change sometime in mid- to late May 2020. Some centers will suffer more than most and be forced to close their doors and may find ongoing costs too much of a burden to absorb and have no alternative but to declare bankruptcy.

"The sad and unfortunate outcome is that so much fear has been instilled into each and every one of us that we may never see international travel go back to what it was once before by most nations."

Alison Dennis runs a small business out of her island Cozumel home (*Scuba with Alison*) with two full-time employees and herself. With one boat, two pickups, and an SUV, she owns enough tanks and rental gear to suit up eight divers, the maxi-

mum load on her fast boat. She has no debt, she told *Undercurrent*, but “I do have a financial obligation to pay salaries and the mandatory government medical insurance for my two employees. They also rely on tips to feed their families and dependents.”

It’s not the case with some other dive centers on the island, she says. “I think that when this is over, some dive operators will throw in the towel and find something else to do. This may be a great opportunity for someone who wants to buy a small

We may never see international travel go back to what it was once before

dive operation in the paradise of their choice when this is all over. Their workers are just out of luck. A lot of lower-paid employees are trying to sell belongings on Facebook to feed their families.”

In Indonesia, times are just as hard. Mike Veitch, who, with a partner, runs *Underwater Tribe* in Bali, wrote, “As you can imagine, we have a lot of fixed overhead such as staff salaries every month, and without tourists, it makes it difficult. We are still paying our staff full salary and medical coverage, so we are happy to support their families at this time. Of course, who knows how long this will go on? As you can imagine, we have run only our daily Bali trips, but also group trips throughout Indonesia on liveaboards and resorts, and it’s very difficult to predict if those will happen or not.

“We are keeping ourselves and our staff busy with social media. We have trained our dive guides to help out with our Instagram account and interact with fellow divers and photographers out there. As guides, they know marine life very well and are happy to spend the time doing so. This helps our social media stats, which is, of course, important. We are also taking the time to create more work online. We are offering ‘One to One’ underwater photography coaching sessions via the net.

“I know that a few dive centers in Bali have closed their doors temporarily. I don’t think any have gone out of business. However, many have laid off staff or put them on half time/half pay. With Indonesia being closed to tourists and a local ban on diving, there is no business. Everyone throughout Indonesia is highly affected by the global situation. Once we hit mid-May is when things will start to really hit home and re-evaluate what is in store for the rest of this year, or even next.”

Palau had no cases of COVID-19 at the time of

writing, but that was because the government acted in a timely manner to stop all incoming flights from anywhere. Tova Harel, who runs *Fish and Fins* and the *Ocean Hunter* liveaboards with her husband Navot, told us they do not have any business at all and are just waiting for it to be over.

Fiji, too, seems to be getting off lightly, with few infections thanks to a government that acted swiftly and decisively. Mike Neuman, the owner of *Bega Adventure Divers*, wrote to *Undercurrent*, “We are managing. The government has put the country on lockdown, so we’re not even getting any domestic business — but hey, not complaining, as the government is doing an admirable job and we feel quite safe. The big question, of course, is, ‘How can we reopen our borders to tourists and potentially expose our population to the virus? Is it only once there are a vaccine and/or cure and/or immunity IDs?’

“It’ll all likely happen gradually and at much lower volumes, and with that in mind, we will shortly be forced to let some staff go so that we can continue to support the others with a bit of money now and a full job later. So far, the government is assisting the redundant staff of tourism operators, which means now the situation is not desperate — but that is not an open-ended policy, and with tourism being 30 percent of GDP, we’re most likely looking at some very tough times ahead. The only good news is that commercial fishing volumes must be down too.”

Stalwarts of Diving Tourism are Affected

The *Cayman Compass* reports that 80 percent of Cayman Islands Tourism Association members’ businesses are closed. That doesn’t augur well for dive centers. We wrote to several but got no responses so far. Looking to exist on the domestic economy, restaurants are getting a financial shock. As one owner said, “A \$55 steak cannot be \$55 anymore.” Prices must become more realistic of future visitors’ reduced spending power.

One of the longest established dive businesses in Grand Cayman, *Don Foster’s* dive shop has been forced to close, and they will sell their six boats. The CDC’s extended ban on cruise ship travel was “the final nail in the coffin,” owner Mervyn Cumber told the *Cayman Compass*. He said many of the smaller operators were also struggling to survive, and he expects more to go out of business in the coming weeks.

Grenada, home of one of the Caribbean’s best wreck dive, the *Bianca C.*, is under curfew with everyone confined to homes. All the ports are

closed, flights have stopped, businesses are closed, and no diving is allowed. Peter and Gerlinde Seupel, who run *Aquanauts Grenada*, say they are sitting at home, planting their garden and watching

The big question, of course, is, “How can we reopen our borders to tourists and potentially expose our population to the virus? Is it only once there are a vaccine and/or cure and/or immunity IDs?”

their veggies grow. The usual online work carries on, rebooking, cancellations, and refunds. There are 21 known cases on the island, and they don’t know when Grenada will open for business.

Trapped in Germany by the cancellation of flights, Rolf and Petra Schmidt, owners of *Sinai Divers* on Egypt’s Red Sea, said they had never been away from their business so long in 38 years. Meanwhile, a task group of employees who live in Egypt are getting all the dive center’s equipment cleaned and maintained and the garden watered, ready for them to return when flights are reinstated.

Imagine Being Isolated Somewhere Really Remote

There’s nowhere more remote than New Britain in the Bismarck archipelago of Papua New Guinea, and Max Benjamin of the *Walindi Plantation Resort*, *MV FeBrina* and *MV Oceana*, wrote to *Undercurrent* to say he was pleased with the article about COVID-19 and the dive travel industry in the April edition.

He told us, “We are in hibernation — for how long? We have no idea. While we hunker down and implement austerity measures, we continue to take future bookings, but when the future will start is difficult to predict. With all of our revenue gone for the foreseeable future, we are in a very difficult position of not being able to afford to keep our staff (in excess of 110) employed, and previous loyal guests have donated via GoFundMe page to help with bare necessities during this extremely testing time. We have been overwhelmed by their generosity.”

Another Max, Max Ammer, was one of the first to set up in business in Raja Ampat, one of the more remote dive areas in the world. He developed the *Kri Eco Resort*, followed shortly after by *Sorido Bay*, on Kri Island. A resourceful man who originally built his resorts using only local materials and labor, he survived the long haul of business from the days when nobody had heard of the area nor had any desire to go there. He recently wrote in

Into the Planet — My Life as a Cave Diver

When meeting Canadian Jill Heinerth, one is struck by what a thoroughly decent person she is — the sort of person anyone would be pleased to have as a sister. She’s so wholesome. In times of lockdown, I bet she makes great cookies.

For those who know her outside of the world of diving, it must come as something of a surprise to discover what activities she partakes in — because she is one of the world’s leading cave divers.

