

The Private, Exclusive Guide for Serious Divers

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Clearwater Paradise Resort, Guanaja, Honduras

swarming silversides and nosy nurse sharks

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Today, it seems, most Caribbean divers visit heavily populated islands, where after deplaning, they grab a taxi to the hotel and drive through streets packed with cruise ship tourists: Grand Cayman, Cozumel, and Bonaire come to mind. These once-charming islands are today urban centers where divers go restaurant hopping, meet the hotel staff only when they have an ice bucket delivered to their room, and watch TV at night. And dive with a couple dozen other divers who seem to rotate daily.

I've had good trips to most of these islands, but I feel far more adventurous when, after I deplane, I have a boat ride ahead to some out-island and an isolated resort where the WiFi might not always work; I'm served home-cooked meals that reflect the culture, no tourists are shouting or automobiles rumbling, and The Milky Way is the after-dinner entertainment. One of our writers recently returned from such a place in Honduras' Bay Islands, and here is his story.

- Ben Davison, publisher

Reaching the Clearwater Paradise Resort requires a 75-minute ferry ride from Roatan, after a 20-minute cab

ride from the airport. And then a second wind-in-yourhair boat trip. And Tom Smith, who has owned the resort for the year, offered cold drinks as his captain sped us through the channel cut to the



A busy Guanaja reef



North-East end of Guanaja, on the opposite side of two other dive resorts, Clark's Caye and Dunbar

(Tom's daughter, Elizabeth, manages Clearwater). Besides my partner and me, three other guests were on board. I introduced myself to the diver sitting near me: "I know what your favorite color is!" She smiled, as we both admired her pink luggage, pink shoes, pink shorts, and pink top. A dive instructor, she had

won a free trip at DEMA and brought her daughter (an ex-cop and martial artist). Another diver instructor was the fifth guest. As we neared the

resort, Tom pointed at the ocotes, pine tree species <u>Pinus montezumae</u>, and told us Columbus called this the "Island of Pines." Peeking out from a hilltop behind the pines and palms were the large balcony terraces of our home for the next seven nights.

While the dive crew took care of our luggage, we walked up to the secondfloor dining veranda, where Catalina, the friendly main server, gave us a rum punch. A dozen hummingbirds sipped at feeders, and a fist-sized jungle frog studied us from the balcony edge. Tom pointed to cans of Deep Woods Off and suggested we keep ourselves lightly spritzed to ward off the no-see-ums. I worried about

the buggers, but Off did its job, though light long sleeves and light long pants helped. Having emailed ahead our answers to questions about diving certifications and experience and food preferences, our only task was to sign waivers. The eight-room, three-story main building felt like a warmhearted, cool-looking big bed and breakfast, with a friendly and helpful three-woman kitchen/housekeeping staff and three-man dive team. (Spanish is their language, but they speak enough English to communicate easily.) The third floor hosts a veranda game room with a pool table, foosball, books, board games, and TV.

The first morning, after breakfast -- they varied with tortilla baleadas (a traditional Honduran dish of mashed beans, thick cream, and salty cheese), quiche, eggs, bacon, pancakes, juices such as pineapple, mango, watermelon, hog plum or tamarin, brown bread, and island fruits. At 8:00 Clearwater Paradise
Resort, Guanaja, HondurasDiving for experienced*****Diving for Beginners*****Hotel*****Food*****Accommodations*****Money's worth*******= poor *****= excellentCaribbean scale

a.m., I walked down the 27 hillside steps and through a short tree-lined path, carefully stepping over a parade of leaf-cutter ants hauling their green loads. At the dock, their partially shaded 29-foot dive boat held our assembled gear, a cooler with fresh water for cameras, and a nitrox gauge, which proved the mix had 33 percent O₂ each time. We had plenty of room for us five divers, Chino, our soft-spoken and super-smiley divemaster, and Captain Sarko. Their largest boat, with temporary engine trouble, sat idly by, and a smaller boat was also available.

After Chino's briefing, we back-rolled in for our checkout at Blue Leak, with no currents, 86°F water, and 80-plus-foot visibility. <u>The healthy 40-foot wall</u> <u>had nice soft corals, interesting cuts and pinnacles, and some fuzzy brown algae,</u> <u>but certainly not as much as Roatan, where I had just dived for two days.</u> While I checked out moon jellies and lots of reef fish, a barracuda stared at a line of Creole wrasse. After half an hour, Chino checked the air on the divers close to



Clearwater Paradise Resort

him, though he could probably tell from how they geared up and their buoyancy control whether they were air-suckers (and they weren't). He kept a close eye on the ex-cop, who had logged only 20 dives but left my buddy and me free to do our thing, which I appreciated since I dislike regimented diving.

As we approached the mooring line, a stingray glided off. We continued diving while Chino watched from the surface, and when we surfaced, he helped pass our BCs up to the captain, who helped us climb over the gunwhale -- we did need his help since the ladder was without handholds or poles

to grab at the top. (Tom said he'll be installing poles.) On board, they offered us water, watermelon, chips, cookies, and hard candy. Chino asked how much time we wanted before the second dives, no hurry-up-and-dive here.

Chino asked if we were okay with him spearing lionfish. Of course, we said, especially since he bribed us with a promise of ceviche. But after 20 minutes, he was hunting much more than guiding. Our other male diver later had a polite discussion with him, and on future dives, while he did snag the predators, he also showed us around town.

After a few dives, it became apparent how Guanaja diving differed from Roatan and lots of the Caribbean. First, the unique volcanic architecture in Clearwater's front yard was especially interesting. <u>Black Rock Canyon, with 80-plus-foot tall</u> <u>canyon cuts, pinnacles, crevices, and swim-thrus, sparkled with glinting sunlight</u> <u>beaming down like rock-concert lighting. Indeed, a miniature Canyonlands National</u> <u>Park painted black.</u> I spotted a slender filefish hiding in a gorgonian, a channel crab, and a decorator crab (I still can't figure out where their mouths are). A marauding band of black tang worked the reef, and as we hung on the line, my buddy spotted a thumb-nail-sized lobster on my vest.

At Tito's Labyrinth, where it's 35 feet to the sand, we navigated cuts and penetrated mazes, a bit like cities with high-rise buildings and nearly empty streets, except for a three-foot tarpon, giant midnight parrotfish and a school of glassy sweepers -- another unique dive. In one tight swim-thru, Chino pointed out an invisible scorpion fish, a warning not to inadvertently put our hands on it.

Hard corals were generally healthy -- a three-foot pristine staghorn gave me hope -- and barrel sponges the size of kettle drums were common. Soft coral was unbroken and untainted -- sea rods in red and knobby, purple sea fans, flumes, feathery blacks, and wire coral in black and lime. I hovered over beautiful gardens in shades of red, black, beige, putty, brown, and even lavender, especially when illuminated by a dive light. At Lee's Pleasure, I thought I was looking at Dr. Seuss illustrations.

And then there were the undulating schools of silversides. At Bayman Drop, I was mesmerized by a massive, flowing cloud, expanding and contracting, until I saw two nurse sharks sporting remoras coming in close. <u>Chino gently held their pec-</u><u>toral fins, turned them upside down, and rubbed their bellies, putting them into</u><u>shark dreamland.</u> He seemed to love them, and, not to be too anthropomorphic, they loved him, a man born and reared on the island and in the water. Well, probably they just came for the massage.

