undercurrent

The Private, Exclusive Guide for Serious Divers

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Raja Ampat, Indonesia

by land and by sea

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Dear Fellow Diver,

When divers talk about the world's best diving, Raja Ampat in Indonesia is often the topic. After all, this area off West Papua -- home to 1500 islands, cayes, and shoals -- contains more hard coral and fish species than in any other region -- 550 hard coral species and 1400 fish species. If there is any destination on your diver's bucket list, this should be it.

If you're a North American, it's a long way from home: two full days, plus or minus, to get there, and the same for returning home. Travelers from the East Coast often fly to Jakarta through Dubai or Istanbul, while from the West Coast, Seoul and Singapore are common non-stop options. From Jakarta, it's another two-hour flight. Most itineraries require an overnight somewhere in a hotel; even then, you'll arrive jet-lagged and out of sorts. So, at least 10-14 days at your destination makes sense, as does having a good travel agent to put it all together for you.

Whether you stay on land or hunker down on a liveaboard, you'll have differing dive experiences. In this issue, we'll feature both a liveaboard -- the Damai II -- and a resort, Misool Resort, as well as an article by our senior editor, John Bantin, who has dived the area four times, spending many weeks there.

Misool Resort

Misool Resort

After my first backward roll into the waters of Misool, I was awed by the huge sea fans up to six feet high and wide. So abundant were the colorful sponges and soft corals, I felt like I was in an over-stocked flower shop. The schooling fish extended as far as the eye could see, which is rather far in the 50- to 75-foot visibility, in toasty 85-degree water.

Noted marine biologist Dr. Robert Erdmann (author of 214 scientific articles and science adviser for films by BBC and NatGeo) wrote about Misool: "There is greater diversity . . . . a larger number and greater diversity of fish, coral, and mollusks . . . . on these reefs than anywhere on earth. A single football field-sized patch of Misool's reefs has nearly five times the number of coral species as the entire Caribbean Sea."

And that means emperor angelfish, wobbegong sharks, fusiliers in massive schools, pygmy seahorses at a shallow 30 feet, black tip sharks, bumphead parrot fish, and manta rays so prevalent that all 20 divers sighted them in my group. Some days at dusk, I joined boat dives to see fast-moving flasher wrasse as well as brilliantly colored mandarin fish.

Though Misool is one of the world's more incredible places for scuba diving, there aren't many divers, mainly because "you can't get there from here," and if you do, you've spent a bundle. As Ben's introduction indicated, it's at least a two-day journey for North Americans. And a complicated one. After arriving in Jakarta, I got a hotel room for several hours, then flew to Sarong at half past midnight. Feeling like a bleary-eyed, walking zombie, I arrived around 6 a.m. (a four-hour flight, a two-hour time change) and waited until 8 a.m. to take the boat for a four-and-a-half-hour journey to Misool Resort. Thankfully, it was a comfortable boat with cushioned seating, an outdoor area, coffee, soft drinks, and snacks. Sixty hours after leaving home, I landed at the Misool dock. In 1969, it took Buzz Aldrin 76 hours to travel from Florida to land on the moon.

The spectacular Misool Resort is on a small private island in remote Southern Raja Ampat. Mark Atkinson, a charming New Zealander, competently manages his staff of 80. Crafted from recycled tropical woods, the lovely dining room opens on three sides to the lagoon. A two-minute walk takes you to the dive center and camera room. Its 19 cottages and villas, either over the water or on steep slopes, hold 40 guests. All have ocean views and are furnished with a queen-sized bed, stylish chairs, and a bathroom with a warm shower (towels are not limitless -- the resort makes its own fresh water). The over-the-water villas have a deck with two chaise lounges for enjoying the sunset. My villa had an electric tea kettle, teapot, and French press, with tea bags and ground coffee. Most guests were American or British, along with a few other nationalities, and a staff-to-guest ratio of 4 to 1.

The smiling and helpful dive staff carried the tanks to the boats, set up gear, and checked the nitrox levels. On my first day, I asked a leader his name.

"Bram," he said. Being the clever fellow I am, I told him that Bram Stoker was the author of Dracula. In a well-rehearsed schtick, his colleague Van responded, "never night dive with Bram because he'll suck your blood!" I suppose they hear that weekly.

I dived three single-tank boat dives daily, at 8 a.m., 11 a.m., and 3 p.m., and an occasional dusk dive. From alongside the dock, the six stable 23-foot covered aluminum speed boats reach most sites in under 10-15 minutes. Though small, the boats are crewed by a driver, deckhand, and two dive leaders for the eight divers aboard.

One of those nearby sites is Boo Windows, with two swim-thrus. Down below, as I marveled at the large, healthy plate coral, a fellow diver pointed beneath one plate, where a unique wobbegong shark had settled in, accompanied by a couple of

Raja Ampat Explained

Raja Ampat, or the "Four Kingdoms," is a group of Indonesian islands off West Papua's Bird's Head Peninsula. It became a hot diving spot in the '90s after Australian ichthyologist Gerry Allen and underwater photographers Denise and Larry Tackett revealed it had the world's richest reefs. More species of coral and fish have been identified off Cape Kri than anywhere in the world.

What makes these reefs so rich? Pacific ocean currents combine with tides and force water up through the Dampier Strait, where Kri Island acts as a foil to the flow. The nutrients in the cold oceanic up-wellings support the fabulous and prolific underwater flora and fauna.

Between Kri and the larger island Waigeo, the channel is peppered with reefs, causing ripping currents and over-falls. The currents near Kri can send the unprepared diver whirling downward, bottoming out at 40m before being released and spat out. At the far end is a manta cleaning station – Manta Sandy – where you hook into something secure and watch the mantas dance in the flow. Once you've selected your position, it's impossible to swim to another, the current can be so strong. Sometimes the sand is whipped up like an underwater sandstorm, leaving your photographs unsharp and disappointing, but if there is no current there will be no mantas.

Underwater photographers who like to dive repeatedly with the same subject to perfect their shots may be disappointed at many sites. Around the Dampier Strait, it's different every time you get into the water. The vast quantities of nutrients can also be problematic.

Most liveaboard operators have earmarked sites farther south that are less demanding of a diver-photographer. Of course, they are often less spectacular. Many of these reefs are home to pygmy seahorses. Take a strong magnifier or an extreme-macro camera.

Liveaboard operations tend to be divided between Northern and Southern charters. Some more extended trips incorporate both areas but leave the diving in the Dampier Strait until last so their passengers are well-dived. There is no point in frightening your passengers at the beginning of a charter.

The islands in the Misool region are jagged peaks that rise spectacularly. Close to the Misool Resort are three sites to which they shuttle divers back and forth, and the currents seem manageable. Liveaboards tend to press on after a few dives, ever looking for something better.

Finally, a word about the weather. Raja Ampat is at zero degrees latitude, and nowhere in the world is more tropical. The islands are in the doldrums, and strong winds with rough seas are rare. However, temperatures vary between extremely hot and quite cool and can happen almost moment to moment. Clouds continually roll across the sky, obscuring the sun, and it rains in biblical proportions, sometimes for days on end.

With ordinary ISO settings on my camera, I've often needed long exposures to get the background light in balance with my flash. Down deep, there is little natural light. In the north, nutrients rushing past in the current can cause an unsharp effect so pictures can be disappointing. That said, there's always plenty to photograph. In the southern area, diving is easier but visibly and dramatically less dynamic.

Said simply, the Dampier Strait is good for adventurous diving, and the southern area around Misool is better for more sedate underwater photography with plenty of macro subjects.

– John Bantin, Senior Editor

For an expanded version of this piece, with the history of diving in Raja Ampat, read John Bantin's extensive blog **here**.