And unlike some cave divers, who often tend to be introverted, she likes to share her life by traveling the globe, making presentations, showing her underwater photos, and revealing what she gets up to when she’s in her favorite environment.

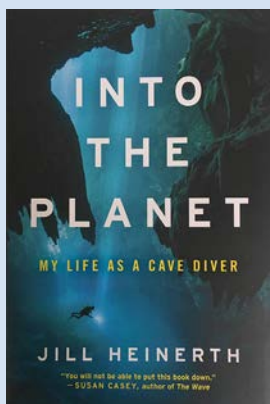
More people have died exploring underwater caves than climbing Mount Everest. But that doesn’t

stop her. One of few women in what otherwise might be described as a man’s preserve, she’s explored the underground secrets of Wakulla Springs State Park, conduits within volcanoes, and cracks in the world’s largest icebergs. Her autobiographical book, *Into the Planet — My Life as a Cave Diver*, tells all, sometimes in such detail that it’s hair-raising.

Referring to the relationship with her husband, she wrote, “Regardless of the assurances I give him when he sees one after another of my colleagues die, it makes my career harder to defend.”

Read the book, but don’t be tempted to emulate her achievements. It can only end in tears. *Into the Planet — My Life as a Cave Diver*, published hardbound by Harper Collins, can be purchased by clicking [here](#). It’s \$29.99, and for every book sold, *Undercurrent* gets a wee share.

— John Bantin



the Bird's Head Seascape blog: "Right now we are focusing on some of the most urgent maintenance issues. We expect it to be six months before we have any business to speak of." His staff is building new catamarans as dive tenders. They don't have to be particularly fast, as Kri is at the epicenter of the good diving in the area, with the confluence of several currents, so the best iconic dive sites are

The doomsday scenario is that COVID-19 proves to be the death of the international tourist industry

nearby. One of the three new boats will be electrically driven.

The Indonesian Liveboards Association issued a letter undersigned by the owners of more than 40 vessels stating they could not afford to refund customers nor allow rescheduling without the possibility of additional fees. In it they said, "We expect our boats will be sitting empty for at least six months (or more), and we cannot afford that 40 percent (or more) of our trips in 2021 will be filled with rescheduled guests who do not generate income in 2021.

"Our fixed costs for salaries, marketing, boat maintenance, yearly mandatory dry docking, fuel, and insurance continue to accrue, creating huge losses expected by end of this year. All of us have dedicated and loyal crew on our ships. They and their families depend on us, since unemployment benefits do not exist in Indonesia. Therefore, we continue to pay their salaries or otherwise support them financially. If bookings do not resume in the summer or second half of 2020, many of us will be forced to shut down our businesses."

Elaine and Simon Wallace, the British owners of the *Oasis Dive Resort & Spa* at Bunaken, North Sulawesi, told *Undercurrent* they left on March 20 on the last flight from Manado. "We left behind a small luxury resort and around 80 full-time team members, all of whom were undoubtedly concerned about their continuing employment. With no revenue coming into the business, our survival meant that difficult decisions about staffing and salaries needed to be made. We proposed that all team members would work fifteen days per month, for which they would be paid 50 percent of their salaries so that we'll be ready to welcome international tourists when they return.

"In the end, we ducked/fudged/avoided the long-term thinking in favour of a medium-term solution: we would maintain the status quo described above until the end of September, by which time we'd hope to have a much clearer idea of if, or when, the dive travel industry would be getting back to some semblance of normal. We gave the staff the reassurance of continued employment until 30 September.

"The doomsday scenario is that COVID-19 proves to be the death of the international tourist industry. If that's so, and if there's little hope of any likely resurgence, then 2020 might be our last year of operation. But we don't believe it will play out this way: we think that travel and tourism may look very different in the future compared with what we've been used to."

Meanwhile, the Indonesian government has banned both international and domestic flights through to June.

Some Dive Operations Will Not Survive

In the Mediterranean, Pete Bullen, a Brit who runs *Gozo & Malta Photo Safaris*, wrote, "A lot of people in my Facebook feed are complaining about lockdowns. They moan about civil liberties being infringed; they suggest that people die every day anyway. Let's all get a grip, stop being selfish, stop kidding ourselves that this is just some bad flu. Let's try and get this thing properly under control by doing what is clearly working where the strongest measures have been put in place. There are 56 licensed dive centers on the islands of Gozo and Malta. In the next few months, there will be some very cheap dive gear being sold off as they go broke."

Cline's Diving Industry Special COVID-19 Survey reveals 24 percent of businesses surveyed said they would suffer significant impact on their businesses with zero or near-zero income within the next two months, while 23 percent said the same for the next three months. Five percent expected to go out of business. Seventy-two percent of businesses surveyed were based in the U.S.A.

Many *Undercurrent* subscribers who can afford to, have written to say they are happy to write off the deposits they have paid as a way of supporting their favorite dive businesses abroad, on the assumption that this money will go toward supporting the staff of those businesses. After all, it's the people that we remember when we visit.

— John Bantin

Plenty of Tales of Woe Among Traveling Divers

Paid for a trip? Don't set your heart on a refund

After *Undercurrent* asked subscribers for stories of how their travel arrangements were affected by the pandemic, we were inundated with tales of woe. In general, people are being offered vouchers for future trips to the value of the money they have paid, but in many cases, future prices will increase, meaning a shortfall.

Airlines, strapped for cash, are also reluctant to make straight refunds. *Lufthansa*, the state airline of Germany, is technically insolvent, and others are close behind. IAG (owners of *British Airways* and *Iberia*), one of the better-placed financially, states they have cash reserves for only a few months. Singapore Airlines is mothballing some of its A380s in the Australian desert, obviously not expecting recovery of the long-haul travel market soon. How this bodes for smaller airlines that fly tourists around the Caribbean or Indonesia is unknown, but it can't be good news. Should airlines even survive the travel bans, social distancing rules may reduce passenger payloads by at least 50 percent with a resultant increase in fares.

So, stuck between a rock and a hard place, it looks like any money you have paid upfront will be worth less when the time comes to reinstate your travel plans — sometimes even if you have a voucher.

Dive Operators

For the most part, dive operators are working hard to balance the economics of good customer relations with staying in business, but some divers are not happy, for good reason.

Mary Ann Heck (Gainesville, FL) booked a trip through Caradonna Adventures on *Caribbean Explorer II* out of St. Maarten, which was canceled, and says "Caradonna has not been successful in

getting a refund from Explorer Ventures. The Prime Minister of St Maarten closed the airport and shut down the island on March 17, 2020. Explorer Ventures demanded final payment on Mar 20 when they knew the dive trip would not happen." While we understand the difficulty opera-

tors would have refunding everyone's money – and that many divers are happy to reschedule – some divers are seriously affected. Heck, for example, has had her working hours cut by a third, so she'd like the cash back. And, she is still waiting for Caradonna to get her a refund of her Delta air ticket (purchased through Caradonna), noting that her traveling companions, who bought their tickets directly from Delta, have received their refunds. We emailed Clay McCardell, owner of Explorer Adventures, to talk about this and other problems reported by readers, but he did not get back to us.