I saw nurses on several dives and the amazing shape-shifting clouds of

Bonaire Boating Incident

On Sunday, September 15, Melina Charbonnet and her dive buddy Daphne were practicing scuba diving skills in water just a few meters deep when they were struck by a small boat driven by a 17-year-old girl. She got her severely injured buddy back to shore and called 911.

In a letter to bonaire.nu, Melina later wrote, "What followed the accident was equally disturbing. The police were called to the dive site but did not arrive until after we had already left in an ambulance. They told others on the scene that they would come to the hospital to take our statements, but they never showed up. Bonaire's rules are clear: boats are not allowed to enter the light blue zone close to the coast, where divers and snorkelers are active. Despite these rules, enforcement [in Bonaire] remains weak."

The incident highlights urgent need for stricter enforcement of water safety on Bonaire.

silversides at half a dozen locations. While some sites were not well populated with fish, overall, the dives had a wide range of tropicals: blennies, goatfish, jacks, a tilefish diving into its hidey hole, chubs, spotted drumfish, queen and midnight parrotfish, rock beauties, French and queen angels, flounders, morays, anemones in blue and yellow, and nudibranchs.

My standard room (one of the six) was clean, white, and spacious, with a queen-sized comfy bed, air conditioning, an excellent shower with lots of hot water, and daily maid service. (They also have two suites, and, above their separate-building dive shop is a 2 bedroom apt with a small kitchen.) The small pool was fine for a post-dive rinse. Guanaja, with only 5500 people, has a lot of walking paths, interesting birds, a waterfall to view, and I took a short hike to a nearby overlook.

And, of course, I dived. We made two in the morning and one every afternoon, except when we made a night dive at Diane's. A light rain announced it was time to drop in, and the first thing my torch picked up were scores of smooth-leg brittle stars creepy-crawling out of the beam. Tiny shrimp with shiny copper-red LED eyes peered from everywhere -- shine a torch on them, and, poof, they're gone. Spotted spiny lobsters with saturated orange tail feathers and beautiful 4-inch red coralbanded shrimps were common. My dive partner illuminated a football-sized toadfish, and I watched a small octopus flash a range of colors until another diver blasted him in the eyes with a camera strobe. (Bad idea: this leaves the animal vulnerable to predators until its eyes recover.) <u>Indeed, this was a better night dive than</u> <u>four I had in Raja Ampat.</u> After watching four small squid dance, I rose to the surface to be welcomed by the Milky Way and billions of stars in the black sky. The gently glowing indigo lights on the wood-plank walkway guided us home.

And then, it was time for dinner, served by the staff and always a delight:



The fast dive boat

on different nights, BBQ pork chops, lobster tail, shrimp alfredo, flank steak, mahi mahi, pepperoni pizza, baked chicken, pasta salad, scalloped potatoes, carrots, breadfruit, squash, green salad, rice and carrots . . followed by flan, ice cream, pecan muffins, brownie, gooey butter cake or cherry pineapple cobbler . . There was so much food, one diver joked, "Better start serving me half portions." Elizabeth explained, "Our last group had some big eaters, so we upsized to ensure everyone has plenty." With such satisfied stomachs, it was easy to fall asleep, but Kiwi, a one-year-old puppy, couldn't contain his energy and started barking two nights around 1:00 a.m., waking me and others for a short while. Oh well.

At lunch, it could be ground beef tostadas, chicken wraps, cheeseburgers, BLTs, onion rings,

or fries. The chef honored everyone's needs. "Don't eat shellfish? Red meat? No problemo, here are other options." The friendly house cat showed its love by bringing geckos to the chef, who gently shooed it away when its mouth was full.

At snack time, after the third dive, the kitchen delivered Chico's promise, lionfish ceviche, and other times chips, cheese, carrots, cucumber, dips, or popcorn. And at the small bar, drinks -- even spirits -- were on the house as part of the package.



Clearwater verandah view

I should note that Guanaja has one wreck dive, the intentionally sunk 440-foot nicely encrusted Jado Trader wreck. Nearly 40 years old, it sits on its side in 100 feet of water. It was our only dive with a noticeable, and unpleasant, current. Inside, I spotted a 6-foot grouper, and nearby pinnacles are available to finish the dive.

One thing about out-of-the-way places is that you can't call a doctor or run to the drugstore. But Tom has his ways. One diver felt UTI symptoms, so the two diver nurses suggested a specific antibiotic, and within a couple of hours, Tom had it at the resort.

On our final morning, I woke up to no power in our rooms, but as we packed to go, the generator and battery backup system were gearing up. Tom has installed solar panels and plans to install even more to mitigate intermittent problems. As a former building contractor, he is updating the property and says he loves being busy "in this, my 3rd Act in life." A personable guy, he checked on us throughout the week while Elizabeth would peek around the corner and ask, "Can I get you a fan? Would you like to see a dive-site map?" Tom's wife, Laurie, was the culprit behind the addictive gooey butter cake and pecan muffins. They were a loving family, excited to take on their crazy retirement adventure together.

For my two cents, they've created a truly unique and entertaining dive trip experience in the Caribbean.

-- P.L.

Our undercover diver's bio: While serving 1974-78 as a U.S. Marine Embassy Security Guard, I wrote a bucket list with diving near the top. Subsequently, college offered a YMCA scuba class as an elective, so I jumped on it as a freshman in the first semester. I hit 930 worldwide dives at Guanaja. To help spread the word, when I meet another diver, I always ask, "Do you know about Undercurrent?"



Diver's Compass: The Galaxy Ferry is a \$20 cab ride from Roatan Airport; clarify the price with the driver in advance. Clearwater will help you book . . . it doesn't run off season, so Clearwater will arrange a boat (it can be uncomfortable in choppy seas) or charter puddle-jumper . . . October-January is rainy season A 7-night 17 dive package is \$1,995 pp double occupancy, plus 19 percent government tax . . . Nitrox is \$150 pp. . . . Credit cards okay . . . Tipping (cash preferred) at your discretion to a pool for distribution; I left a cash tip on the bed, but it remained

untouched . . . Rental gear is available. Kayaks and sightseeing tours are also available. WiFi is free but only consistent in the dining and game rooms . . . Guanaja has a hyperbaric chamber, with funding helped by DAN . . . Clearwater can arrange a dive instructor with advance notice. <u>www.clearwaterparadise.com</u> is very informative.

Roatan, the Big Island, Indonesia, the Sea of Cortez hot water, vanishing chase boats, Cayman sharks

I've always been delighted with the detailed and honest reports that *Undercurrent* members submit. Not only have they helped thousands of readers select the best place to go diving, but they also encourage resorts to buy new mattresses, extend the dives past 40 minutes,

"On the fourth morning, at breakfast, our flight to Sorong disappeared from the website!"

and discipline the divemasters who harass the creatures. The travel industry listens to *Undercurrent* readers.

As I read the reports, I noticed that many interesting comments and criticism deserve sharing, so I've selected a few you might miss when you peruse them in search of your next destination.

Transition Journeys

One unique liveaboard trip to consider is those when a boat is being repositioned; you begin in one port and end in another. You typically dive places not usually visited, and while you might get a good deal on the price, flights may be more expensive since you arrive and depart from different airports.