Villa at South Beach, Misool

sweet lips. I cruised among immense, pristine barrel sponges, marveling at the large gathering of fusiliers and baitfish. In a crevice, a hairy squat lobster kept a careful eye on me. Because the current was strong, I had to use my reef hook to stop and look, being careful where I hooked to avoid snagging live coral. And one had to be careful not to get scraped. I wore a 1 mm wetsuit to protect me on those few occasions when the currents swept me into some hard coral.

On almost every dive, the currents were strong. While diving from the 23-foot boats, we usually entered the water simultaneously, diving up to 75 feet deep and never surfacing as a group because the currents moved us quite a distance apart. Indeed, it was even hard to stay with my buddy, so carrying a signal marker buoy (SMB) was mandatory. On one dive, our leader had to blow his whistle to summon the boat from the other side of a rock island because the captain couldn't see us. I was glad I had my long-ignored whistle on my BCD.

We were free to dive as we wished, with no restrictions on time or depth, so the leaders' jobs were to keep an eye on us as best they could rather than point out things; however, when planning a dive, they tried to meet a group's requests for seeing such things as manta rays or dense schools of fish. After each dive, they performed a careful headcount. Understandably, there were no night boat dives.

Misool Resort

Diving	★★★★★
Diving for Photographers	★★★★★
Diving for Beginners	Don't go
Accommodations	★★★★★
Food	★★★★★
Services and attitude	★★★★★
Money's worth	★★★★★

★ = poor ★★★★★ = excellent

Worldwide

The founders of the Misool Resort established and now fund the Misool Foundation, a charity that supports an 18-person, 3-boat ranger team that constantly patrols the area to enforce the no-take policy to keep the marine sanctuary pristine. That sustainable, eco-friendly ethos seeps into the kitchen, and from my pre-trip reading, I learned about such things as "Meatless Monday." As one who considers a Big Mac an appetizer, I was worried that the food would be hippie stuff -- like tofu and sprouts -- accompanied by green tea. But I was stuck in the past. The meatless meals were delicious, and one could always go off the day's menu and get chicken, meat, or even pizza (but no pork; Indonesia is the world's largest Muslim country). Or go vegetarian or vegan. For example, one night's dinner menu offered two entrees: slow-cooked curry with beef or slow-cooked curry with jackfruit and tofu. I went for the curried beef, but both were excellent and served by a skilled wait staff. The pastry chef, Yuna, baked sinfully delicious desserts as well as all the bread, rolls, and muffins. The Indonesian beer, Bintang, is quite good, and there were some Balinese wines, which were, well, only just drinkable.

The dining room opened at 6:30 with a buffet of fruit, cereal, muffins, and toast. After the 8 a.m. dive, there was a full breakfast about 9:30, with eggs, pancakes, French toast, and oatmeal. One morning with my eggs, I ordered beef bacon, which was barely OK compared to the real stuff.

For me, it was a long walk to breakfast. I stayed in the South Beach section, which is less expensive because it is a good 15-minute walk, which included up and down 220 narrow, steep, and winding steps. It is a good workout but a sweaty slog in the humid, equatorial weather. It can be too much to return to it between dives, but South Beach villas each have a two-way radio to summon the taxi, a small run-about that lands on the beach and zips you to the dive center dock. It doesn't run during low tide, so you'll inevitably do some walking.

Misool Dive Boat

The dive center has several dunk tanks, warm water showers, bathrooms, and a place to hang wetsuits. Inside, each villa has an assigned area to stow gear, wall pegs, and a cubby. Next door in the camera room, cooled by ceiling fans, are a dozen camera stations. On the second floor of the dive center is the hive, a large room with tables and chairs, comfortable couches, and a few ceiling fans, where photographers set up their laptops and share images or relax on the deck. Only here will you find WIFI -- and weak, at that; messages or e-mails sent usually got through, but sometimes very slowly. Forget net surfing or phone calls. Next door in the camera room are a dozen camera stations.

The resort also runs a 36-foot catamaran with a canvas top that holds a dozen divers easily. It travels about 90 minutes daily for a two-tank dive at sites such as Tank Rock, Nudi Rock, and Whale Rock. The Nudi Rock dive site is named for the two trees sprouting from this tiny rock that look, at least to those with vivid imaginations, like the rhinophores on a nudibranch. The Brits describe this site, as they do many Misool sites, as "currenty," and indeed, there are often strong currents. But the upside is that schools of fish thrive in the currents, which are nourishing the hard and soft corals. Here I saw a school of a dozen barracuda, stacked like logs, trevally, gray reef sharks, and a manta cleaning station. Two mantas swam in, swooped up for a 360-degree turn, then returned. The rule here is to remain stationary and let them come in on their own. After the dive, I handed up my gear, climbed the ladder, and headed for snacks and drinks before the second dive.

I did have one concern about diving from the small boats. Most leaders counted 1-2-3, and together we would all roll in. But, some did not count, so we entered when ready, which I thought risky. The strong current could quickly move a diver in the water, directly under another diver rolling back; his tank could crunch the head of the diver below. If a leader did not count off, I'd ask a crew member if it was clear behind me.

Your Travel Experiences are Important to Other Subscribers.

The ever-growing resource that are the *Undercurrent* readers' independent reports is one of the main reasons others subscribe. There's nothing like the unvarnished truth delivered by fellow divers to give an accurate impression of what a dive resort and its accommodation or a liveaboard is really like. These reports, now numbering more than 11,000, are unedited and tell it like it is – which is where you come in. Write a report about a recent trip and post it alongside others. Don't hold back – tell both the good and the bad. You can even add photos if you wish, and it's easy to compose because you can add to or edit as you go or even come back to it later. Go to **www.undercurrent.org/members/UCnow/SubRRTopMA.php** to get started.

As Animals Confront Us, We Must Blame Ourselves

Last month, *Undercurrent* reported that a river dolphin nearly bit off a woman's foot in Bolivia, a rare and extraordinary occurrence. In the same month, an elephant killed a man in Kenya, and an alligator drowned a woman in Florida.

According to a new study by University of Washington researchers published on February 27 in the journal *Nature Climate Change*, climate change may be increasing the frequency of violent encounters between humans and wild animals.

"We found evidence of conflicts between people and wildlife exacerbated by climate change on six continents, in five different oceans, in terrestrial systems, in marine systems, in freshwater systems – involving mammals, reptiles, birds, fish, and even invertebrates," said Briana Abrahms, a UW assistant professor of biology.

Shifting weather patterns affect wildlife behaviors. Warmer air and ocean temperatures in a severe El Niño have led to an increase in shark attacks in South Africa.

Rising temperatures in the Arctic have melted sea ice, leaving polar bears with diminished food sources. As a result, they look for food on land, increasing their confrontations with humans.

In Tanzania, lions' usual prey have migrated away from floodplains, prompting more attacks on humans.

The researchers expect human-wildlife conflicts to increase as climate change intensifies, so studying this link can help policymakers find solutions.

One success story lies in California waters. In 2014 and 2015, a record number of humpback and blue whales became entangled in fishing lines off the coast. Research later showed that an extreme marine heat wave had driven whales closer to shore to follow their primary food sources. California regulators now adjust the start and end of each fishing season based on climate and ocean conditions delaying the season if whales and fishing gear are likely to come into close contact.

"These examples show us that once you know the root causes of a conflict, you can design interventions to help both people and wildlife," said Abrahms. "We can change."

One fine dive spot with no current was the shallow lagoon opposite the house reef. In the 50-foot visibility, I spotted many fascinating creatures, including shark pups swimming in the shallows. One morning walking to the dive center, I noticed two octopuses mating. It's an excellent spot for split-level shots to capture the shore and critters below.

My week at the beautiful Misool Resort was hassle-free, thanks to a professional, well-trained staff that worked hard to make that happen. For guests, it was necessary to maintain a sense of humor because, for many, the lengthy, multi-modal travel seriously disrupted sleep patterns. We seemed to have a silent agreement that we'd all grin and bear it. My only complaint would be the mosquitoes (they're out at dusk and dawn), but the mosquito netting over my four poster canopy bed kept them away at night. The housekeeping staff neatly rolled up the netting in the morning and lowered it before I returned from dinner. My air conditioner over the bed made sleeping comfortable. Considering the energy-conscious, pristine environment, I never ran it during the day.