Ellen Smith (Edina, MN) was booked on the *Tiburón Explorer* in the Galapagos, operated by *Explorer Ventures*, but was advised to wait before rescheduling, since it would carry a 15 percent surcharge and 2021 prices were likely to be more expensive.

Rescheduling Isn't Always Feasible

Just because months back an operator set higher prices for 2021 and 2022, it doesn't mean they must maintain those prices; in fact, claiming so at this stage seems premature at best and certainly callous. The economic downturn will drive down prices, it will drive down travel, it will increase competition to fill spaces, and will surely mean less business. Citing higher prices for trips a year to two from now is unnecessary and will not ingratiate operators with their customers.

For example, Bruce Leibowitz (Newark, DE) had fully paid back-to-back trips to Socorro on *MY Rocio*

Airline Ticket Refunds; It's the Law!

The U.S. Department of Transportation has issued an enforcement notice regarding refunds by carriers given the unprecedented impact of the coronavirus on air travel.

"The Department is receiving an increasing number of complaints and inquiries from ticketed passengers, including many with non-refundable tickets, who describe having been denied refunds for flights that were canceled or significantly delayed . . . the passengers stated that the carrier informed them that they would receive vouchers or credits for future travel. Carriers have a longstanding obligation to provide a prompt refund to a ticketed passenger when the carrier cancels the passenger's flight or makes a significant change in the flight schedule and the passenger chooses not to accept the alternative offered by the carrier." www.transportation.gov/airconsumer

del Mar canceled. Because rescheduling in 2021 clashed with another trip, he rebooked for 2022 and says he's being levied an additional \$200 even though they'll have \$8000 of his money interest-free for two years.

Blanket policies refusing refunds and only offering rescheduling puts a serious burden on some people, such as *Undercurrent* subscriber Daniel Niborski, who lives in Bariloche, Argentina, Patagonia, in fact. After his and Nery Tomba's liveaboard trip with *Emperor Divers* in the Red Sea, booked through *Divers Around Spain*, was canceled, they were offered a voucher to be used within 11 months, but no refund. He says it will be very difficult for the two, living on the other side of the world, to organize a second trip to the Middle East, and they may have to suffer a significant loss.

Josh Hall (CO) was treated even worse by live-aboard *MV Dolphin*, departing from Palawan in the Philippines. He wrote, "Despite multiple appeals to PADI Travel and to the dive operator directly to be reasonable about working with me because of canceled flights with airlines by the airline and level 4 'no travel' State Department warnings — both dive operator and PADI Travel said "tough." They said the Philippines is going to open May 1, and they are going, and if I don't make it — it's my tough luck." *Undercurrent* tried to contact PADI Travel/Diviac on behalf of Hall, and though we made contact, they did not follow through on our questions; in fact, on May 1, the PADI travel website listed many liveaboard trips departing in May, but *The Dolphin* showed no trips until October. Josh has since contacted *Undercurrent* to confirm, "The dive boat operator has stated that even if he does not go or is prevented from going, he will keep everyone's money."

Even without the huge travel problems stemming from the coronavirus, online travel sites have a poor reputation for problem-solving. Val Laval (Toronto), who booked directly with the *MV Infiniti*, got a refund in 24 hours.

It was good news for Jim Squires (Saint Simons Island, GA), who had booked a trip to Cozumel. When he pulled the plug on it, *Roatan Charters* got him a refund of hotel less ten percent booking fee, a full refund from *Dive with Martin*, and a refunded flight cost from *United Airlines*. He was philosophical when he wrote, "For me, it has been an inconvenience and disappointment, but that is such small potatoes when I think about how the people in dive and travel industry are trying to cope or those individuals who become ill just try to survive."

Shark-Free Fish 'n Chips

Australians inherited the British love of fish and chips. Little do they know that their battered fish, euphemistically called "flake," is shark and that its heavy-metals content, at often 14 times recommended levels, is such that it's often not fit for human consumption. The double tragedy is that it is supplied by a shark-fishing fleet operating off the coast of South Africa on a devastatingly intense basis that has overfished smoothhound and soupfin shark.

Each demersal shark longlining vessel regularly catches up to a thousand sharks per trip and by way of bycatch also kills CITES-protected species such as smooth hammerhead and great white sharks. South Africa's shark population is collapsing at an alarming rate as a consequence.

You can directly tweet at the South African Minister of Environment by visiting www.sharkfreechips.com, asking her to close down this fishery, which is destroying South Africa's tourism economy and poisoning unwary Australians.

Insurance Woes

If your trip gets canceled, take a shot at getting your trip insurance refunded. It worked for Adrian Snyder (Greenville, NC), whose trip with a group from Chicago to *Captain Don's Habitat*, Bonaire, got rescheduled for 2021, and DAN refunded their unused travel insurance.

When Jack Dempsey (San Diego, CA) heard his trip on the *MY Kona Aggressor* was canceled, he called them right away and got rebooked for the end of October, and DAN Travel Insurance changed the dates of travel. Let's hope everything is back to normal by then.

And, we must mention again, "Cancel for Any Reason" insurance carriers have found plenty of reason not to honor their policies and have proved to most people who have tried to collect to be a step short of fraud given the name of the policy. John Kirkiner (Skillman, NJ) was told that the coronavirus was a "Force Majeure" and his Cancel-for-Any-Reason CSA Travel Protection Policy did not cover him. Says John, "What a scam." Yes, indeed.

Travel Agents

Travel agents work on their clients' behalf and had put a lot of time into putting together trips before coronavirus canceled those trips; they earned their money, and most folks think they should be

able to keep it. Wayne Joseph (San Mateo, CA) and his wife were booked through *Underexposure* for a trip to Bonaire that was canceled; *Underexposure* refunded \$800, keeping \$200 of the \$1000 they had paid. He wrote, “At first I was a bit perturbed not receiving the full refund, but after reading your article in the most recent *Undercurrent*, I changed my mind and felt it was fair to all concerned. Everyone is losing out on this sad turn of events.”

There Can Be a Lot of Money at Stake

Group bookings require big money. Susan Welch (Stuart, FL) had booked her group through *Reef.org* for a trip on an *Explorer Ventures* boat in Raja Ampat that was canceled. She wrote to *Undercurrent*, “It is a very expensive trip. Because they were fully booked next year, we were offered a trip in two years, but they want an extra \$350, because the trip is one day longer, which we’d have to pay a year before departure. I am not comfortable with them holding our money for two years, then requesting more, one year out. They want us to continue to invest in them with no consideration for the \$100,000 we have already given them. Who knows if they will

even be in business in two years?”