The Aggressor Fleet has several transition trips, and John Morgan (Surprise, AZ) spent 13 days on the **Raja Ampat Aggressor** in July, traveling from Raja Ampat to Borneo, about 2000 nautical miles. He writes, "We started in the Lembeh Straits for two days - the world's best muck diving. We did a day at Bangka Island and a day at Bunaken National Park (lots of turtles). Then, three days transiting the north end of Sulawesi Island. We dove a couple of reefs that did not have names, doing two dives per day, understandable as we had a lot of miles to go. From Sulawesi to Borneo, we found a floating fish platform with two whale sharks below, which was incredible. The last part was at the Derawan Islands for heavy current drift diving. We saw eagle rays, barracuda, and a few distant sharks, including a zebra shark. . . .With the best crew I've ever seen. The food was great. The boat is older but well-maintained. It was a great trip." www.aggressor.com

The *Philippine Aggressor II* also makes transfer trips, and Randy Alexander (Littleton, CO) joined a 10-day trip in June. They were moving the boat from Puerto Princesa to Cebu and would return in the fall. "We started by diving Tubbataha Reefs National Parks, then continued to Cogayanillo, which is excellent because divers rarely visit. We continued to Apo Island and worked north toward Cebu. We did see a few sharks, but large pelagics were rare. There was a massive amount of smaller sea life and great macro photography. The boat and crew were excellent. It's a new boat, and I was on its third charter. The transition is a great way to see a variety of sites. Because a considerable distance must be covered, this results in less diving. I did 29 dives on this ten-day trip; three were night dives. We had time to relax, and photographers had more time to work on photos." www.aggressor.com

Flight Woes!

Indonesian inter-island flights can be a headache, especially if you don't use a travel agent and book your own, as did Judy Orange of Irvine, CA. Before traveling to Sarong to board a Raja Ampat liveaboard, she booked five nights at Spice Island Resort in Ambon, where she would take a direct flight on **Lion Air** to Sorong. She booked through Nusatrip. "Knowing Lion Air from experience and reputation, I checked the flight schedule daily. On the fourth morning, at breakfast, our flight to Sorong disappeared from the website! A phone call by resort staff confirmed that it had been canceled. But the noon flight in a few hours was still open, so we packed as fast as we could to catch this flight. We did

The Lionfish Problem is Getting Worse

The epidemic of invasive lionfish in the Caribbean runs rampant, as indicated by the recent state-wide Florida lionfish culling competition, where a record number, 31,773, of the invasive fish were caught, 1200 more than last year. Baye Beauford of Jacksonville, in the northeastern part of the state, won the recreational division for the second year in a row with 915 kills. He said he didn't even try.

The competitors had about three-and-a-half months to catch as many lionfish as possible, doing their part to help eliminate the species from Florida's waters, where they are proliferating. A native of the Indo-Pacific, they were first seen off the eastern coast in 1985. Other than the spearfishers, lionfish have no natural predators in Caribbean or Florida waters, though there is hope that groupers, barracuda, morays, and sharks will learn to feed on them, regardless of their poisonous spines.

LiPo Bags Halt Battery Fires

Dear Undercurrent,

On a recent trip aboard the *Rocio del Mar*, the crew was adamant about using LiPo (lithium polymer) bags when charging batteries. They said the bags contain any fires or discharge that might happen with lithium-ion batteries. My buddy noticed a LiPo bag in



not want to miss our boat! At the airport, the board indicated that our canceled noon flight the next day was replaced by an earlier 9:00 am flight, so we could have stayed the 5th night at the resort. We were not informed of this by the resort or airline. In fact, a Lion Air staff member showed up at the resort to deliver our tickets and to collect a penalty fee for the change, even though Lion Air canceled our original flight. This person never

"It might have been unsettling not knowing what just impacted my body."

mentioned the next day's morning flight."

Judy received no refund for the shortened stay and paid for an extra night at the Sorong hotel. www.spiceislanddivers.com www.nusatrip.com

We get many reports of inter-island flights in Indonesia (and elsewhere in the world) screwing up plans. Judy was wise enough to track her flight daily, but many travelers do not. Using a reputable travel agency can help avoid such hitches.

Long waits in airport lines are another annoyance. They are common on Saturdays, the day many tourists use to arrive and depart during a few afternoon hours. Bonaire and Cozumel get backed up, as does Roatan, where Ronald Bailey (Roanoke, VA) said in August, "It took an hour and 45 minutes to go through immigration while standing in a hot line/building. They were not fast at processing entries. Before entering, one needs to fill out a custom form. Be warned that you must fill out a custom exit form before exiting." The solution is simple: arrive or depart on any day except Saturday.

What About the Lion Fish?

In June, Kenneth LaBarbeara (Grass Valley, CA) had a great trip to **Belize's Blackbird Resort**: "We

the rubbish, so he plucked it out to see why it was there. It looked good on the outside, but when he looked inside,

he saw scorch marks. The bag had contained the fire! We are sold on them now and have added the bags to our dive kit.

LiPo bags come in a wide range of sizes. I got mine from Amazon.com.

– Mary E. "Mel" McCombie, Ph.D., (New Haven, CT)

were treated like royalty! Dives were full of marine life: grouper, blacktip sharks, nurse sharks, eels, tangs, lobsters, turtles, rays, jacks, barracuda, triggers, and even a toadfish!"

Reefs are healthy, but he notes that although lionfish prowl the reefs, tourists are not allowed to spear them. "I don't recall any [Caribbean] dive resort that would not give a qualified diver a Hawaiian sling to hunt these invasive creatures. The divemaster explained that they were speared and fed to the sharks for years, and the sharks got used to the sound of a sling and would consider it a "dinner bell." The sharks became overly friendly toward the divers. On one dive, while taking a picture of a large nurse shark, a smaller one swam right through my legs!" While resorts don't want their divers nipped at by sharks, tourists with spearguns are essential for keeping reefs clear of lionfish. It's a dilemma. www.blackbirdresort.com

When the Reefs are Dead, Wait Until Dark

On the big island of **Hawaii, Jack's Diving Locker** has long been the go-to place, and a reader who calls herself "Love Sharks" (Portland, OR) visited in May.

"I have always used JDL; with our 10 percent discount (for return customers), we paid \$198 for a two-tank dive. The sites were over-dived, boring, and browned out. We had to look hard to find critters. JDL seems to cater to student divers, which means going to easy and over-dived sites. It's the specialty dives that make Jack's worthwhile. To our delight, on the first night of our manta dive, we had 31 mantas show up; on the second night, we had 26. There was so much food in the water, and the mantas were loving it."

"I did two black water dives. The first was cut short 20 minutes into the dive because the guide spotted an oceanic white tip. I never saw it, but I would have loved to. I know they're an aggressive species, but I wonder if it was appropriate to abort the dive? There

Florida Scuba Charter Skipper Indicted for Manslaughter

A 49-year-old boat owner from Ocala (FL), Dustin Scott McCabe, was indicted in August on multiple charges, including manslaughter, and negligent operation of the *Southern Comfort*, which resulted in 37-year-old Mollie Ghiz-Flynn's death. This led to McCabe's formal suspension from being able to provide paid services with the vessel. (See *Undercurrent*, April 2020.)