The resort closes from July through September when the seas get rough. Mark Atkinson leaves then to pursue his passion, power gliding, where he jumps off cliffs with a parachute and a small engine with a propeller strapped to his back. And I thought current diving was challenging.

Clearly, Raja Ampat is for advanced divers only. Although the resort has a nurse on staff, the nearest doctor is in Sorong, and then it's a two-hour ferry ride to the nearest chamber. With the strong currents and diving freedom, one must be a cautious diver skilled in buoyancy control. If you are, you'll relish the extraordinary diving offered by this beautiful, top-of-the-line resort.

--G.P.T.

Our undercover diver's bio: *Certified in 1983, I am a PADI Advanced Open Water diver with more than 1,000 dives from resorts and liveaboards in the Caribbean, Indonesia, Philippines, Maldives, Red Sea, Mexico, Florida, California, and Hawaii.*

Diver's Compass: Depending upon your cottage or villa location, a seven-night stay ranges from $3,370 to $4,045/person; add 40% for single occupancy; they also offer 9- and 12-day packages, more suitable for all the travel involved . . . . The price includes all meals, three daily boat dives, unlimited shore diving, nitrox, and a night's hotel stay in Sarong before boarding the flight back to Jakarta . . . . To run the credit card machine during check-out, the resort turns off the WIFI . . . . They offer snorkeling trips; stand-up paddle boards; sea kayaks; diver propulsion vehicles; and hikes on nearby islands . . . . Rental gear, including 1 mm wetsuits and skins, is top-notch, but there is no equipment repair . . . . The 80 cu. ft. aluminum tanks were always filled to 3000 PSI . . . . Round-trip boat transfer from Sorong is $380 pp . . . In Jakarta, I stayed at the FM7 Hotel, which was clean and adequate. www.misool.info.

Damai II

Raja Ampat seemed to offer the best diving on the planet, so I've been eager to visit for some time. At last, I selected an itinerary aboard the Damai II, sponsored by Blue Water Dive Travel, which covered a swath from the central islands to the northern ones and then to the southern islands. Along the way, I learned that the best diving on the planet does not mean every coral, fish, and critter rolled into one, day in and day out.

On my third day out, I did have that near-perfect diving. After we anchored near Sauwandarek Village jetty in Pulau Mansuar, I descended past several two- to three-foot barracuda, then kicked along a stunning healthy coral garden, meeting up with a large green sea turtle. She didn't mind my intrusion, but an inconsiderate photographer stuck his camera in her face . . . . goodbye turtle. I kicked up to the old pier where hundreds of sergeant majors darted about. In deeper water, a massive school of yellow-tailed fusiliers intermingled with a great school of jacks to become an enormous wall of fish so thick I couldn't tell if a diver was behind them. I hung out for eight minutes watching the show. Would it all be like this?

When I arrived at the hot and humid Sarong airport at 6:30 a.m., I was met by Mika Hollnbuchner, an Austrian, formerly an IT professional and now the cruise director of the Damai II. After a quick drive to the harbor and a short haul on the dive skiff, I climbed aboard the striking, ironwood craft with shiny teak decks. Built in 2011, she's a 40-meter diesel-powered craft, showing just a bit of wear, that accommodates 12 divers in 7 cabins with a crew of 20.

My spacious air-conditioned cabin had a double bed pushed up against the bulkhead, giving me plenty of room. The ceiling had been taped in a few spots to prevent water from dripping on the bed, which it did, but overall the room was comfortable, and the large bathroom shower had plenty of hot water and a bench to sit on.

MY Damai II

The boat is a photographer's dream, so Blue Water Dive Travel uses it for photography workshops, and this one was led by photojournalist Mark Hatter. He instructed us on shooting techniques and post-production using Lightroom. We were an eclectic group of photographers, ranging from those shooting with housed iPhones to professional-level photographers using DSLRs with elaborate light configurations. Mainly Americans, we

A spacious air-conditioned cabin

were joined by a German, an Austrian, and a UK ex-pat living in Singapore. All were good divers, and most were avid photographers.

On the dive deck, each gear station had a camera rinse tank next to the seat where the tank/BCD is stowed. An air hose was readily available to blow off the cameras. The staff carefully loaded our cameras onto the skiffs, unloaded them after the dives, gently rinsed and blow-dried them, and placed them at each diver's spot in the camera room, which had 11 stations with 120-volt and 220-volt outlets. Even the dining room table has power outlets underneath so guests could plug in between dives -- and maybe during meals, as some did.

But there was one odd problem. During the evenings, we presented our best images or video clips to receive feedback from Mark and the group on composition and color grading. However, the salon had an outdated screen projector, so we didn't have the clarity and resolution of HD TV monitors, quite a shortcoming for this upscale craft.

With few exceptions, visibility wasn't good for fish photographers; often, a school of fish 20 feet away was hardly visible. My video lights illuminated the clouds of nutrients in the water, obscuring whatever I was trying to shoot. In this kind of water, macro shooting is the way to go. When visibility improved, I marveled at large schools of jacks, sweetlips, and snappers, turtles here and there, and I saw a few sizable, well-camouflaged wobbegong sharks lolling on the bottom. On one dive with excellent visibility, we were diving a sea mount with swarms of fish, even baitballs, and my camera failed. Initially I was upset, but after relaxing and diving as a tourist rather than a photographer, I appreciated the sea life more than I would have had I been fiddling with my camera.

The night dive at Tapokreng along a sandy slope was perfect for spotting little critters, like seahorses, two tiny crabs that appeared to be mating, and scores of colorful, radiant sea urchins (think of Tribbles from Star Trek, but spiny, not furry). I was filming a tiny cuttlefish when suddenly it bounced up and crashed a couple of inches away. When I reviewed my video, I saw that a tiny fish had swooped past him in a blur and stolen his prey. He recovered quickly and gobbled up another little critter illuminated by my lights. Later I was carefully filming a small octopus whose head was not much larger than a thimble when I felt a sharp needle-like pain in my knee. I swore through my regulator when I realized I had inadvertently brushed a sea urchin. Back on the boat, I spent several minutes digging into my flesh with a sewing needle to extract the spine tip.

Our daily routine was a light breakfast from 5:30 to 7 a.m., a dive, a hot breakfast from 8 to 8:30 a.m., a 10:30 a.m. dive, lunch, a third dive around 3 p.m.; then the night dive -- really a twilight dive -- around 6:30 p.m. Dinners were after the night dive, though divers who skipped the night dive could have dinner earlier. With only two dives offered on a long transit day, we totaled 30 over eight days. Between dives, I hung out on the large main deck salon or the bridge deck and sometimes headed to my cabin for an afternoon nap.

The ship's captain, assistant captain, engineer, and deckhands kept us moving and assisted divers when loading/offloading from the skiffs, toting gear, or getting in and out of wetsuits. They rinsed, hung, folded, and placed our wetsuits at each diver's station before the next dive. We all wore cover -- I wore a 5 mil and

Divemaster or Dive Guide?

We commonly refer to professional divers who escort us on dives in exotic places as "divemasters." But are they?

A PADI Divemaster has received certification after demonstrating swimming and lifesaving skills, among other things, and they'll have a certification card to prove it. (You can always check with the dive operations manager.) A divemaster is trained to assist PADI diving instructors by covering safety aspects when teaching. Often divemasters demonstrate some skills to the students, but in classes, their role is to take action should, say, a trainee decides to break for the surface while failing mask or regulator-clearing skills. Divemasters are trained in supervision, risk management, rescue, first aid, and CPR. They have a duty of care, the responsibility to look after you.