She added, “In a situation like this pandemic, the closer you are to a departure, the more expenses the boat will incur. I don’t think we should expect to be reimbursed for food that was purchased, for example, or expenses directly related to the trip. On the other hand, why should we pay the national park fee?”

Mike Lever of *Nautilus Adventures* summed up the unprecedented situation in which the dive travel industry finds itself, when he wrote to *Undercurrent*, “I think the thing is that virtually everybody in the dive industry are good people. Everyone is stressed, fearful, outside our previous experiences, and often making mistakes. We’re worried about staff, worried about going bankrupt. It’s super easy to make a mistake in handling issues and easy to make a mistake and come up with a misguided, wrong policy.”

Yes, it’s indeed tough for each and every one of us. Stay well, our fellow divers.

– Ben Davison

Can You Trust Your Dive Guide?

are they as careful and responsible as they should be?

When we review reports from our dedicated readers — and when we think about our own trips — it’s clear that dive guides are not always as careful and responsible for their charges as they should be. So, we’re working on a piece about that and want to hear your own stories.

These days, as divers can get certified by watching videos and taking a couple of quick dips in the ocean, there is a preponderance of folks who like to say they have gone diving just as they might say they’ve gone skiing or white-water rafting. Mark up another activity on the life-chart. However, when rafting, you are in the same boat as your guide, who is in control. Scuba diving isn’t like that — you really are on your own.

Many of our readers are highly experienced, having made hundreds, if not thousands of dives in all sorts of conditions. Others are less advanced. While you may be in the water as part of an organized group or supervised by a group leader or dive guide, unless you have had a widespread experience, you may need looking after on some dives. But, if you place your trust in the guide, who is also looking after a bunch of other divers of varying

abilities, and trust that he or she is indeed looking after everyone and making all the right decisions, you may be fooling yourself.

For starters, not all guides have had equal training; some are instructors, some are divemasters, and in third world countries some might not even be rescue divers. They might know how to find a blue ring octopus at 60 feet for you, but if it bit you, they wouldn’t have the slightest idea what to do next.

Back in the day when diving was considered dangerous (and hugging strangers was safe), dive guides accepted their responsibility seriously, and there are still those who travel that road. However, many younger guides have been brought up in the time of ‘scuba-is-fun’ and ‘zero-to-hero’ instructor training, and may be less conscious of their responsibility for the safety of others. Even when I took my PADI Instructor course in 1992 — at the age of 45 — there were teenagers qualifying right alongside me. Clearly, some were not sufficiently responsible at that age to look after others in the water. In fact, when once I voiced that opinion, one took issue with me — although years later he conceded I was right.

So, have you been in the water with a dive guide who seemed oblivious to individual members in his group? How often did your guide appear to be pursuing his own photography rather than paying attention to the well-being of his or her charges? Would you trust these people to be there for you if

We have no choice but to put our trust in a dive guide

you got in trouble? Do you know whether the guide you're trusting has a serious diving certification? Have you ever asked to see it?

Like many, I've swum around the engine room deep in the wreck of the *Kansho Maru* in Truk Lagoon, led by a local guide in whom I had complete trust. "Two of us asked an *Odyssey* dive guide to give us a tour deep inside the engine room. I did point out before we left that I was almost twice his height, so might be unable to get through small apertures. He laughed!" (See my article at <https://tinyurl.com/ybaq32tf>)

I've also been lost inside the wreck of the SS *Umbria* in Port Sudan because the dive guide, not a local, was surprisingly unfamiliar with it. That was scary. (<https://tinyurl.com/ybmyeuc6>)

These days, I see three distinct groups of dive

guides: those well-trained and knowledgeable of their dive sites, young local people who appear to be comfortable in the water but might not have knowledge of the finer points of diving physics (the PADI Divemaster certification is very basic and relates mainly to aiding a certified instructor conducting training courses), and divers who have turned up in some distant exotic shore and talked their way into a job with a dive operation. These folks are there to have fun. They are the ones who are less attentive, and it's all OK while nothing untoward happens.

Youth and Experience

There will always be a difference between youth and experience. There is also a distinction in the kind of places they work and the professionalism of the shop. High-end resorts usually have higher standards with better-trained dive guides than backpacker resorts.

During the last few years *Undercurrent* has reported sad incidents that led to tragic results; for example, where a diver left the group to go deeper than he should or one who encountered problems and was left to make her own way back to the surface, when one might reasonably ask, where was the dive guide? There have even been cases where an instructor has taken a beginner into the water in clearly inappropriate conditions. We trust the dive

Jack Randall, the Original Fish ID Book Author, Passes

The world of ichthyology is mourning the passing of John Ernest "Jack" Randall. When it comes to fish identification, in 1983 he wrote the book — *Caribbean Reef Fishes* — on which all others are based. *Shore Fishes of Hawaii* was published in 1996. All his books carried his endless photographs to help ID the fish.

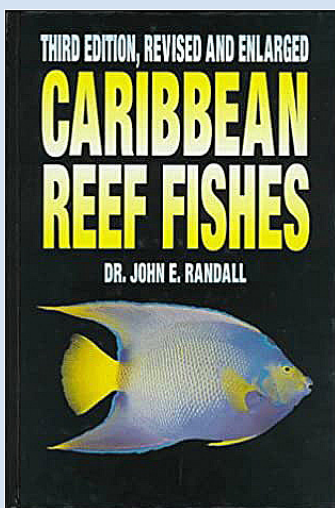
In his time, he described more than 600 species of marine life, authored 11 books and over 670 scientific papers, as well as many popular articles in magazines. He spent most of his career working in Hawaii and died in April 2020 at the grand old age of 95.

Doug Perrine sums up a lot of our experiences in fleeting encounters with the great man when he writes, "When I met Jack he was

already at the top of Mt. Olympus of the world of ichthyology, and I was just a schmuck with a camera looking for some help identifying the fish in my photos. He always took time to look at my photos [and] give them his best shot at identification. There are few people who rise to such a level of accomplishment and high regard in their field, and fewer yet who do so while always exhibiting generosity and good humor to others."

If you knew him and would like to write a tribute, you can join a hundred others on a website set up for the purpose by Richard Pyle. He writes, "Don't be shy! Helen and the rest of the Randall 'Ohana' will greatly appreciate anything you are willing to share."

<https://tinyurl.com/ycsdunly>



guide and alas, sometimes this trust can be misplaced.

None of us is as competent as we would like to think we are. Most amateur divers, however keen, log only limited hours in the water during any one year. We all get out of practice. Good dive guides are well-practiced because they are in the water every day, and, like good waiters in restaurants, attentive to every need of the client but inconspicuous when not required. Most of all, they should be

absolutely trustworthy when push comes to shove and things go wrong. The inhospitable environment that is underwater is no place to find yourself left to your own devices when problems arise.