According to the indictment, McCabe purchased the 48-foot *Southern Comfort* in March 2020 and falsely claimed to the U.S. Coast Guard that he was using it only for recre-

was no refund for this expensive dive. A few nights later, I watched the incredible show of deep-ocean critters coming up to the shallows. I was struck by a

"Crawling into the bunk was like entering a coffin"

squid with torpedo speed three times and got inked. Had the guide not told us about it in the dive briefing, it might have been unsettling not knowing what just impacted my body. Other sightings were pyrosomes, comb jellies, siphonophores, salp chains, and other things that were just indescribably beautiful." www.jacksdivinglocker.com

Where's Our Boat 2

When two divers were lost for nearly 40 hours in the Gulf of Mexico in July, their liveaboard, the *MV Fling*, had no chase boat in the water. There should always be a boat ready to pick up divers, though even resorts fail, as Joan Huke (Centennial, CO) found out while diving in June with **Borneo Divers** at **Sipadan** in Malaysia. Her boat had a couple of snorkelers aboard, but she was the only diver. Just before she entered the water, she heard a snorkeler say she did not want to snorkel there. Now, divers have the right to expect their boat to stay with them during a dive, but upon surfacing her boat had vanished.

She says, "The water was rough. It wasn't terrible but I do get seasick and was worried about it. The divemaster cursed and then waved his safety sausage. Later, he began blowing his whistle. I waved my safety sausage, too. We were not extraordinarily far from shore or other dive boats. I told him I was going to swim to shore or to another boat. He said no, he's coming. After 20-30 minutes of bobbing around, we saw the boat on the horizon, and with the waves, there was ational purposes, though he conducted unauthorized paid scuba charters.

The indictment also alleges after McCabe was unable to operate the *Southern Comfort* for pay, he operated under Florida Scuba Charters, Inc. to "engage in Paycheck Protection Program fraud" by submitting two loan applications that he "fraudulently obtained and/or had forgiven."

If convicted of any charges against him, McCabe faces up to 20 years in prison.

no way he could see us. But he knew kind of where we were and finally found us. It was not that scary with my BC fully inflated and knowing I could swim to safety if I had to. The boat driver decided to take the snorkelers back to the dive shop while we were diving. Good thing we didn't have an emergency." www.sipadan.com/Borneo-Divers.php

Grand Cayman Sharks

On **Grand Cayman, Ocean Frontiers** and the **Compass Point** resort, on the East End, is away from the madding crowds. Their dive packages even include a rental car, so you can easily get back and forth and try nearby restaurants. Michael Cotter (Great Falls, VA) visited in May, liked their condo accommodations, and made 25 dives in the week, repeating only two sites. "The dives covered almost the entire 'horseshoe' of sites from Old Man Bay on the North Side (Babylon) wrapping around the East End to Frank Sound on the south (Fantasea Land). The boat rides were never longer than 30 minutes. A stretch of sites outside the reef was 100 percent reliable for reef shark sightings; we regularly saw up to three different sharks at these sites.

"On several occasions, they would swim no more than five feet from us. At one site, a large remora repeatedly tried to hitch a ride on us. On the North Side, we were lucky to see a hammerhead and a pair of spotted eagle rays rooting around in the sand. Bleaching was worse, but not excessively so, than what I saw on Little Cayman a few months prior."

And maybe those sharks he saw were at Little Cayman a few months prior.

www.compasspointdiveresort.com

So, fellow divers, keep your reader reports coming. We, and all *Undercurrent* subscribers, look forward to reading about your dive trips.

– Ben Davison

An Ill-Fated Cruise

when divemaster are experts and divers are idiots

Not long ago, I was on an Indo-Pacific liveaboard, and while I don't intend to name it, I think my trip had some lessons to be learned, not only by divers but by liveaboard operators as well.

After making it through Customs, we were told that of the 15 divers expected, only two had made it to the boat; others had been stuck at airports. Our agent confided that one of the two onboard divers was a problem and had not wanted to wait to dive. The indignation it provoked in all of us was palpable, but it would not be the last time we would be disappointed.

Much to the chagrin of the Aussie diver on board, who had arrived on time, he had been labeled a troublemaker. The grievances leveled at him by the DMs were related to his questioning what diving would be available while waiting for the 13 stranded guests. For whatever reason, his questions and manner had profoundly irked the staff, and he was told that they would deal with the issue while insisting he desist from asking further questions. He shared this with us shortly after boarding; we were initially incredulous that a seasoned crew would deal with passenger concerns in anything other than a diplomatic fashion. Surely, he was merely overstating a misunderstanding.

Liveaboard diving is characterized by a vast spectrum of personalities and abilities brought together in close quarters. The potential for friction is immense, and if it occurs, it needs to be diffused early on by professionals committed to the discreet finessing of people of differing backgrounds.

Sadly, this did not seem to be part of the DMs' skill set. Indeed, the protestations of our Aussie friend were quickly verified when the DM verbally attacked the diver in public, an experience that was quite jarring. All the divers were deeply flawed in the eyes of the DMs, whose opinions were voiced publicly and repeatedly with tremendous ferocity. Eruptions were utterly unpredictable; for example, during a poorly planned dive characterized by a raging current, the DM became enraged, gesticulating her frustration when we were too overpowered by the current to swim against it and return to the reef.

Derogatory labels and opinions were expressed to all the divers daily:

- A diver with cold-like symptoms, earaches, a headache, and congestion could not dive and was labeled a "drama queen." As a clinician, I suggested that the diver be tested for COVID as there were obvious implications for the boat, crew, and passengers. And while the DM admitted to having the tests, she refused to do so; if positive, it would cause too much drama. And yet, as a non-medical professional, she would otherwise freely advise divers on medical conditions. This led to *inappropriate advice*, such as offering antibiotics for noninfectious conditions.
- A diver was labeled as an "asshole" as he asked too many questions. Other divers were "incompetent, childish, arrogant, and crazy." Upon embarking on a dive, it was stated, "If you think you know better than me, then go ahead and do your own thing, but you'll be sorry."
- "I have a Ph.D. in marine life and tropical parasitology; don't argue with me," when discussing the local fish life.

As a result, rather than incur the mercurial wrath of the DM, divers tended to avoid interactions that could

Discarded Oil Platforms Increase Ocean Fish Populations

Every diver knows that fish like to gather in the shadow of structures such as jetties, shipwrecks, and even floating objects. However, a recent study by Danish researchers found that the density of fish aggregating under oil and gas platforms is not localized, but extends many miles beyond them, far greater than previously thought.

While offshore oil drilling is a serious environmental hazard, when platforms end their operational life, many are left in place or partially dismantled or toppled, in a socalled "rigs to reef" program. Not all environmental groups support turning them into artificial reefs, but the Danish researchers' study further supports leaving them in the ocean. For divers and fishermen, they're a boon.

Texas oil rigs are popular with divers. High Island A389, located off Galveston, Texas, was the first decommissioned oil platform to be reefed in Flower Garden Banks National Marine Sanctuary. Another well-known U.S. site is Tenneco Towers, five oil platforms (three within recreational diving depths) south of Fort Lauderdale, where coral life is spectacular. lead to any combustible situation; this led to a rather awkward dynamic onboard.