The local guys who escort you on a dive might well be certified divemasters, but often they're just guides who know the sites, can point out interesting features in wrecks, and can find you a hairy frogfish or a pygmy seahorse. They're underwater tour guides, probably without the duty of care to supervise divers accompanying them. If they're not divemasters, they should not be called a divemaster. You can't expect them to be well-trained in risk management and rescue, and you can't be sure they have a duty of care if you get in trouble.

Too much new diver training these days leans toward quick certification for those who pay for courses rather than ensuring they become competent, autonomous divers. The commercial pressure to certify people in short order means that many newly certified open water divers expect to be looked out for rather than being able to look out for a buddy.

Nowadays, it's common for a group of divers to follow the local dive guide. They assume he will be able to unravel any problem that arises. However, if two or more divers have a simultaneous problem, causing one diver to head for the surface while another sinks, for example, a single dive guide will be in a quandary, unable to respond to both, with no help from his barely trained certified divers. You can't even be certain a dive guide has the duty of care, with a responsibility or skills to aid divers.

While *Undercurrent* subscribers tend to be well-trained and experienced divers, your impromptu buddy may not be, especially if he was assigned to you. Discuss the dive leadership with him. You may not want to be diving merely with a guide, if your buddy really needs a divemaster.

– John Bantin

a hood -- though the water was around 86 F. I wanted protection from the scores of jellyfish on many dives -- the first day, a diver got badly stung on a hand and leg.

They divided us into three groups of four, in two skiffs, with the guides rotating between groups. The guides gave excellent briefings and artistic descriptions of each site. Two local guides, Yanto and Rian, had a knack for finding the unique. All the macro lovers wanted to join Rian because he discovered the tiniest critters, including several pygmy seahorses smaller than a fingernail. The third guide didn't lead us according to the dive briefings and didn't point out much, so with him, I was more inclined to dive on my own, venturing from the group to search for unusual creatures. We generally surfaced at the same time since everyone was a slow breather and a good diver.

The Passage, a tiny channel between Waigeo and Gam islands, is a dive with a raging current where divers "fly" from one end of the channel to the other, theoretically with lots of fish over great corals. As the skiff made its way through the beautiful channel, we were flanked by mangroves and rainforest; the water churned in spots as if we were riding on a fast-moving river. The plan was to drop in, ride the current for 30 minutes, and for me, film anything that looked interesting, a challenging task in a current.

My dive team included a California doctor and a couple from Ohio. The current was strong, the water murky. It was a challenge to keep an eye on my buddies. The other boat's team caught up to us, flew by, then hooked up, and the Doc joined them while the three of us and our guide continued flying through the low-viz channel. Ten feet away, my buddies were only silhouettes. I didn't spot any fish, and nothing interesting on the bottom.

After five minutes, the four of us (our doc buddy had been hurled down the current alone, eventually surfaced, and was picked up) ended in a side pool jostled about by an eddy. We kicked to the center of the channel and floated with the current. The skiff soon arrived. The groups reconnected, and some of us decided to repeat the dive but stay closer to the shore and mangroves (I still had 1800 psi). This time, skirting the walls was much more enjoyable -- the viz wasn't much better, but there was plenty to see. Near the end, we slipped back into the serious current, and I nearly bulldozed a dead tree on the bottom. Current rides are thrilling, though at times unnerving in low visibility.

Damai II's *dive skiff*

In case I got in trouble on any dive, I always carried a Nautilus Marine Rescue GPS, which enabled me to send my location to the Damai II. I can program it with any liveaboard's MMSI number and send a "Man Overboard" distress signal to that craft for 30 minutes; if I don't turn it off after 30 minutes, the Nautilus would then broadcast my location to all vessels within range. (You can read more about this in the May 2020 issue of Undercurrent.)

Meals were excellent, with the kitchen accommodating all requests. We could select one of the planned meals or ask for something else, quite unusual on a liveaboard. I discovered Mie Goreng, a traditional Indonesian noodle and veggies dish; it wouldn't be right without a teaspoon or more of sambal, their daily-made hot chili sauce that packed a punch! After one guest over-spiced his entree, sweat poured from his forehead for the rest of the meal.

***Damai II*, Raja Ampat**

Diving	★★★★
Diving for Photographers	★★★★
Diving for Beginners	Don't go
Accommodations	★★★★★
Food	★★★★★
Services and attitude	★★★★★
Money's worth	★★★★★

★ = poor ★★★★★= excellent

Worldwide scale

A typical lunch included a salad starter, then pork schnitzel. One day it was coleslaw salad, then burgers and fries. One dinner opened with cauliflower soup followed by sirloin steak or grilled eggplant and capped off by crème brulee. Another night, it was onion soup, followed by grilled pork ribs and cheesecake. Vegetarians received superb substitutes.

One morning, smoke from the toaster set off the dining room fire alarm. I didn't hear other alarms blaring because they were not connected to each other. A single upper deck smoke alarm may not be heard below decks. The primary escape route from my cabin was quick, but if forced to take the alternate route, I'd have to pass through two other cabins, which would be tricky in an emergency, since it was blocked when I tested it. Mika said he is searching for an integrated alarm system.

But there were no emergencies and no drama on this trip, uncommon when a boatload of strangers are locked up together for a week. The only "moments" I had were with a diver on my team who seemed a little clueless on photography dive etiquette (i.e., bumping into me or getting in front of me while I was filming), so I just stayed away from him (there's always one onboard). Otherwise, it was a boatload of great divers, great people, and an exceptional crew that made everything

What's Going on in Chuuk Lagoon?

A popular British former dive guide, Chrissie Bone, died February 21 after falling unconscious when she returned to the liveaboard *MV Odyssey* after an uneventful dive on the wreck of the *Shinkoko Maru* in what was once called Truk Lagoon. Those aboard presumed she suffered "undeserved" decompression sickness. She had worked with Blue O Two, Siren Fleet, and Master Liveaboards.

Her fiancé Michael Todd said that the absence of supplies at the medical facilities in the poverty-stricken Chuuk islands and an inoperable hyperbaric chamber meant her situation became hopeless. The actual cause of her death has not been verified.

Last December, Amanda Jacobs, a 37-year-old technical diver from St. Charles, MO, diving with the Dirty Dozen Expeditions dive group from *Pacific Master*, died in a similar way.

As you can easily discern, Chuuk is not a place to have a diving accident. If you're contemplating a visit, you should be a skilled, experienced, and conservative diver, as these two casualties were. Be warned.

run well and on time.

But none of us could control the one thing that bothered us all: the gobs of trash floating on the surface, at times so much that the skiffs traveled cautiously to avoid it. In one area, thousands of capped plastic water bottles floated in a debris field more than a mile long. At another anchorage, mounds of trash piled up against the hull. It all comes from land, and some say the primary culprits are the nearby growing settlements of Sorong and Wasai. Still, the ocean currents originate in the Philippines, which dumps more trash into the ocean than any other nation. The region has no waste management plan, so it's an unfolding tragedy.

Overall, I think my expectations were too high, for I did not see stunning corals like Fiji, the wild fish action of Blue Corner in Palau, or the many pelagics of Socorro or French Polynesia. And I did not have the gin-clear water I expected. But indeed, there was beautiful coral, endless fish, and unique creatures. Of course, no two trips are alike; conditions are never the same, and sites always differ. I'll return, maybe take a different itinerary at another time of year, but surely aboard the Damai II. I'm looking forward to seeing what I missed.

-- V.A.

