

undercurrent

The Private, Exclusive Guide for Serious Divers

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Yucatek Divers, Playa del Carmen, Mexico

whale sharks, cenotes and reefs on demand

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Dear Fellow Diver:

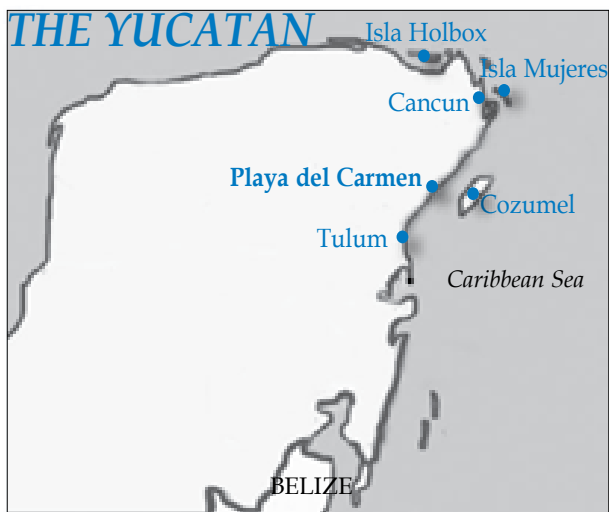
"Go, go, go! Over there! Over there!" Several miles off Isla de Mujeres, our guide was yelling and pointing to an immense spotted dorsal fin flopped over on the surface, and a two-foot high caudal fin trailing it by a good eight feet. I went over there, as fast as I could. The shark pulled away easily, finning languid "s" patterns in the plankton-rich water. I clamped down on my snorkel and swam harder, or maybe the shark slowed, but I saw a gray shape in front of me, then the white spots, and then

Whale sharks. For me, they're the Mount Everest of sea beasts, and like Ahab, I've looked for them in the seven seas. In Papua New Guinea, Australia, Palau, Honduras and more. But not one damn whale shark. On Grand Cayman, a South African guide told me there were so many off Mozambique that she got tired of looking at them. In Cozumel last April, I heard about a kid who, on his first openwater dive after certification, saw a 15-footer next to his boat. No doubt, I had the whale shark jinx. Then I received an email from the dive travel agency Island Dreams, with the heading "Whale Shark Season in Mexico," and a picture of a hotel big enough to house an army. I thought, "Oy. Huge hotels, all-inclusive partying, parasailing, screaming kids and . . . whale sharks?" Is this something real divers do? But I wanted to see the sharks.

Each summer, hundreds of whale sharks appear off the Yucatan barrier island of Holbox to



Maroma Beach Resort and Spa



feast in an ocean turned pea-green by a massive plankton bloom. The Holbox sharks are spread over dozens or even hundreds of square miles, in often murky waters. You can make the tiny town of Holbox home base, but if you're staying in the Cancun area, a van will pick you up at your hotel at 4 a.m. (Undercurrent was the first publication to break the story of the Holbox whale sharks; read our review online at www.undercurrent.org/UCnow/dive_magazine/2004/HolboxIsland200410.html)

A potentially denser gathering occurs with some regularity in the open ocean off Isla de Mujeres. Some scientists believe the sharks arrive to feed off the spawn of tunny, a small tuna species. My late-July visit would be at the tail end of the full

moon, when the tunny had spawned, and a huge aggregation was predicted.

But I couldn't deal with the mega-hotel or the Playa del Carmen tourist chaos, so I selected the 65-room Maroma Resort and Spa, a quiet luxury resort 30 minutes south of Cancun and 20 minutes north of Playa del Carmen. After turning off the main highway, I drove a meandering route through a forest of palmetto and poinciana, then past a faux-Mayan gatehouse to the lobby entrance, where the blue Caribbean was visible past the first of three pools. The concierge greeted me and my partner with margaritas, and we walked down a stone jungle path to our king-sized room on the second floor, overlooking another pool reserved for our cluster of eight rooms. But the pool was ours alone because no other guests were assigned to our cluster that week. At this point, I usually relax and let my partner wheedle her way into an upgrade or beachfront room. Not this time. No beachfront rooms available, and others would cost another \$1,000 -- per day.

Staying put, I called Yucatek Divers in downtown Playa del Carmen, and spoke with owner Jean-Yves Moret, a Swiss national, to make arrangements for the next morning. The wind had kicked up, so Jean-Yves recommended cenote diving, but he noted that the weather would improve and would not affect the whale shark trip. So I scheduled three days of cenote diving and two days of ocean dives. Then we took our margaritas to the beach, reclined on a king-size beach bed under two umbrellas, and contemplated the blueness of the water. That night, we ate ceviche at the hotel bar. One restaurant offered high-end Mexican cuisine and western dishes, while the other, a French restaurant with only seven tables, offered exquisite, fresh seafood dishes. Later in the week, we tried El Fogon, a taqueria a few blocks away. It's open on two sides so it gets the breeze, and it has live music, lots of locals and tasty, inexpensive grub.

The next morning, a family of white-faced coatis descended from the trees to watch the bellhop load us and our gear into his golf cart for the drive to the parking lot. We hopped into our rental car and headed into the traffic on the main highway, passing police checkpoints on the way. Armed with submachine guns, the cops peered into our vehicle. We -- and all tourists -- passed without incident, but locals seemed to be stopped for sobriety, overloading and vehicle maintenance issues.