Of greatest concern was when an older diver developed an extensive, clinically threatening deep vein thrombosis and was offered antibiotics by the DM until the passengers requested our clinical review, at which time we made the diagnosis. The DMs then stepped up and took responsibility, which was commendable; however, while attempting to outline a possible medical strategy, they rapidly stepped back privately, stating their unwillingness to proceed: new guests were imminent, and they could do no more. They said they were "washing their hands of the entire episode." While I appreciate the pressures of the situation, this was in profound contradistinction to their comments that the ill diver remained their "primary concern and responsibility," and they would stay involved and committed to ensuring his recovery." Such hypocrisy was very unsettling. Additionally, trust in the DMs had been eroded by their behavior during the voyage.

Nevertheless, the ill diver was sent to the local hospital, where the appropriate therapy was unavailable. As beds were scarce, he was placed in a *hotel* despite confirmation of our diagnosis. Upon that discovery and a report of the symptoms progressing overnight, we recommended that he be evacuated by medical aircraft as a commercial flight would be hazardous. Prolonged discussion between his two insurers began regarding who had primary/secondary fiscal responsibility, especially since this was a medical condition rather than a divingrelated emergency such as DCS.

The thrombosis developed into life-threatening necrotizing fasciitis, which was in part due to small skin cuts. He was evacuated to Australia and has done well after a prolonged hospitalization.

Upon review, we were left with much to consider. Among them:

 Divers must be fit before departing to some distant Third World paradise where medical care is difficult to obtain and the standard unknown. It is not unusual for divers to refuse to disclose preexisting ailments that they fear may impair their ability to dive in the opinion of DMs.

- Divers should maintain a master list of medications and their primary doctors' contact details that medical staff can easily access in an emergency.
- Dive boats should have remote access to clinicians or other medical staff to advise on diagnoses and assist with or monitor therapy. DMs should never consider themselves surrogate clinicians who can make medical decisions. This cruise had doctors on board; however, with satellite communication, easy access to the internet, and video phone capabilities, there's no excuse for a liveaboard to be without access to established medical emergency protocols for discussion and diver safety.
- Divers must be adequately insured to cover serious unforeseen events. The coverage must be optimized for complex medical issues and potential evacuations that are not dive-related.

What recourse do divers have when zealous passion turns to brittle dogma, and the passenger is seen as an ill-informed liability and adversary?

The public displays of hubris and antagonism can never be justified, particularly when diver safety is a concern. Simple respect and understanding are not merely required but demanded.

This trip left me with a profound sense of disappointment and sadness that such experienced and knowledgeable individuals could so easily have altered the trajectory of the overall cruise through patience and understanding rather than the belligerent intolerance that was displayed.

- Max Weinmann, M.D. (Atlanta, GA)

P.S.: I've since learned that the two divemasters/ cruise directors have been dismissed after a series of complaints to the owners of the vessel.

Presumption is the Mother of Disasters, Part II

This is the second part of our article on errors divers made, thanks to our humble readers who were willing to describe their errors so that others may benefit.

Know What Your Computer Tells You

Too many divers are unfamiliar with their computer displays and assume they always display the remain-

some mistakes are worse than others

ing No-Stop time. When a computer switches over to the mandated deco-stop mode, it displays what is often unfamiliar information, and some divers ignore that it now displays a downward pointing arrow, indicating they've missed a stop.

Less serious, but still significant, some divers get to a location such as Truk Lagoon, where they might spend longer at depth than they are accustomed to. While they have taken the precaution of carrying a backup computer, they find that the two display different decompression information because they rely on different algorithms.

Of course, divers should use computers with identical algorithms so they have identical backup information. It's surprising how many divers don't realize their computers (such as an Oceanic) provide the option to switch to another algorithm, for example, one similar to Suunto's algorithm. Did the dive store staff fail to men-

"It wasn't worth the stress I put my dive buddy through."

tion this when demonstrating its use? Did the diver fail to read the manual carefully? We once wrote about a diver who intentionally left his backup computer behind on a dive because, on the previous dive, it locked him out when it went into the SOS mode. Why use a more conservative computer as backup?

Making one extra dive can mean outstaying your welcome with disastrous consequences. As Mike Maremesh from Miami (FL), tells us:

"I went to Cocos with *Undersea Hunter*. On the last day of diving, we did three dives greater than 100-feet, each progressively deeper than the previous. While my Nitrox computer was OK with it, it was obviously the reverse of how we were all taught.

"About an hour after the last dive, l started tingling under the skin around my navel. Trying to be at least semi-smart, l had my dive buddy (my wife) inform the crew. They met me in my cabin just in time to see me black out and keel over unto my bunk. My buddy claims it may have taken a few years off her life. I woke up on O_2 and kept on it for the trip back to the mainland. I got checked out by the hyperbaric specialist in San Jose, but I was pretty much back to normal by then. My buddy, who had been wise enough to take it easy and not do the dives, now has even more ammunition to question my judgment.

"Take away. I am not in as good a shape as the much younger dive guide who led the dives, and I am not ashamed to admit it. Sometimes, you need to trust your training and common sense over your computer. It wasn't much consolation that l got a decent video of a 10-foot tiger shark that swam right under me. And it wasn't worth the stress I put my dive buddy through.

Jumping In Without Proper Preparation

A common mistake among cold water divers is jumping in with a drysuit zip that is not entirely closed. A flooded suit is part of the steep learning curve, but contrary to popular beliefs, it doesn't make you heavier in the water, as Chuck Ballenger, a very experienced diver from Mill Valley (CA), found out, and yet it caused serious repercussions. He told *Undercurrent* that he failed to fully tighten the inner zipper on his DUI drysuit during a trip to dive the wrecks of Scapa Flow in Scotland's Orkney Isles, where the water ranges between 45°F and 55°F.

"Seven of us jumped into four-foot swells frosted with white caps. As we prepared to descend, I realized my drysuit was flooding. I could either cancel my dive or deal with it on the bottom. I decided on the latter and descended to the battleship hull at 100 feet, struggling to close the leaking zipper. To do so, I had to loosen my weight belt enough to open the outer zipper and then tighten the inner zipper. After much effort and almost losing my weights, I realized I couldn't do it. I decided to explore the wreck as long as I could stand the freezing water.

"Hypothermia set in, and I soon couldn't feel or move my legs. I skipped the safety stop and barely made it to the boat. The result: a shoulder bend that later required surgery for bone necrosis."

It's better to forfeit a dive than to risk your health, and Chuck will tell you that.

Always Do a Buddy Check

When David Pleace, 57, entered the water to dive the wreck of the *SMS Brummer* is Scotland's Scapa Flow in the Summer of 2021, he was unaware that the direct feed to his wing-style BC was not connected properly and was thus possibly unable to control his buoyancy. So decided the Coroner's inquest in the casualty's home town of Derby this September. The deceased diver's body was found just 60 feet from the wreck. It highlights the essential nature of equipment checks before diving.

The coroner said that it was not entirely clear what checks Mr Pleace personally took, but that fewer checks took place on this dive because experienced divers tend to do fewer team checks. However, some other divers have taken issue with the Coroner's conclusion since any diver should have been able to reconnect a direct-feed hose and wearing a drysuit in the cold waters of Scapa Flow, Pleace would have had an alternative method of buoyancy control available. Were both his directfeeds not connected?