Author's Bio: *I've been certified for 35 years, and since retirement, I've ramped up the frequency of traveling to new places. I dive and hike all over the world, with a passion for capturing those moments in pictures and videos and sharing my experiences with others. Hiker, diver, adventurer, amateur photographer, that's me.*

Divers Compass: I had a single cabin at US$9,250. It's around $7200/pp for a standard shared cabin . . . . Aluminum 80s were filled to 2900 psi; 100 cu. ft. tanks were available . . . Several divers rented gear because of strict airline weight restrictions . . . . Some crew members were massage therapists, offering free hour massages daily, indeed a luxury . . . . No charge for beer or soft drinks; a glass of wine comes with dinner; refills or bottles are extra . . . . Before departing, get informed on Indonesian COVID protocols . . . . Travelers from most countries must obtain a 30-day visa; pay before departing at https://molina.imigrasi.go.id/ . . . . At Jakarta, I whizzed through immigration while others waited in long lines. . . . Batik Airlines tried to charge one diver hundreds of dollars for excess weight, which he negotiated down to $200. I purchased an extra weight allowance on the airline website for $120. www.dive-damai.com

Punishment Abroad for Training Deaths

but it will never happen here

While the family lawsuit over the death of Linnea Mills was settled with PADI for seven figures, there has only been a cursory investigation by the government, and no charges were filed against the instructor, her employer, or PADI. The plaintiffs alleged that the instructor, Debbie Snow, failed on several counts and was responsible for Mills' death. It further implicated her employer, Gull Dive Center of Missoula (MT), for failing to manage her and PADI for inadequate training and instructor oversight. But, unless the government decides to bring charges aside from the money that transferred hands, no one has been held responsible for Mills' death. Dive training in the U.S. still relies on self-regulation, which sometimes means no accountability at all.

It's not like that in other countries, such as the U.K., where dive training is subject to regulation derived from statute. Authorities investigate accidents, subject those convicted to punitive damages, and seek to prevent the occurrence of similar incidents.

For example, in the U.K. in January 2023, technical diving instructor Lance Palmer was found guilty of breaching government regulations in the death of his student, Roger Clarke, 55, who drowned during a training dive. Palmer was sentenced in a magistrate's court and ordered to pay roughly $3800 in legal costs and contribute 50 hours of unpaid work.

An investigation by the Health and Safety Executive (HSE) found that Palmer did not adequately maintain and check his student's breathing apparatus; failed to remain in close enough proximity to monitor his student, which meant he did not notice the audible and visual alarms sounding on breathing apparatus (rebreather); contravened TDI rules for exceeding maximum diving depths on repeat dives; and failed to have an adequately qualified rescue diver in the water with him and the student.

The coroner found that errors and omissions by the instructor and safety diver "significantly increased the

Strange Tales from the Deep

Why is it that when celebrities talk about their scuba diving adventures, they seem ignorant about the fundamentals of diving while inevitably describing, with lots of laughter, how they almost died? The latest clueless actor, Paul Rudd, was interviewed on the *Late Night* show by Seth Meyers on February 14.

Here's their abridged conversation.

Paul: Did I tell you about the time I was scuba diving in Cozumel? I was new to scuba diving, and you're not supposed to fly the next day. Also, when you go below 60 feet or something, you have to decompress for three minutes, or you get something called nitrogen narcosis. And then, if you fly the next day, you can get the bends; you can die, and I came this close to getting an early flight out of Cozumel [the next day].

Seth: Wow, and you think you were full-on going to die if you got on it?

Paul: I know I would have died. I know it.

Seth: Oh my gosh, talk about a dodged bullet.

Paul: It was only because of the flight – we were there, and there was an issue with the plane, so I had to wait a whole day. It was Mexico; there's not a lot of flights, so I had to wait, but I knew I had to get back. It was the championship game – Chiefs versus Bengals. Oh my God, and I'm like, I can't be late to this. My son will never forgive me.

Seth: But meanwhile, he's lucky you did because otherwise, he'd be at the Super Bowl alone because of his dad: Dead in the air.

Paul: Yeah, dead in the air.

Seth: What a crazy story. Real quick, your three favorite things you saw underwater?

Paul: OK, a parrot fish and moray eel … and then just a body, just floating. I don't know what happened; I don't know who; I didn't follow up on it.

Seth: Did you tell someone?

Paul: I was too freaked out. I didn't say a word, so I was like, "Oh my God, there's just a dead body." Maybe it went deeper than 60 feet; I didn't take the time.

Seth: Maybe he didn't take the class. They were like we want everybody to take the class before they go diving, and that guy was like, "I'm fine."

Paul: Yes, he said I got this. You can breathe. I get it; I use this thing. I'll go up, and I'll be able to breathe again. Nitrogen narcosis knocked him out.

Seth: I mean, obviously, this is not a story he can tell but pretty cool that Paul Rudd was who found him. He'll never know, of course. Thank you so much for sharing these things that never happened.

Whatever Happened to Dive Knives? Our Recommendations

Back in the day, traditional surface-supplied hard-hat divers wore a massive Siebe Gorman brass-handled knife strapped across their chests in case they needed to saw through their heavy hemp lifeline. That's where the diver's knife first entered diving mythology.

Once scuba became popular, the first thing a would-be diver bought was a dive knife capable of slaughtering a grizzly bear. Having such a weapon strapped to your leg may have been legitimate for a scuba diver when it would have been classed as an offensive weapon for anyone else. But it signaled you were a macho dude and knew what you were doing in the underwater world. Even if there were never any chance of meeting and dispatching a grizzly down there.

Of course, such sabers were useless for dealing with the hazard most frequently encountered by divers: monofilament line. Good for cutting through thick hemp, maybe, but useless for slicing ghost fishing nets and detritus abandoned by anglers – even if an entangled diver could actually reach his calf to unsnap the case and retrieve his blade.

Eventually, the frustrating experience of unfortunate divers entangled in almost invisible monofilament was translated into small knives with line cutters built-in or (better still) trauma shears, strapped high up at the shoulder straps of the BC.

Come September 11, the traveling diver discovered that packing something that looked like a bayonet, even in checked baggage, could lead to all sorts of irritating and unnecessary questions at the boarding gate of an airport. Even more problematic, when you arrive in some countries and authorities discover a blade longer than four inches stashed in your luggage, you'll be having a conversation with law enforcement officers. So, keep that big knife at home and reserve it for your weekend barbecue.

A dive knife is not meant to be a weapon. It's emergency kit. What you want is a modern dive knife, small, with a line cutter for emergencies, a serrated blade for cutting through rope, and a sharp, smooth blade for making a sandwich at lunchtime.

Some suggestions: Stainless steel comes in various grades, but the more rustproof it is, the less sharp you can hone the blade. So instead of ending up with a knife that turns into a pile of rust in your dive bag, invest in a more expensive titanium knife such as the Scubapro Mako Titanium Knife ($155).

Atomic Aquatics produce quality products at a premium price, and the Atomic Ti6 Titanium Dive Knife at $175 list is no exception. Choose one with a useful blunt point that can be used as a screwdriver rather than a pointy ended one that's only good for hurting things.

As an alternative, consider Leatherman Raptor Trauma Shears, about $100, which are made of 420HC stainless and have lots of features besides scissors. You'll need to rinse and grease them between dives to keep them up to par.

For a similar price, you can get Maniago Pacific Junior Shears, which look more substantial in hardened stainless steel with grippy handles.

Zeagle Diver Tool Kit with EMT Scissors & Knife hedges bets over whether scissors or a knife are the best for a specific job. They come in a holster that can be attached high up on the BC ($80).

A cheaper alternative is Dive Rite's Trauma Shears in marine grade stainless steel at around $40, but the manufacturer is quick to insist, "Shears and sheath must be rinsed with fresh water and allowed to air dry after use to prevent corrosion to the blades. Corrosion and rusting are not covered under warranty."

Better than nothing when you're in dire need to release yourself from some line or net: Blue Reef Shears Cutter, which comes with a holster and can be picked up for less than $20.

– *John Bantin*

risks associated with the dive and may have caused or contributed to Mr. Clarke's death." While the penalty may seem slight, his involvement in the death is now on public record.

The allegations against PADI dive instructor Debbie Snow were such, that if she were living in the U.K., she surely would have faced such an investigation. American instructors may think that such regulation impinges on their freedom, but with no regulation, one has the freedom to harm others without much consequence, especially if covered by an insurance policy.