Have you experienced a less-than-responsible dive guide recently? Write and tell us about it. Write to BenDDavison@undercurrent.org — not forgetting to mention your town and state.

— John Bantin

Have You Ever Surfaced and Been Lost?

sensible divers take steps to avoid it

The hiatus in our diving activities gives us time to pause for thought and consider how we can make our activities safer once we pick up where we left off.

“I’m just glad I’m alive,” explained Mike Ozburn, a Pensacola diver, after he drifted in the Gulf of Mexico for eight hours before being rescued by a Niuhi Dive Charters boat last June. “I never intended anything like this to ever happen in my life” (See the story in *Undercurrent* July 2019). It’s an experience that would shake up any diver, and it’s not so uncommon.

Like Ozburn, we divers spend time underwater happy in the assumption that our boat will be there as surface support when we need it. If we didn’t, we couldn’t enjoy the dive. However, things don’t always go according to plans. Mechanical problems, sea conditions, and the needs of other divers might mean you are not picked up quickly, and surface currents may move you a long way from where you are expected to surface. In planning, preparation for a worst-case scenario is the answer.

Like Mike Ozburn, Wilt Nelson (Leesburg, FL) had a similar experience. He recently wrote to *Undercurrent* about drifting away with a group in the North Coral Sea before being found because one of the divers had a military-type signal mirror in his BC. “We were adrift two to three hours, which isn’t an eon, but some in our group were getting panicked and worried about sharks, so it was one big ordeal too many.”

The most frequent diving disaster we write about in *Undercurrent* seems to be divers lost at the surface. Imagine leading a group of divers around a remote reef in the Suarokin archipelago of the Sudan’s Red Sea for an hour, only to surface to

discover no pick-up boat and no liveaboard in sight — only an empty horizon. It happened to *Undercurrent*’s Senior Editor, John Bantin, when he was a dive guide.

He took his charges around to the leeside of the reef so that they were out of the wind and current and could float there without danger of drifting off into the wide blue yonder. They didn’t know what had happened to their boat, and their only option was to wait.

Three hours later, the liveaboard returned. Bantin had just about run out of funny stories to distract the six drifting Italian businessmen who had embarked on this diving holiday of a lifetime. As it turned out, the liveaboard had developed a steering problem, and the diver’s pick-up boat was needed to nudge it away from the dangerous reefs. The divers were abandoned to expediency. The boat crew knew where they were, and provided they stayed there, they crew knew they would find them. And they did.

Is Someone Keeping Watch?

Bantin’s friend, Tom Burton, had been less lucky when he and his buddy surfaced on the wrong side of their boat with the crew inattentive and looking the wrong way. The divers were in the strong tidal flow of the English Channel, and their boat soon disappeared over the horizon as they drifted away. Without a surface marker buoy, their heads were as invisible as floating coconuts in the waves. After spending the night at sea, they were miraculously spotted by a lifeboat crew the next day.

Undercurrent wrote about Jacob Childs in August 2016, who, while diving off the Great Barrier Reef, surfaced soon after entering the water and was

not spotted by his boat crew. The current pulled him away from the boat, so he inflated his buoy, but nobody thought to look for him because it was early in the dive and the crew simply presumed he was down with the other divers. He endured a six-hour drift before he was found.

Imagine no pick-up boat and no liveaboard in sight — only an empty horizon.

In 2004, a whole boatload of divers was swept past their liveaboard at the Brother Islands in the Red Sea. They had covered 45 miles before they were picked up more than 13 hours later, found by their shining dive lights after an intensive search by a fleet of liveaboards.

Big Currents Equal Big Problems

Big seas and strong currents can disperse a group of divers over a wide area when they surface. Fulvio Cuccurullo from Cozumel wrote to

Undercurrent in December about an experience that shook him up. He was on a diving trip to the Galapagos on *The Galapagos Master* and diving at the remote Darwin Island. The currents are known to be strong there, but that's what attracts schools of scalloped hammerhead sharks. He surfaced with the dive guide just as dusk was approaching, but he could see neither the pick-up vessel nor the liveaboard. His dive guide had only a puny four-foot safety sausage and no GPS locator (Nautilus Lifeline).

Cuccurullo had sensibly equipped himself with a 12-foot DSMB, the largest he could find, and after 30 minutes, they were picked up. When there are a lot of divers in the water, it may take a half an hour for a pickup vessel to reach you, however surfacing at different points in strong currents, a 30-minute wait at the surface to be picked up may not be unusual, but it would be anxiety-ridden if all your guide had was a 4-ft sausage for detection.

How Do You Make Yourself Visible?

Cuccurullo had the comfort of a very visible

Nature Takes Advantage of the Lockdown

The lockdown necessary to take on the coronavirus crisis has meant that nature has been given a break from many of man's activities.

Jellyfish have been seen swimming in the Venice canals, as the sediment has settled, leaving the waters clear and blue instead of their usual muddy color. In North Vancouver, Canada, a pod of orcas has been spotted in Indian Arm, a steep-sided glacial fjord, they've been spotted in the middle of Vancouver harbor, exploring the waters of the floatplane terminal, normally busy with noisy seaplanes. Penguins have been filmed walking the streets of Cape Town, South Africa.

Bloomberg reports the closure of restaurants and hotels, the main buyers of fish and seafood, together with the difficulty of maintaining social distancing among crews at sea, have caused thousands of fishing vessels to be tied up at ports around the world. Marine scientists have already started investigating the effects this will have on marine life.

Kuulei Rogers, a researcher with the Hawaii Institute of Marine Biology, says that in Hanauma Bay they are seeing more fish closer to the shoreline thanks to humans abandoning the beaches.

Throughout the Caribbean, the absence of cruise ships might help reduce the incidence of deadly Stony Coral Tissue Loss Disease. Karen Neely, a scientist at

Florida's Nova University involved in SCTL research interviewed by *Forbes Magazine*, guesses the absence of divers will make little difference. However, she thinks the spread to new, unaffected regions of the world could possibly be reduced thanks to the lockdown. "While we have no way of knowing how SCTL got to the Turks and Caicos or Virgin Islands, St. Martin, or Mexico, the best working hypothesis is shipping traffic. If shipping traffic is reduced, the probability of infection of new areas would be as well."

Leatherback turtles, which can grow to six feet long and weigh up to 2000 pounds, are taking advantage of deserted beaches to nest in peace. In Juno Beach, Florida, the staff at the Loggerhead Marine Life Center have discovered 76 nests over a 10-mile stretch of sand in the first two weeks of the season — a significant increase over last year. In Thailand, the largest number of leatherback nests in two decades has been found on beaches bereft of tourists.

In India, a massive influx of more than 70,000 olive ridley turtles took advantage of deserted beaches to storm the Odisha Rookery to mass nest in broad daylight.

Clearly, the oceans need healing, and this respite in the human-caused degradation of the seas is a welcome note in the tragedy of the coronavirus.