Your Own Boat Can Be Dangerous

We've often said that a dive boat is the most dangerous thing you encounter diving. Greg White from Cobden (IL) discovered this:

"I'm sure we've all made mistakes that we could look back on and laugh about, but I made one that I still cringe about because, at the time, I thought I had bought the farm. It began with something I thought was a smart idea. It turned out not to be so smart after all.

"Any time that a dive ended under the dive boat, I would stay down at my safety stop depth, waiting until the other divers had exited, then I would kick to the bottom of the ladder, take off my fins underwater, pull myself up the ladder, hand up my fins, and then climb the ladder. This seemed to work well, giving me extra safety stop time and avoiding surface congestion as others floated waiting to exit.

"When it didn't work so well was one day when the seas were really rough. I had just grabbed the bottom of the ladder and taken off one fin when a huge wave lifted the boat and pulled the ladder out of my hand. When the boat came back down, the ladder knocked my mask down my face, which knocked the regulator out of my mouth. There I was with only one fin, my mask around my neck, no air in my BC, and my regulator lost for the time being. My first thought was to inflate my BC, but nothing happened when I pushed the inflate button. Somehow, the low-pressure hose had also come unattached in the process. As I frantically tried to kick to the surface, one of the boat crew fortunately saw me struggling and jumped in to grab me. At about the same time, I managed to find my regulator.

"After that experience, I now ascend completely after each dive, fully inflate my BC on the surface, and make sure I'm ready to climb the ladder before taking off my fins. One near-death experience was enough for me."

It's better to forfeit a dive than to risk your health.

David Holzman (Ben Lomond, CA) was in Raja Ampat with friends, all with decades of dive experience in all conditions, enjoying an easy dive following a gradually sloping wall filled with color and fish.

"About halfway through the 60-minute dive, our divemaster signals a change in direction as a current starts to hit us and then increases significantly. We struggled against the current and ascended to eight meters, changed direction again, and drifted with the current over a shallow reef, which soon became our safety stop

The Intelligent Leadership of the Pugnacious Octopus

Researchers studying several octopuses in the Red Sea near Eilat, Israel, discovered that not only did the cephalopods prowl the seafloor using camouflage, but also organized several reef fish into hunting parties. The new study published in *Nature Ecology & Evolution* shows *Octopus cyanea* maraud around in hunting groups with fish, often of several species.

Not only did the octopus decide what the hunting party should prey upon, but also researchers witnessed the cephalopods punching accompanying fish, apparently to keep them focused on the task and contributing to the collective effort.

The scientists tracked 13 octopuses for 20 hours, following them for 13 hunts, during which they observed between two and ten fish working with them.

The fish most punched were the ambush predators, most often blacktip groupers, the ones less inclined to move when hunting. The octopus would use punches to keep the group moving, benefitting by simply following the fish for food rather than performing what the researchers referred to as speculative hunting.

https://tinyurl.com/yen4ccw4.

as the current pushed us at high speed to our pick-up location. However, our boat was moving in the same fast current and was approaching a channel with shallow water.

"Our exit became treacherous as, one by one, we surfaced with our boat in sight but struggling to slow down enough to let each diver ascend the rear-mounted ladder. When my turn came, I saw the ladder flopping up and down on its hinge and realized that I needed to time my grab for the right moment or I'd be battered by the ladder. With all my gear on, I swam behind the boat, grabbed a rung high on the aluminum ladder, and stepped on the bottom rung. The current was moving the boat quickly into the shallow water ahead, and I needed to get up and out as fast as possible so the boat could motor to deeper water. As my full weight started to push the ladder down, I suddenly realized that my fingers were at the ladder's hinge and would be crushed or severed, but I could slide them down just enough to avoid injury. Everything happened so quickly!"

In our October issue, we ran a letter to *Undercurrent* in which a woman diver described to us how a bouncing ladder had severed her finger.

Odd, Unexpected Things Happen

K.S., a female diver from Cape Town, South Africa, was diving on a liveaboard out of Cairns, NSW. She told us, "I left my tank standing unattended for a moment, and the roll of the boat made it fall over onto my foot, breaking my big toe." Ouch!

Constance Stirling-Engman (Ithaca, NY), had an unusual experience of being unable to submerge using a new hood. "My mistake was diving with a new hood without checking to see if it had an opening to release air. I jumped in and couldn't descend. The hood had filled with air, creating a huge bubblehead, and lifted me just enough so I was stuck at the surface.

"Confused and embarrassed that I was holding everyone up, I returned to the boat, cut several slits in it (it was a lightweight nylon hood), and was able to descend. I could have removed the hood during the first dive, but as a new diver, I wasn't used to problemsolving while in the water. I couldn't figure out how to remove the hood without removing my regulator (that was too scary). If something isn't an emergency, it is good to try to deal with it in the water instead of giving up the dive. These incidents reminded me of the importance of flexible problem-solving during the dive."

Setting the Anchor

After diving at home in California and worldwide since 1975, making a little over 3000 recreational dives, Randy of Palos Verdes Peninsula, CA, has had his share of mistakes, and one we hear about too often: the

It Takes Hope to Save Yourself

"If I drifted away from my dive boat alone and night came, I don't see how I'd survive," said an old dive friend of mine as we shared pints in our favorite Sausalito pub. We were talking about the two divers who floated for a day and a half in July before being rescued.

I, too, wondered what I would do adrift as darkness fell. How long could I last floating on the surface with not a speck of land or a boat in sight? I'd be damned frightened, and I hoped that for days on end, I'd be determined to save myself, but would I? I don't know. I've never faced such a test. Few divers have, thankfully.

As we talked over a second pint, I remembered an early '50s Harvard study I read years ago and tracked it down the next day. It's a cruel experiment led by Curt Ritter, an American psycho-biologist. To study rats' determination to survive, he let them drown. Good thing he wasn't studying humans.

His crew put a dozen domesticated rats in a water tank. Three floated around for a short time, then dived down as if to look around, maybe find a way out, but they drowned in a little over two minutes.

The other nine explored the tank more casually and stayed afloat for several days but eventually grew tired and drowned. [Why didn't the researchers latch on to them when it was apparent they wouldn't make it? No wonder people are opposed to live animal research.]

For part two of the study, they trapped 34 wild rats. Richter believed that because they lived in nature, they knew the wild world and could swim well, so they would fight to stay alive. All the wild rats drowned within a few minutes.

So, he hypothesized that domesticated rats had a support

system (in contrast with the wild ones), which perhaps led to a will to live. He figured that hopefulness would make the domesticated rats fight for their survival. So, he put a second batch of domesticated rats in a water tank. When they were on the verge of drowning, the researchers saved them and let them recover.

But then, he put them back in the tank. This time, the rats swam on and on. The duration for which they could survive surpassed the earlier time lengths. The only variable that had changed was that the drowning rats had been saved, making them aware, he concluded, of the feeling of hope. He concluded, "*After eliminating hopelessness, the rats do not die.*"

This brief reprieve seemed to mean that these rats "learned that they were not doomed, that the situation was not lost, that there might be a helping hand at the ready – in short, when they had a reason to keep swimming – they did. They did not give up, and they did not go under, " wrote Joseph T. Hallinan in *Psychology Today*.