Undercurrent contacted David Concannon, the lead attorney representing the plaintiffs in the Linnea Mills case, who says the charges in Montana could be negligent homicide, reckless endangerment, tampering with evidence, and misleading authorities. He told us that more facts were uncovered that have not been disclosed publicly and have been turned over to the prosecutor with a request to reopen the case.

U.K. Regulation and Accountability

In the U.K., to become a paid scuba instructor, one must, of course, be certified by a training agency

(PADI, BSAC, SSI, RAID, etc.). Unlike in the U.S., those agencies' training programs have been reviewed and approved by the Health and Safety Executive, a government department. No such procedure exists in the U.S. (If it did, it's unlikely Mills would have died.)

A diving contractor – an employer such as a dive shop, an individual, or a self-employed instructor – takes on legal responsibilities. Diving instructors and paid assistants must pass a comprehensive HSE-approved medical examination annually to ensure they are fit to dive. They must hold a diving first-aid certificate, including therapeutic oxygen administration training.

The diving contractor must appoint (in writing) a diving supervisor, normally an instructor, for every dive. For any training dive, at least one person must be on the surface and two in the water. The instructor/supervisor will typically lead the dive, while another rescue-trained diver (normally a divemaster) must accompany the instructor. A third person who can manage an emergency must be at the surface, with an operational therapeutic oxygen set positioned near where the divers exit. Before diving, they must write a risk assessment of the dive site and hazards, and the dive must be recorded in a detailed log. It's not required, but most instructors carry a separate bailout cylinder.

Dive training in the U.S. still relies on self-regulation and sometimes no accountability

Diving contractors must ensure that the equipment they provide has been properly maintained. If students provide their own equipment, they must confirm (sign) that it has been maintained in accordance with the manufacturer's recommendations.

Specialist diving inspectors from the HSE conduct spot checks to see that regulations are followed; otherwise, they may levy substantial fines. HSE inspectors investigate any fatality.

Training agencies and dive instructors have complied with the HSE diving codes-of-practice for more than two decades [I contributed to them in an advisory capacity before the HSE introduced them in 1997]. Since then, few training fatalities have occurred, despite Britain's difficult and cold diving conditions.

PADI's Actions

After the Mill's settlement, on March 8, PADI sent a memo to its instructors and dive centers, exhorting them to elevate dive safety culture with the supreme importance of vigilance and sound management. CEO Drew Richardson reminded PADI members to stay within safe diving practices, with safety overlaps, and to always be on duty when it comes to safety. He wrote, "When a dive instructor neglects standards, disregards required equipment, or flouts established practices, they not only increase the likelihood of an unnecessary tragedy, but they can also be difficult or impossible to defend reasonably."

Linnea's mother told *Undercurrent*: "PADI . . . . has not expressed condolences publicly for Linnea's death, and it still causes me pain. . . ."

Regulate Dive Training in the U.S.?

While people call for the regulation of scuba training from time to time, especially after tragic and unnecessary deaths like that of Linnea Mills, there is little, if any, chance of government regulation. In the '60s and '70s, Los Angeles County had some regulations and still seems to have a few simple outdated and ignored laws on the books. ("SCUBA diving shall not be conducted at depths greater than 100 fsw, unless a recompression chamber is ready for use or procedures have been established at the dive location for emergency evacuation of the diver(s) to a chamber.")

With 50 states and more than 3000 counties, a federal agency would have to step in, but with few training deaths a year in American waters, there is no interest and no incentive. It's not worth a debate.

After Mills' death, PADI made significant changes in instructor training, perhaps a condition of the settlement. We'll never know. But we do know, when it comes to self-regulated industries, lawsuits, not accountability, are the motivators for change.

John Bantin, Senior Editor

Error Correction. In *Undercurrent*'s March article, we incorrectly named David G. Concannon's partner in Concannon & Charles. His name is Matt Charles. While they served as lawyers for the plaintiff in the Mills' case, they have defended dozens of lawsuits filed against members of the scuba industry.

The Weird World of Sea Slugs

We all love the colorful and unusual sea slugs, creatures that photosynthesize -- that is, create their energy from sunlight, like plants. Colorful nudibranchs are sea slugs that wear their feathery gills on their backs and are popular with macro photographers. Take a deep dive into the lives of these beautiful critters with invertebrate zoologist Michael Middlebrooks, who, in his TEDx talk, introduces the solar-powered slugs that lost their shells -- but gained the ability to harness the power of the sun directly. Watch it here: **https://tinyurl.com/2m9nwxms**

Insurance and the Traveling Diver: Part II

getting the right policy and making it pay

Traveling divers need two kinds of insurance, a policy that covers dive accidents and a general policy that covers all other elements of travel, such as flights and luggage problems, and medical and health issues. As a diver, you're engaging in an "extreme sport." Dive accident policies cover you when your injury is directly related to diving, but if you're walking down a dock with your tank strapped and fall and crack your noggin, you're probably not covered. You were engaging in an "extreme sport." Many travel policies don't cover extreme sports, so if your carrier decides your injury occurred while engaging in an extreme sport, you may be left hanging. So, make your policy applies.

And keep in mind collecting any insurance reimbursement may turn out to be a full-time job.

Persistence Pays

Jack Bernstein (Englewood, OH) had issues with Allianz on trip interruption coverage after his flight to Bonaire was canceled, and he couldn't get a flight until two days later. It took him two months of continual calling and "giving them justifications as to missing the days" before he got paid.

N. S. Kruck (Harrisonburg, VA) put in a claim with DAN for a trip delayed due to medical problems in April 2022, but it was initially denied. Even after supplying an MRI scan as evidence, it was rejected because they claimed it was not a covered event. He persisted and showed the company where it was listed as covered in two places on the policy, and he was finally paid four months later.

Travel Guard/AIG came through for Ruth Lindner (New York, NY), reimbursing her within six weeks after she had to abort a trip to the Solomon Islands when her husband became ill, and she needed to care for him.

Constance Stirling-Engman (Ithaca, NY) suffered middle ear and vision problems shortly before departing to Bonaire. "I was uncomfortable going on the dive trip with these conditions since diving could have made them worse." AIG was backlogged with COVID claims then, and after contacting the company's representative many times, she got paid out five months later.

When COVID struck in March 2020, thousands of divers had prepaid trips cancelled after resorts closed, some refunding money, others providing only credits. Many divers grumbled about credits, and some didn't apply to their insurance companies for recompense. Solange Farina (Astoria, NY) did after Nusa Bay Menjanan in Bali offered only a future credit. Her insurer, AIG, covered it.

Where to Get Insurance

Two excellent Internet sources, Squaremouth.com and Insuremytravel.com, allow you to compare various company policies to select one that meets your specific needs. It takes a bit of research, but it can be worthwhile if you have an expensive trip. After Bruce Carnall (Santa Clarita, CA) discovered his Master DAN insurance policy required an extra $195 for the COVID coverage to fly to Grand Cayman, he shopped Squaremouth.com. For $90, he procured a nearly identical policy from Generali, DAN's underwriter.

Free Diver Pipin Sues Netflix for Defamation

At the end of March, the international champion free diver Francisco Pipin Ferreras filed a defamation lawsuit against Netflix over the film *No Limit*, which suggests he deliberately killed his wife in 2002 while attempting a record free dive. She drowned in the Dominican Republic after the device that was supposed to carry her back to the surface malfunctioned.

Last September, Netflix released the fictional French-language film that closely resembled the circumstances of Audrey Mestre's life and death. For a while, *No Limit* was the most popular non-English movie on Netflix. It tells the story of characters Roxane Aubrey and Pascal Gautier, who is depicted as abusive and jealous of Aubrey's success. In the climactic scene, the film implies that Gautier sabotaged her compressed air tank, leaving her without enough air to inflate the lift bag intended to send her safely to the surface.