12-foot surface marker buoy. John Bantin straps to his tank a pole that can be extended to unfurl a 2x3-foot square flag. While no longer commercially available, it's easy to make one with a few two-foot lengths of plastic conduit with strong bungee cord threaded through; when it unfolds, it snaps together to form a tall mast for the flag.

And even on day dives, carry a flashlight and reserve it for night-fall.

Can We Count on Hi-Tech Rescue Solutions?

Some dive operators in remote locations provide GPS locators to all their divers. A popular example is the Nautilus Lifeline Marine Rescue GPS, which sends out an emergency call with the GPS position of a diver the surface; it is broadcast on Channel 16, the radio-monitoring channel used by all vessels at sea, to all AIS-equipped (Automatic Identification System) vessels up to 34 miles distant and sends a message to the marine radio on the liveaboard. They cost around \$200 individually, so a boat operator might need to spend \$4,000 to equip all divers. www.nautiluslifeline.com

Another device is the Garmin inReach Mini. It communicates via its base in Texas via satellite,

Electronic devices should not be relied on as the sole rescue remedy

allowing lost divers (who must carry it in a separate watertight container) to confirm they are safely at the surface and to reveal their GPS position. They cost around \$370. www.garmin.com/en-US

There are other man-overboard devices, but they are not waterproof at depth and need to be carried in a suitable container.

A problem with all these devices is that you never know if they are going to work when you need them. Vessels leaving port routinely check with the harbor master or Coast Guard to confirm that their radio is working properly. It's difficult to

do this with an emergency personal locator beacon without instigating a response and "crying wolf."

The original Lifelines needed to be recharged, and we know of many instances where those who wanted to use them found they had forgotten to do so. The up-to-date Lifelines use a long-lasting battery that only needs to be changed every five years.

The original Lifeline had a personal VHF radio facility that allows you to talk directly with anyone using the radio on your boat, which allows you to confirm it was working. Unfortunately, it fell afoul of radiotelegraphy laws in many countries and that feature was dropped.

Mark Shandur, owner of Worldwide Dive & Sail, raises the specter of failing electronics, when he replied to Fulvio Cuccurullo about his 30-minute wait as sea. He explained that many of the Lifelines they had on board *Galapagos Master* had become faulty, saying that many other liveaboard fleet owners experienced the same problem so they had gone back to issuing passengers with extra-large safety sausages and BCD-connected horns due to these reliability issues.

"It was at this stage that we made a company decision that handing out Lifelines to our guests or guides could result in a false sense of security, which might result in unnecessary risk-taking in terms of staying with the group or not aborting a dive if taken away in a current," Shandur wrote.

John Bantin likes another device he has tested, the German-made Seareq ENOS system which, when the beacon is activated by the lost diver, sends out a signal to a unique search device aboard the liveaboard. It is independent of other technologies in that it does not require support from Search & Rescue or Coast Guard, so it's possible to routinely make sure it works. You could do a 'radio check' as soon as you leave your boat.

Designed to go to 330 feet deep, the earlier diver beacons tended to be bulky, with an unwieldy activation switch. Later units are about the size of a typical diver's flashlight. It needs to have a clear line of sight, but with a range of about 5.6 nautical miles (depending on the height of the receiver anten-



A 12-foot DSMB is the largest

Undercurrent Readers' Rescue Australian Wildlife from the Devastating Fires

Thanks to the generous support of *Undercurrent* readers, we raised \$52,836 from more than 300 donors to help save Australian wildlife during the horrible December and January fires. *Undercurrent* contributed an additional \$2200 to cover credit card processing costs and accounting.

We selected many groups in the fire-ridden states on the east and southeast coasts of Australia, including New South Wales Wildlife (WIRES), Zoological Parks and Gardens Board, Wildlife Victoria, Koala Rescue Queensland, and the Royal Society for Prevention of Cruelty to Animals. Each group had specific wildlife rescue programs for the bush fires, and we directed our contributions to be used for that purpose.

In addition, many groups are at work to rehabilitate important habitat to which they return the animals, once treated and recovered, and we made

additional contributions to FAME (Fund for Australia's Most Endangered Species), the Australian Wildlife Conservancy, and the Australian Platypus Conservancy.

I want to thank all of you who contributed so generously. It seems like such a long time ago, but I can assure you the money went to established organizations that we were able to confirm were doing good work; each acknowledged our donations and send their deep appreciation to all the divers who contributed. They were delighted that those of us, so far away from Australia, had their animals at heart.

PS: Your contributions are tax-deductible. As required by law, we emailed a formal letter to each individual who gave \$250 or more. If you have any questions about deductibility, you may email me at BenDDavison@undercurrent.org

– Ben Davison

nae), it should provide contact for the drifting diver long before they were discovered. The manufacturer tells us that since the ENOS system was launched in 2004, no rescue of a diver at the surface using ENOS has taken more than 17 minutes.

You need to make yourself more easily seen than a floating coconut might be

The big drawback is that it requires a vessel operator to invest in the right number of diver units (beacons) together with the search unit — something that might cost approaching \$12,000 for 20 divers (not including any taxes that might be applicable). It's pointless for an individual diver to buy a personal ENOS beacon if there is no search unit. Those vessels so equipped are listed here: www.seareq.de/en/references/enos-worldwide

Keep in mind, reliability is always a problem when electronics are in close association with seawater. While these devices are great when they work, they should not be relied as the sole rescue remedy.

What Do We Learn from This?

Of course, it is essential that someone aboard keep permanent watch while you are diving. That's from the moment you enter the water until you are safely back on board or ashore. They need to be

aware that you might be missing. Searches cannot be instigated unless the alarm is raised.

Jacob Childs had a very visible safety sausage that he sensibly inflated — but nobody thought to look for him until he was well out of sight. Tom Burton had no such safety device.

There are many reasons why you might not be seen when you surface. The boat may have moved from its predetermined spot so as to recover divers who broke the surface elsewhere. There may have been a mechanical problem that allowed the boat to drift off. (Outboard motors are never 100 percent reliable.)

Weather and sea conditions may have changed while you are oblivious underwater. Or divers can lose their way and surface a long way from where they were expected. Or, for any number of reasons, surface prematurely.

Dive defensively by staying close to the reef or wreck and avoid venturing out into the blue in strong currents.

And, if the crew does not make a roll call after every dive, ask them to. There have been unforgivable cases where divers have not been fully accounted for after a dive, but the vessel moved off to a new location. You don't want to be the one waving goodbye.

But if you are in the open ocean, even if someone is keeping watch, you might still be missed. If you are afloat alone in the ocean, you need to

make yourself more easily seen than a floating coconut might be.

It's fashionable for divers to wear black — not the best color to be easily spotted, so you need to substitute a visible method of recognition. A mirror can reflect the sun, if there is clear sun and you understand how to use it. A fully charged dive light reserved for emergency use only can be a life-saver once dusk falls.