We've written a few pieces on divers who spent nights adrift. In the Gulf of Mexico, Kim and Nathan Maker relied on hope for the future, chatting about the restaurants they would visit and the diving they would do, and when they spotted distant planes, they knew the next one would get closer. In the distance, they saw an oil rig and, full of hope, swam that way.

All abandoned divers rely on hope, seeing shorebirds, the stars in the sky, and maybe a distant land mass. They talk to their distant families and friends, promising they'll return.

And they do. It's hope that saves them.

- Ben Davison

combination of having no one on board the boat when diving and then failing to set the anchor.

"While learning to operate my newly purchased 25-foot SeaRay, I anchored on the lee side of Ship Rock, a great Catalina Island dive site, and entered the water with my buddy. Unfortunately, the wind shifted while we were underwater (I found out later it usually does), lifting the anchor off the rocks. When we surfaced, my boat was heading back to Two Harbors. Somehow, with all my gear on, I snorkeled to the boat, got in, started her up, and returned to pick up my buddy. Very scary. Another lesson learned the hard way is to check your anchor and know your dive site and prevailing conditions."

Critter Handling

For many divers, it's hard to keep their hands off the animals. Unlike wild animals on land, many creatures underwater are easily approached, and many can be easily touched. Rich Gallagher, once the owner of Marin Scuba Diving (CA), told us, "While diving and photographing in Belize, we encountered a beautiful octopus sitting in the open on a coral outcropping. We gently moved him from place to place for a better image with water in the background or for a close-up. As the fun continued, the gentle creature seemed to settle down and, at one point, rested in my open hand with his tentacles wrapped around my forearm.

"All seemed to be going well until I felt a sharp pain in my wrist and looked down to see a giant stream of green blood gushing from my arm. Octopus have sharp beaks, and this one was tired of putting up with our harassment. I still have the scar as a reminder of my surprise when our gentle friend had had enough."

Says Rich: "It is probably best for divers to avoid direct contact with creatures." And we second that.

Let wildlife be wildlife.

– John Bantin

Next Issue: Our final instalment of unusual mistakes divers have made.

Hawaii Snorkelers Drown Using Full-Face Masks

On vacation in Hawaii, 26-year-old Sophia Tsaruk and her husband, Ilya (Billy), from Snohomish, Washington, drowned in mid-September while snorkeling a mere 150 yards from shore, off the coast of the Ahihi-Kinau Natural Area Reserve in Maui. They were with her brother and his wife.

It's possible that CO2 builds up inside the mask, leading to an increased breathing rate and even panic by the user. Italian manufacturers like Ocean Reef and Cressi-sub say that their masks are so designed that this cannot happen, although there may be cheaper, less wellthought-out versions available from the Far East online.

While some ocean experts have questioned the safety of this relatively new snorkel design, especially in Hawaii, where several snorkeling businesses ban their use,

recent studies found the new design to be safe when made by a reputable manufacturer. Some experts suggest that pulmonary edema may be the true villain of the piece.

This medical condition can cause breathing difficulties, low blood oxygen levels, coughing, frothy or blood-stained spit, and, in some cases, death. In January 2023, *The Guardian* published an article highlighting the dangers of IPE, in which Dr Peter Wilmshurst, a cardiologist and a member of the UK Diving Medical Committee, who first described IPE in the 1980s, said, "I suspect that the majority of people who die in the water [having entered voluntarily – that is, swimmers or divers] – die from immersion pulmonary edema, not drowning."

That doesn't stop others from blaming the full-face snorkel for such deaths. Those who sell them may take some blame for omitting to tell purchasers how to use them correctly and that if they encounter any difficulty breathing while using one, they must be prepared to remove it instantly.

Snorkeling is the leading cause of tourist deaths in Hawaii, and, incredibly, most of the deaths occur in less than three feet of water. Those suffering difficulty breathing, as is the case from IPE, shouldn't just rip off the mask. They need to get out of the water immediately to recover. (https://tinyurl.com/2a4t3p95)

Diver Alert Network (DAN) says, "Overall, the incidence rate of snorkeling deaths is very small; with an average 10 cases per year and about 2 million snorkelers annually; it is approximately five deaths per 1 million snorkelers. In cases of cardiac death, there are about two deaths per 1 million snorkelers. While this small overall risk does not require any particular intervention, some people may be at much higher risk."



Cayman Reef Sharks

That shark you saw last summer at Little Cayman may be the same shark you saw the summer before on Grand Cayman. That's one bit of information from a nearly decade-long study of Cayman sharks discovered, and there are many more surprises found by the researchers.

Grand Cayman and Little Cayman are 59 nautical miles apart, and Little Cayman is just 3.5 nautical miles (nm) from Cayman Brac. They have narrow coastal shelves – 43 percent are Marine Protected Areas – dropping to more than 2000 meters deep.

Beginning in 2010, researchers tagged 66 reef sharks off Little Cayman (60 percent), Grand Cayman (26 percent), and Cayman Brac (14 percent). They placed 57 acoustic receivers at various spots, covering about 7 percent of the coastal shelf. Through 2019, divers periodically retrieved the receivers, and the data was downloaded and the receivers reattached to their mooring lines. The last data downloaded was in 2019. Data yielded 77,651 shark detections, 11 percent at Grand Cayman, 54 percent at Little Cayman, and 35 percent at Cayman Brac.

Residency

The sharks were classified by their behavior: Passerby, Transient, Pseudo-resident, and Resident. Only 13

some stay home, others roam the islands

individuals were found to be residents, with a linear home range averaging 11 nm, although more than half traveled less than 5.5 nautical miles. Six sharks (11 percent) were detected at more than one island, and three were detected at both Grand Cayman and the Sister Islands. All inter-island movements occurred from April to September; a mature male and a mature female repeated their inter-island movement in two non-consecutive summers.

Sharks appeared to concentrate more north and southeast of Grand Cayman, northwest, west, and south of Little Cayman, and east and south of Brac. The reasons may be food availability and avoiding human activity. On Grand Cayman, boat traffic and water sports are concentrated along the west and northwest, so the sharks avoid the area. On the south side of the Sister Islands, they may seek more exposure to wave action and strong currents. Many areas were identified as the primary site of only one individual.

This study recorded the first documented movement by Caribbean reef sharks over distances greater than 27 nm, traveling as far as 80 nm across the ocean deeper than 6,500 feet. This suggests reef sharks likely travel to Cuba (77 nm from Cayman Brac) and Jamaica (112 nautical miles). Most Caribbean reef sharks are either migrants that come and go or nomads that pass

Adrift for 40 Hours, the Makers are Back Diving

Kim and Nathan Maker, had their dive trip on the *MV Fling* into the Gulf of Mexico turn into a nightmare as the couple drifted 40 hours before being rescued (see *Undercurrent*, August 2024). That was in late July. In September, they were back diving, this time off Palm Beach, Florida, and they were filmed by *Inside Edition*.

The captain of Dive Time Charters briefed the couple on safety procedures, telling them, "In the event you guys find yourself separated at any point in time, you're gonna follow the lost buddy procedure. When it's safe to do so, I'll come pick you up."

The couple then geared up. "There's always a little bit of hesitation, a little bit of nervousness every time we dive," Kim said. At first, the couple clung tightly to the dive rope but quickly let go and dove into the depths.