In the book *The Last Attempt: the true story of freediving champion Audrey Mestre and the mystery of her death*, published in 2006, author Carlos Serra, Pipin's manager and business partner, alleges that her death was caused by a mismanaged attempt by Pipin to steal the limelight through a preplanned rescue after her ascent cylinder failed. Others have also claimed he was involved.

No Limit is a good film; you can still view it on Netflix.

– *John Bantin*

Should Divers Fear an Orca?

After we wrote in our March email that a pair of South African orcas had attacked 17 sharks to eat their livers, we received a query from reader Chuck Wilson, of Lincoln, Nebraska.

"Orcas are fascinating creatures, certainly beautiful and smart. They are voracious predators, attacking even great white sharks. My question is, are there any recorded orca attacks on scuba divers?"

Aside from captive orcas who have attacked people (can't say we blame them), we've never heard of an orca attacking a diver, and a web search came up with no instances of orcas in the wild killing humans.

To be sure, we contacted Amos Nachoum, the famed photographer who leads occasional trips to Norway to snorkel with and photograph orcas. (**www.biganimals.com**). He told us:

"Ben, thanks for reaching out on behalf of your reader. According to my experience diving with orcas in many parts of the world since 1992, I have not experienced any threat to one of my divers or me.

"I have not heard or know of any threat of attack to humans, with the exception of events in captivity."

Keep in mind that orcas are the largest member of the dolphin family. Ancient sailors called them "whale killers" because they occasionally do just that. The name later got flipped into "killer whale," and humans, perhaps the first tabloid publishers, began to think they were coming after us.

Like DAN, endless organizations offer a variety of travel insurance policies. While they earn money from it, the commission may not always affect the cost of the policy if you find it elsewhere. One reason to buy through an organization such as DAN is that you hope they will advocate for you.

For example, long-time subscriber Carol Risdall (Rapid City, SD) bought a DAN travel policy in 2022 for a REEF survey trip to Cozumel, but when the date changed by two days, she forgot to update the insurance policy. Flight delays resulted in increased costs, but when she applied for reimbursement, DAN's underwriter (Generali) denied her claim for $327 because she flew on different dates than she had initially stated. Upset that Generali refused to overlook her minor error, she thought DAN might appreciate feedback and contacted them. DAN president Bill Ziefle sent her $327 for a goodwill payment from DAN's ex-gratis fund. "It made my day that DAN was so generous and listened to me."

Another organization, World Nomads, offers their Travel Nomads insurance, which Robin Schiendelman (Limerick, PA) has used for several years.

"They cover 'adventure travel,' including scuba, and their prices are very good. I paid under $350 for the Explorer policy for an upcoming three-week trip to Indonesia, with trip cancellation/interruption coverage capped at $10,000."

For previous trips, she submitted three small claims successfully, one when they arrived in Belize two days late because American canceled their arriving flight; "There is no scheduled transfer from the mainland to Turneffe Island on Friday, so we had to pay $400 for a charter flight. World Nomads reimbursed us for the cost." **www.worldnomads.com**

Consider using a dive travel agent who can help advocate for you if necessary. Many have long been in business and offer insurance through companies they trust. Jennie Collister, the owner of Reef and Rainforest, uses Travel Guard but also sends her customers links to DAN and DiveAssure. Ken Knezek, the owner of Island Dreams, offers TravelSafe, which "has been a good payer in all legitimate claim situations." And suggests his clients compare DAN and DiveAssure pricing. Cindi Lararia, the owner of Dive Discovery, offers CFI Travel Insured International for her clients.

So, What to Do

COVID, fewer flights with less staff, and more unpredictable weather have upped the stakes for a traveler. As a traveler ages, insurance becomes a better idea each year, if for no other reason than it reduces the stress of travel planning and traveling. If you decide to forgo travel insurance, be sure you have medical coverage for trips abroad. Medicare alone won't cover you.

Before buying a travel insurance policy, check what your credit cards offer and your memberships, such as AAA Premier, to review their coverage. You may find their coverage for trip interruption or delay, lost baggage, etc., is sufficient for your needs.

To buy a travel policy, seek a reputable company. If you're using a travel agency, strongly consider using the company your agent recommends. Compare policies carefully. Carefully read those sections that affect you. Insure for the total amount of your trip. Keep all your receipts because you'll need them if you file a claim.

And if you do file a claim, be persistent. Be persistent. Be persistent.

And, if you have decided not to get travel insurance, diving insurance is essential. Don't go diving without it.

– *John Bantin and Ben Davison*

PS: An excellent website to seek answers for insurance and travel issues, with daily subscription newsletters, is the nonprofit **https://www.elliott.org**. Founder Christopher Elliott is a scuba diver.

Lend A Hand on Your Next Dive Vacation: Part I

save the reefs, maybe save on taxes

As a diver, you're undoubtedly concerned about marine conservation, having seen first-hand the damage to the oceans and reefs. If you're like most *Undercurrent* members, you're making plans now for your next dive trip abroad. Several years ago, the scientific community realized they needed "citizen scientists," committed folks who could make significant contributions to their research. Last year, volunteers contributed 57,223 hours to national marine sanctuaries alone and endless hours elsewhere.

When you volunteer for marine conservation, you can immerse yourself in a project for a week or more or find one where only a portion of your vacation is required. Volunteering won't be free because not only will you pay to get there, you'll most likely pay for housing and food, maybe even diving. The upside is that many groups offering programs are 501 (c)(3) organizations (that means they are registered nonprofits with the IRS). As a volunteer, you may deduct most, if not all, of your direct expenses from both federal and state income taxes. But the real upside is that you'll be doing the oceans a favor. Here are some activities to consider.

Land-based Activities

Many dive operators partner with local conservation organizations to assist in their projects. Others have projects of their own, especially restoring reefs or eradicating lionfish.

Reef Check has been a leader in establishing scientific methods for recreational divers, and their practices are now used worldwide. They are currently attacking the demise of kelp forests on the Pacific Coast. Jackie Selbitschka is the Washington State regional manager and told us, "I help train and organize dive teams for our Kelp Forest Monitoring Program, which operates from Washington down to Baja. We also have opportunities in our Tropical program for coral monitoring in 93 countries/territories. The kelp forest program has upcoming training dates posted for our five regions in Washington, Oregon, and California. Anyone interested in participating in our 2023 survey season running from May to October would need to complete one of our training courses." **https://www.reefcheck.org**

Reef Renewal Foundation International works in Australia, Bonaire, the Cayman Islands, Curaçao, St. Vincent & the Grenadines, and the U.S. Each country has its own organization and works with local dive centers. *Undercurrent* correspondent Mark Magers (Los Angeles) took a "Reef Restoration" class (via PADI) in 2019 on Bonaire. "We were there four months. After completing the class, we made several dives to clean algae from the coral propagation trees through Reef Renewal at Buddy Dive, which provided free tanks. We also planted staghorn coral onto bamboo frames, and it seems to be working." **https://www.reefrenewal.org/our-network**

Thomas Wells (Crested Butte, CO) says Buddy Dive has, for several years, run a coral restoration and lionfish eradication program. Contact Augusto Montbrun **augusto.montbrun@buddydive.com** to get involved. Another *Undercurrent* member, Samantha Tse, from Tucson, is a volunteer. **https://www.reefrenewalbonaire.org**

Ocean Defenders Alliance. Their all-volunteer boat and dive crews remove abandoned fishing nets, traps, lines, plastic, and other man-made debris threatening ocean wildlife and habitats. Subscriber Geoff Walsh told us, "they have a strong volunteer program in California and several Hawaiian islands." **https://www.oceandefenders.org**

The University of Miami Rosenstiel School of Marine and Atmospheric Sciences has half-day expeditions to experience coral restoration work. **https://tinyurl.com/yr434upw**

Undercurrent member Jaan Leemet (Aventura, FL) says, "It's a nice experience. A sponsor often pays for the air fill and sometimes even the boat. We've paid our way for the dive occasionally; it's a nice way to meet good people, do some good, and learn, too (typically, a marine biologist or senior team member from the university joins the outings)."