The longest surface-marker-buoy, one that is sent to the surface as soon as you start your ascent, or at least once you are at your safety stop, will give a boat crew prior warning of your arrival at the surface.

Audible signaling devices such as whistle/air horn are not so useful. Searching boats are inevitably underway, with engines roaring noisily. Even if the boat stops for the crew to listen, it's difficult to know which direction the sound of such a horn is coming from.

There is no single solution. At *Undercurrent* we suggest you carry with you a raft of safety devices: A surface-marker buoy, a small plastic mirror (an old DVD does well), a fully charged diving flashlight held in reserve, and as a last resort, a radio beacon like a Lifeline. It sounds like a lot, but it makes getting found routine rather than a miracle.

Is it Bad News for Divers Who Suffer COVID-19?

could the effects have contraindications for diving?

The medical profession is still learning about COVID-19, but the first specific news related to divers comes from the Innsbruck University Clinic in Austria, where physicians have discovered lung damage in recovered COVID-19 sufferers. "COVID-19 is undisputedly a serious illness despite what some politicians might tell you, and the massive changes in the lungs can significantly increase the risk of scuba diving accidents." So says senior physician, dive medical officer, and diver Frank Hartig, MD.

However, as we report later in this article, other doctors believe these findings are premature, at best.

Doctors at the Innsbruck Clinic have treated dozens of coronavirus sufferers, from those who are symptom-free spreaders to intensive care patients saved by the use of heart/lung machines. Among those to have had the virus were six scuba divers, all of whom stayed at home in quarantine until they recovered. But Hartig believes they can no longer dive because the damage to their lungs appears irreversible. The bad news was revealed by lung CT scans.

"As an emergency doctor with 20 years' experience, you swallow when you see something like this in a 40-year-old patient," Hartig said in an interview first published in Italian *RAI News* and widely reported by diving media throughout the world.

After several weeks, two patients showed significant oxygen deficiency when under stress — a typical sign of a persistent lung-shunt. In two, the

bronchi were still very excitable under stress, as with asthmatic sufferers.

Hartig says it's difficult to believe these divers' lungs will heal, and says that after any COVID-19 infection, even after only mild symptoms, divers should definitely be subject to a thorough medical examination. Under no circumstances should former patients dive until fully examined.

As for using gases with elevated levels of oxygen, such as nitrox, some doctors feel this might trigger cascades of symptoms. Hartig reports that patients might come in with low oxygen saturation, and except for an increased respiratory rate, they appear to be fine. After being given two liters of oxygen, that saturation improves, but a few hours later, many are in intensive care with severe lung failure. "It is worrying that it is clear how little we know about this disease," suggests Hartig. "The use of nitrox by divers could be dangerous if the lung tissue is still sensitive."

Max Weinmann, MD, the director of acute Respiratory/COVID ICU at Emory University hospital (Atlanta, GA) and an *Undercurrent* subscriber, disagrees.

"The statement by Hartig that divers infected by COVID-19 will never be able to dive again due to irreparable lung damage is irresponsible and not based on scientific data. The fact that these cases were sufficiently mild to convalesce and recover at home indicates that at no time did they require supplemental oxygen, hospital care, or mechanical ventilator support. They were mild cases who never

Bigger Fish Suffer More from Climate Change

Have you noticed there are fewer big fish than there used to be? Overfishing and killing off all the larger members of a species are leaving a gene pool of fish unable to grow so large. And fishing is getting easier because the warming climate is depleting oxygen in the ocean, driving fish toward the surface, where they are easier to catch.

A report by the *BBC's* environment correspondent, Matt McGrath, tells how that is the conclusion of the biggest study of its kind, undertaken by the conservation group IUCN.

Warming oceans are less able to hold dissolved oxygen. As many as 700 ocean sites are now suffering low

oxygen levels compared with just 45 in the 1960s, and researchers say the depletion is threatening species including tuna, marlin, and sharks. They estimate that between 1960 and 2010, the amount of oxygen dissolved in the oceans has declined by an average of two percent, but in some tropical locations, the loss can be as much as 40 percent. Waters with less oxygen favor species such as jellyfish, but they're not good for bigger, fast-swimming species like tuna, which have greater energy needs. Seeking more oxygen, they are moving to the shallow surface layers of the ocean, where there is more oxygen, making them more vulnerable to overfishing.

required hospitalization. It is not unusual in such situations to have bronchial hyper-reactivity or a 'viral-induced asthma' that can persist for around two months or so and may limit return to diving. This is usually temporary, but it can be distressing in a previously healthy individual. It typically responds to inhalers (bronchodilators, inhaled steroids, etc.) and hence, physician review.

"This is in stark contrast to those patients who develop Acute Respiratory Distress Syndrome, or ARDS. The latter is the condition which typically challenges us here in the ICU with a mortality of up to 50 percent. It is this aggressive systemic inflammatory situation which is associated with both tremendous lung and organ damage. In those patients who recover from ARDS, rehabilitation and healing is indeed prolonged, but lung function has [been] noted to return to near normal over time in up to 75 percent of patients."

In response to people posting on Facebook about the Innsbruck Clinic's findings, Doug Ebersole, an interventional cardiologist in Lakeland, FL, and a technical dive instructor who consults for Divers Alert Network (DAN), wrote: "I would not recommend making any firm conclusions or recommendations based on short-term results of six divers. I would especially refrain from using terms like the damage to the lungs is irreversible when they have only had a few weeks of follow-up.

"Apparently, two divers had exercise-induced hypoxemia while two others had exercise-induced reactive airway disease. They say four still had significant changes on CT scanning, implying that they were sick enough at one time, though appar-

ently not hospitalized, that a physician had ordered a previous CT scan. Finally, any conclusions regarding the effects of increased partial pressures of oxygen in divers who have suffered COVID-19 is purely speculative.

"I would recommend taking the above information with a 'grain of salt' for now while awaiting further data. It is definitely interesting and is thought-provoking. We just need to wait for larger, more controlled studies with longer followup before becoming overly concerned.

"If a diver had a mild case of COVID-19 and is now back to jogging five miles per day without issues, they can probably return to diving without restrictions or further testing. However, if a diver had a prolonged ICU stay from the infection, especially if they required intubation, maybe they should have followup CT scans showing resolution of the changes and maybe even pulmonary function testing prior to resuming diving. Only time — and, more importantly, data will tell. The Belgian Hyperbaric Medical Society has released some recommendations which are similar to what I stated above."

Ebersole is currently recovering from a COVID-19 infection he caught from a cardiology patient, despite wearing an N95 mask. He says he was lucky — for him, it was like an extremely bad case of the flu.