"With me, sometimes I feel like I'm invincible," Nathan says. "You always think like, 'That happened to somebody else, not to me,' and so I do know, like when we went missing and as soon as the boat went completely out of sight, I remember thinking inside, 'Oh no, this is how movies start, not good movies.""

When the dive was over, they surfaced and waited for their dive boat to pick them up.

"The diving was great. But then, sitting on the surface of the water again, just floating, I did not like that. That took me back to a very bad moment, and it's like, 'Yup, I'm done with this.' I get back on the boat. I don't want to do this anymore," Kim says.

The Makers say they are grateful to be able to get back into the water.

"I just wanted to conquer that fear. Fear does not have to overpower you," Kim says.

"I think this made us stronger as a couple and individually," Nathan says.

You can view an excellent video of the couple describing their harrowing 40 hours at sea at:

https://tinyurl.com/uvny87j7

by once, spending only a limited amount of time in one area. The Caymans may be a "navigation point" or "pit stop" en route from one Caribbean region to another.

Some Caribbean reef sharks undertook movements far beyond the usual home range. Movements by mature individuals could result from foraging, social interactions, reproductive requirements, or investigating potential foraging grounds while avoiding the territories of others. Immature sharks moved strictly between Little Cayman and Cayman Brac, following a direct path along the upper reef with less exposure to potential predators.

Females were detected more frequently on receivers that did not detect males (on Grand Cayman and Cayman Brac) and were detected less frequently on receivers that detected both sexes (on Little Cayman), suggesting that females might seek to avoid male encounters to mitigate energy demanding mating activities outside of the mating season. In contrast, male sharks were more mobile than females, perhaps a mate-searching behavior. Surprisingly, despite having strong site fidelity, females in this study made longdistance movements more often than males, indicative of possible migrations to more favorable areas for parturition and survival of pups.

All long-distance movements between islands occurred between May and August, peaking in July. Only mature sharks moved between Grand Cayman and the Sister Islands, and a few sharks made multiple trips between islands. This behavior coincided with the months when mating scars on female Caribbean reef sharks are evident and diver observe newborn Caribbean reef sharks.

Mature individuals of both sexes undertook repeat trips between islands in non-consecutive years. The annual, or in females, the biennial reuse of a particular area has been linked to the apparent biennial reproductive cycle of females in most large-bodied shark species in which the gestation is thought to be approximately one year; females can give birth every two years. Finally, the sharks showed no significant patterns of regular (diel) occurrence or movement behavior. This was a surprise because it was expected that the number of individuals detected and their space use would increase at night because of greater night foraging activities. Diel behavior is widespread in sharks due to feeding behavior, predator avoidance, energetic advantages, and environmental conditions. Caribbean reef sharks have been reported to exhibit a diel shift in habitat, with sharks tending to occur deeper (e.g., outer reef, deeper depth) during the day and shallower (e.g., inside lagoons, shallower depth) during the night, behavior that has been linked to both foraging success and predator avoidance.

The study provided an understanding of the movements of Cayman reef sharks, which is essential for the conservation and management of the species. Although the Marine Protected Areas (MPA) have proven beneficial for reef fish, this study shows that individual sharks' home ranges extend to areas outside the protected zones, where they can be exposed to recreational fishing. The realization that existing MPAs were unlikely to provide adequate protection for threatened shark species was key to passing legislation introduced in 2015, giving blanket protection to all sharks throughout Cayman waters. MPAs now comprise 48 percent of the Cayman shelf.

Last year, scientists from the Department of Environment estimated that there are 180 Caribbean reef sharks and 336 nurse sharks in the Cayman Islands. Hammerheads, lemon, blacktip and tiger sharks are too few to estimate populations.

Citation: Kohler J, Gore M, Ormond R, Johnson B, Austin T (2023) Individual residency behaviours and seasonal long-distance movements in acoustically tagged Caribbean reef sharks in the Cayman Islands. PLoS ONE 18(11): e0293884. https://doi. org/10.1371/journal.pone.0293884 (This work was supported by funding from the UK government, and the Save the Seas Foundation. A small portion of the funds came from the Cayman Islands Brewery sale of Whitetip Lager, which is donated to the Cayman Islands Department of Environment's shark research.

Flotsam & Jetsam

Scuba Instructor Charged with Sex Abuse. A Sandy (UT) man, David L. Butt, 40, was charged on September 17 with sexually abusing a young female scuba student. The 10-year-old says Butt would repeatedly place his hand inside her bathing suit, and she would try to swim away, according to court documents. This is said to have happened each week that she had

scuba lessons. There have been similar charges against Butt, prosecutors say.

Don't Give Yourself a Lung Infection. The old chestnut of breathing down your BC before making a negative entry, say in a strong current to avoid missing the dive site, has arisen again on social media such as Facebook and other diving forums. Don't do it. A BC can be loaded with pathogens (especially in a tropical climate), and inhaling it can cause a lung infection. The

best way to make a negative entry is to duck dive down, kicking hard, while dumping any air in your BC, pulling open the lower dump valve. It works.

Vandalism on Coral Reefs. Underwater vandals have been engraving their names on live coral in



many parts the Philippines, and visiting scuba divers have been appalled to see graffiti on hard corals. The damage can be profound. The impact on the local tourism economy can be huge if corals die.

Carolina Sharks. Dozens of small sharks washed onto the North Carolina shore – all bleeding from their mouths. The N.C. Coastal Management Division workers found 51 dead Atlantic sharpnose sharks at the tideline ranging 14 to 21 inches long. The cause has yet to be discovered. (*Miami Herald*)

Not Another Surely? While you're still digesting our booklet, *A Decade of Liveaboard Losses*, liveaboards continue to catch fire and burn more frequently than we would like. This time, it was the phinisi-rigged *Naraya* (not to be confused with RoRo ferry with a similar name) in Indonesia's Labuan Bajo, Flores, on September 23. All aboard were rescued safely from the



wooden-hulled vessel. The cause of the fire has not yet been determined. It's another reminder to be fire-aware when on a liveaboard and carry a personal smoke detector in your luggage to put in your cabin.

Great White Encounter Off Catalina.

Southern California divers had a close encounter with a 15-foot great white shark on September 29 while diving from *Sundiver International*. Seamus Callaghan (known for his work with Oceanic and Huish Outdoors) described the shark swimming peacefully past him a mere six feet away. The Shark Lab at Cal State Long Beach has tagged several white sharks in the area, but on initial examination of the video, this was not one of them. www.youtube.com/watch?v=gK7BpVs1Kjg

Hurricane Helene Strands Manatees. Florida Wildlife officials rescued four stranded manatees and tended to seven others after Helene struck. Higher water levels allow the manatees to move beyond their usual range, but some become stranded once the water recedes. One got stranded in a roadside puddle, another on a grass bank. "All these manatees are still in really good health," one official said. "So, it's mostly just getting them out of the traffic and back in the water." As air breathers, the manatee can survive a long wait.

Underwater Australasia Awards. The winners of the Underwater Awards Australasia (run jointly with the Dive Travel Guide, UW Images and Underwater Australia, have been announced in Sydney at the Go Diving Show ANZ on September 28. Gabriel Guzman,

a Chilean who lives in Cairns, won the "Best of Show" – with executed sunburst images. A total of A\$50,000 was awarded to entrants. You can



see the winning photos here: www.underwatercompetition.com/uwaa

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