The Coral Restoration Foundation in the Florida Keys is looking for volunteers who can give them two months, first for serious training, then to join the workboats at the coral nurseries.

https://www.coralrestoration.org/volunteering

In Florida, the Force Blue Team "unites the community of Special Operations veterans with the world of marine science and conservation . . . to restore lives and restore the planet." Patti Gross, the diving safety officer, says, "please sign up online," and adds "We train." **www.forceblueteam.org**

Terra Sub Aqua is a commercial business with an underwater coral and live rock farm off the coast near Key Largo, and they welcome volunteers. **http://www.terrasubaqua.com** Tim Birthisel told us, "I welcome volunteer divers on the Terra Sub Aqua project, a unique effort to improve reef habitat in the Keys. that supplements charity – and tax-supported efforts."

The Central Caribbean Marine Institute (CCMI) CCMI is both a tax-exempt 501(c)(3) organization and a U.K. Registered charity with a field station on Little Cayman Island. While currently not operating because of COVID restrictions, their researchers have conducted citizen scientist projects with volunteers. **https://reefresearch.org**

Liveaboard Volunteer Projects

Many liveaboards host a few researchers on certain sailings, and guests are invited to assist.

Mike Ball Dive Expeditions has supported James Cook University's research projects for many years, including nautilus research conducted at Osprey Reef in the Coral Sea. They are involved with the university's Minke Whale Project and have several sailings to "swim with the minkes." Divers are invited to join in the research with the scientists on board. **https://tinyurl.com/y3uu2b7f**

All Star Liveaboards has reef restoration sailings on the *Cat Ppalu* in the Bahamas and shark research in the Red Sea aboard *All-Star Red Sea*. The liveaboard *Aqua Cat* undertakes Bahama reef restoration efforts, which guests are invited to join. **https://allstarliveaboards.com/citizen-scientist**

The Aggressor Fleet offers a few special sailings each year that support volunteers. While not always listed on their website, they offer programs from the Sea of Change Foundation and Project Seahorse. Many crew members gather data for these organizations' projects while leading dives. **https://tinyurl.com/2scmwu7d**

Rocio del Mar and the ***Quino el Guardian*** offer volunteer-supported conservation trips in the Sea of Cortez and Mexico's Pacific coast. Get more information from Mexico Liveaboards. **https://tinyurl.com/ym8ptvvw**

Cuba's Avalon Fleet (seven liveaboards, one of which has a permanent mooring) has a unique program for U.S. citizens who face travel restrictions visiting Cuba. By conducting marine research, which falls under the humanitarian and environmental projects deemed by the State Department as permission to travel to Cuba, divers are given a certificate of participation recognized by both the U.S. and Cuban governments, allowing them to visit Cuba legally. The fleet partners with All Star Liveaboards and Aggressor Adventures. Truth is, this is more of a way to get into Cuba than engage in serious research. **https://cubandivingcenters.com**

– Charles Davis and Ben Davison

Next Issue: Several nonprofit organizations with diverse programs, and some agencies to help you find other volunteer diving efforts.

Flotsam & Jetsam

Cocos Island Liveaboard Volunteer Opportunity. The nonprofit Turtle Island Restoration Network has two spots left on their May 23 expedition aboard the Sea Hunter at a $500 discount. Besides seven days of fabulous diving, they will be catching sharks to insert internal tags (you can photograph). They expect to capture and tag turtles with the aid of several scientists/activists aboard. Talk to your accountant about the tax deductibility. Contact Todd Steiner at **tsteiner@tirn.net** or 415.488.7652. **https://tinyurl.com/bdfvhtm2**

Octopus Massacre. While octopuses are one of the more intelligent and clever species on our planet, an octopus farm is about to open in the Canary Islands, ultimately cramming a million of them into tiny tanks until they grow large enough to … this is even more difficult to imagine … be painfully frozen to death in icy vats to be sold as food (according to confidential documents seen by the BBC). Plans for this giant octopus torture chamber have been submitted to local authorities in Spain. Protest by adding your name here: **https://tinyurl.com/3fcnnr8x**

Tell Us About Your Liveaboard Safety. Have you been on a liveaboard trip in the last year? Did you get a thorough safety briefing before you left port? Was there a fire drill? Were you shown an emergency exit from your cabin? Did a crew member stand watch throughout the night? Did you have a functioning alarm in your cabin? Were you instructed what to do

if an alarm went off? Were lifejackets stowed in your cabin or somewhere accessible on an upper deck? Were life rafts clearly marked with the date of their last inspection? Were the battery charging facilities overloaded? Tell us about the boat, the crew, and how safe you felt. Write to **BenDDavison@undercurrent.org** not forgetting to mention your town and state.

Don't Overdo the Antibiotics. Otorhinolaryngologist Paul Neis, MD (Mountain Home, AR), wrote in response to a subscriber comment about treating swimmer's ear with antibiotic ear drops (*Undercurrent* March), "it is always possible for a bacteria to have resistance to whatever antibiotic you choose. It would be better to apply an over-the-counter ear-drying drop with alcohol and acetic acid or mix your own with rubbing alcohol and vinegar. The alcohol will kill any bacteria, and the acidification deters the bacteria and fungi."

The 2023 Photo Competition for UN World Oceans Day. A collaboration between the UN and other organizations, the competition is a unique opportunity for underwater photographers to showcase the ocean's beauty and shed light on its animals. Until April 23, six categories are open for submissions, and winners will be announced on June 8. **https://tinyurl.com/2p9ubu6s**

Have a Headache in Cozumel? While you can buy many drugs over the counter in Mexico that require prescriptions in other countries, a study by UCLA has found that some pain relievers are counterfeit, often containing fentanyl, heroin, and methamphetamine. Stay away from Mexican painkillers other than Ibuprofen. If you carry any medicine containing pseudoephedrine (such as Actifed, Sudafed, and Vicks inhalers) or codeine into Mexico, you must carry a written prescription or doctor's letter.

Don't Check Your Lithium Battery for a Flight. It's safer to carry lithium batteries in a carry-on rather than in the hold of an aircraft because, if a fire started, passengers would be alert to the burning smell in the passenger compartment. This is what happened on March 1; the cabin of a Spirit Airlines flight from Texas filled with smoke and diverted safely to Jacksonville, FL. When you fly, you must carry on your spare batteries, but consider carrying all of them.

Belize Woman to Captain *Aggressor III*. Monique Lamb, who began her Aggressor career nine years ago as a divemaster aboard the *III*, will soon take the helm of the 110-foot liveaboard, having recently earned her Master of Yachts 200-ton power certification in Florida. She has a degree in marine biology from the University of Belize and began her career restoring coral reefs with the Wildlife Conservation Society.

Monique Lamb

New Zealand Boat Skipper Pays Out US$10,000. After hitting a surfacing diver off New Zealand's north coast last year, Shane Hollinger was fined and required to compensate the diver, who had a concussion and head cuts. Hollinger failed to slow to five knots within 600 feet of a diving flag and struck a surfacing diver who sustained a concussion and cuts to the head. There seems to be a scourge of boats hitting divers, and better enforcement is required. We reported on the death of two Americans off Isla Mujeres last year when a dive boat from Cancun plowed over them.

Rewilding Sharks in Raja Ampat. While Indonesia's Raja Ampat is now a shark sanctuary and has nine marine protected areas, zebra sharks are targets for the global shark trade and poaching has been rife in the past; so much so that between 2001 and 2021 researchers found only three zebra sharks. In an unprecedented effort, 15 aquariums from around the world are teaming up to raise endangered baby zebra sharks and reintroduce them into the wild in Raja Ampat, where populations have nearly gone extinct.

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