The *Undersea and Hyperbaric Medical Society* has published a statement, which says, in part, "At the present time, we simply do not have sufficient data to support or refute the definitive proclamations made by this case series. Any attempt to generalize the effects of COVID-19 based upon a single case

series (6 cases) published in the lay press should be met with appropriate scrutiny.

“The list of potential variables related to how this disease manifests, its clinical course, and long-term prognosis is lengthy and may include factors such as underlying medical conditions, age, disease severity, and secondary complications. Case reports suffer from multiple design weaknesses to include a lack of controls and randomization, which makes any conclusions that we may want to generalize to a larger population suspect. While these findings are indeed disquieting, it will take time before the potential impact on individual health, and any lasting effects on lung or heart function, are captured in the peer-reviewed literature.” The full statement can be found here: <https://tinyurl.com/yajv6eyf>

Jim Chimiak, the Medical Director of Divers Alert Network, told *Undercurrent*, “COVID-19 shares many features with other serious viral pneumonias and requires a period of convalescence before returning to normal activities. The amount of time needed to recover will vary, as will the long-term effects of COVID-19, such as pulmonary function. As information becomes available, it will be incorporated into COVID-19 prevention, treatment, and follow-up guidelines.

“Determination of your fitness to return to diving after a COVID-19 infection will require assessment by your physician team confirming your full recovery and ability to safely perform unrestricted vigorous activity.”

DAN’s recommendations can be found here: <https://tinyurl.com/yaf4uhjy>

A final word from Dan Orr, former President Emeritus at DAN: “We all want to return to the sport we love, and it is always best to do so when and only when you are physically fit to do so. Only time and research will tell when that time is. In the meantime, a cautious and conservative approach is always a good idea.”

As Dr. Hartig reaffirms, “At the moment, we are dependent on [different] expert opinions and studies will only be available in a year’s time.” *Undercurrent* reached out to Dr. Hartig for further comments, but at the time of writing had received no response.

So, self-isolate, shelter in place, stay home, stay safe . . . and wait for a data-based recommendations to emerge.

Flotsam & Jetsam

Despite the Virus Lockdown the British Coastguard Service caught a scuba diver spearfishing under Brighton’s Palace Pier on the south coast of England on Easter weekend. A spokesman for the Service told how both the police and the coastguards issued strong words of advice: “Please stay at home, protect us and other emergency services, and avoid overloading the national health service.”

Bog Snorkeling in South Wales might take a hit from the lockdown if it continues into August. It sounds like some type of twisted military punishment, but every year crowds flock to watch, and contestants come from all over the world to participate in a race of more than 300 yards against the clock under the surface of a bog, an area of a wetland that accumulates peat, a deposit of dead plant material — often sphagnum mosses. Conventional swimming strokes are not allowed and they do it for fun. It’s now planned to be part of a bog snorkeling triathlon.

Bioprinted Coral Great at Growing Algae. Corals serve as a host to algae, which in turn produces sugars that the corals consume. Now scientists

have created 3D-printed coral that’s even more algae-friendly than its natural equivalent, which could help address the problem of coral bleaching. Researchers at Cambridge University and the University of California San Diego say each piece of the printed coral incorporates a skeleton that supports what’s described as “coral-like tissue.”

The Biggest Jellyfish Ever. Scientists from the Schmidt Ocean Institute on research vessel *Falkor* off Western Australia spotted a giant *Apolemia* on the video from their ROV, deep in the Ningaloo Canyons. The pilot estimated the ribbon-like creature was about 154 feet long, the longest living animal recorded by the scientific world. *Apolemia* are siphonophore, deep-sea predators related to jellyfish and corals, composed of thousands of individual clone bodies working together as a team.

Emirates Starts Testing Passengers. The middle-east airline headquartered in Dubai, UAE, has begun testing passengers for COVID-19. The quick blood tests are conducted in the group check-in area of Dubai International Airport, and results are said to be available within 10 minutes. *Emirates* passengers are also required to wear their own masks when at the airport and onboard the aircraft. Is this the future of air travel?

Extinction Looms for Megafauna. In a study published in *Science Advances*, researchers at the University of Swansea, UK, looked at how the extinction of large marine species would impact the ecological roles of ocean ecosystems. They found that sharks, especially great white sharks, and whale sharks were likely candidates for extinction within the next 100 years, and 18 percent of all marine megafauna were in danger.

Lack of Advertising Killing Diving Magazines. The publishers of *Wreck Diver* magazine have announced that the publication has gone temporarily dormant thanks to the absence of advertising revenue to sustain it, and the UK's *Diver* magazine has become a digital-only publication for the same reason.

Photos Submitted to the World Shootout are normally required to be taken in the current year but this year, rules are different, and the contest has become: Pictures of Your Underwater Life. It's time to review what you've achieved, since competition is for the best images you have shot in past years. More than 100 underwater photographers have entered within 24 hours of the competition being announced. Entry is free. www.worldshootout.org

Free Underwater Photography Lessons Online. Among several pros offering online classes, Frenchman Guy Chaumette and partner Anita will launch a free series of lessons and practical tips for both photography and video on YouTube. It's the Liquid Motion & Underwater Photo & Film Academy. <https://tinyurl.com/y96anodb>

Face Masks from Recycled Ocean Plastic. PADI has partnered with sportswear company Rash'R to make face masks out of plastic recovered from the ocean. Each mask is sold with five replacement filters (at \$20.40). These PADI masks are a

sustainable alternative to the N95 respirator masks reserved for front line workers. Children's masks are available too. So far, 1,300 pounds of ocean plastic have been recycled into masks to prevent the spread of the coronavirus.

Planet Plastic. Scientists have discovered the highest levels of microplastics ever recorded deep on the seafloor near Italy in the Mediterranean. This aggregation of 1.9 million elements is likely to include fibers from clothing and other synthetic textiles and fragments from larger items broken down over time. Drift deposits of fine silt can be tens of miles long and hundreds of feet high, and these microplastics accumulate with them. It's calculated that up to 12 million tons of plastic enters the oceans each year, mostly through rivers. Beach plastic might be a very small fraction of the waste out there.

Cancun Opening for Tourism. The Quintana Roo Tourism Promotion Council has announced that Cancun is reopening for travel. Its director, Darío Flota Ocampo, has stated that Air Canada, Air Transat, Delta Airlines, Copa Airlines, Air Europa, Sunwing, Southwest and Aeroméxico have already confirmed they will begin landing in early June. He reiterated that the recovery strategy will first focus on re-establishing direct air connectivity as soon as possible at the international airports of Cancun, Cozumel and Chetumal.

Facetime Eels. It seems that it's not only humans that are getting a bit anxious during lockdown. Since Tokyo's Sumida Aquarium has been closed to the public, its 300 garden eels have become very shy and burrow down at the sight of the staff, just as they would in the ocean. They've forgotten about people. So, the aquarium arranged five iPads around their tank so that people could Facetime them during a three-day event in early May.

undercurrent

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