Yucatek Divers is two blocks from the ocean, in a two-story building across the street from a local breakfast joint that never seemed to be open. (We had a spectacular breakfast at the hotel.) After Jean-Yves checked C-cards, I signed the usual release forms (if I were to check an ailment, he said, I would be required to see a local physician), and we loaded the gear, aluminum 80s, weights, four divers and a guide into a van for the 30-minute drive to Chac Mool to dive the Kukulkan and Little Brother cenotes.

Geologically, the Yucatan is a limestone platform with many underground freshwater rivers running through it. At various places, the roof of a cave has collapsed, creating a sinkhole and exposing the cave to the surface. While a haven for hardcore cave divers, a handful of cenotes have caverns with natural light, and many have multiple openings, so it is possible to swim away from the entry point and see light in front of you. So, as our guide, Leopoldo ("Polo") Lacona, explained during the drive, there are special rules: a maximum of four divers per guide; no dangling equipment or knives; stay one meter away from the guideline and one meter from the diver in front of you; maintain buoyancy away from the bottom and the ceiling; carry at least one light and keep it on at all times; stay above 70 feet of depth; stay horizontal; no scissor kicking, only gentle finning from knee to ankle; any diver can abort the dive at any time; and

Where Do Whale Sharks Spend the Winter?

The whale sharks off the Yucatan Peninsula apparently travel up to 5,000 miles annually, according to a new study of their migration. Whale sharks are known to gather at a dozen major feeding locations around the world, from Western Australia and Indonesia to Belize. But between May and September, the waters of Mexico's Quintana Roo state, on the northeastern Yucatan Peninsula, draw far more animals than other spots --an estimated 800 or more in a given season.

"From this one feeding area, these animals spread throughout the Gulf of Mexico, into the Caribbean, through the Straits of Florida up into the Atlantic Ocean," said study co-author Robert Hueter, director of the Center for Shark Research at Mote Marine Laboratory. "We found animals coming back for as many as six years at a time. Clearly they are returning to fuel up on the food that's there to carry them through much of the rest of the year."

In 2003, Heuter to begin accumulating tagging and satellite tracking data that formed the backbone of the recent study by the Mote Marine Lab and Mexico's National Commission of Natural Protected Areas. Mike Maslanka, of Smithsonian's National Zoo in Washington, DC., said, "These tagging efforts allow us to discover more about what happens when they aren't gathering to feed in the summer . . . These things are so big, to think that they 'disappear' is pretty amazing. It's the largest fish in the ocean, and we don't know where it goes for six months of the year."

Among more than 800 individuals studied, one animal stood out. A mature and presumably pregnant female called Rio Lady was tagged and then tracked along an odyssey of some 4,800 miles. Hueter said. "She swam out between Brazil and Africa until she passed the equator, and that's where her tag came off." But her journey, and other whale shark sightings in the remote region, could help answer a question that has plagued whale shark researchers for years: Where are all the females? The Quintana Roo gathering is more than 70 percent male, and other global aggregations show the same gender imbalance. Such imbalances don't happen in nature.

"The females have to be somewhere, and we hypothesize that mature, pregnant females undergo long migrations to the middle of the ocean, near seamounts or remote islands, and that's where they give birth," Hueter explained. "In coastal zones where the feeding aggregations are, their young -- which are less than two feet long at birth -- might be subject to higher predation."

Conservation of the far-roaming animals will take international cooperation because whales spotted in one area may depend, in other seasons, on resources located many hundreds of miles away. And while mating remains a mystery, whale shark genetics suggest that animals swap genes among far-flung geographic locales, and that only two large metapopulations exist -- one in the Atlantic and another in the Indo-Pacific.

Each population requires management on a broad scale. The species as a whole is currently listed as vulnerable, and is still hunted for oil in some Asian waters. Hueter said he's encouraged that whale sharks can be protected by the process that's already begun, notably in his study area, with the Mexican government's designation of a Whale Shark Biosphere Reserve in the feeding aggregation grounds. But there's more work to be done, he cautioned. "This is the largest fish that has ever lived, and it's charismatic. It might be the largest animal on the planet that you can be close to in its natural environment and not be in any danger whatsoever."

-- Brian Handwerk, National Geographic

obey the rule of thirds -- one third of a tank for the way into the cavern, one-third of a tank for the way out, and one-third as a reserve. Because most dives are a maximum of 50 feet deep, it's possible to stay in the water for 45 minutes or more.

At the site, I set up my gear on a table in the parking lot. Suited up in a 5mm wetsuit with less weight than usual, due to the freshwater, I walked down steps cut into the limestone to a pond under a stone overhang. After inflating my BC, I took a giant stride into the 75-degree freshwater and donned my fins. We dropped down to six feet, formed a line and swam past boulders from the collapsed ceiling. Rains had raised the halocline above its usual 30-foot depth, and for a while I was unable to see much, due to the shimmery emulsion. When I finally emerged into unbelievably clear water, I had the startling experience of seeing a diver floating in what seemed to be air.

After a 45-minute surface interval, we were back in at the "Little Brother" entrance at Chac Mool, and looking up at blue sky and vivid jungle greens through openings to the surface. Stalactites like gray sea pillars poked up from the talc-like bottom. It seemed like we were briefly beyond visible light as we passed through a large room at our maximum depth of 40 feet, then curved around back to the entrance. After we exited, Polo served sandwiches of "carne misterioso" and bottled water. It was just enough food to ruin my lunch without being enough food for lunch. No chips, fruit, dessert or juices, so next time I skipped it and had a great burger at Zenzi's on the beach in Playa del Carmen.

Next day, the wind was still up, so we stuck with cenotes. Rather than boulders and tree trunks, Dos Ojos offered long swims around sharp stalactites and stalagmites, limestone waterfalls and curtains resembling tunnels in the Alien films, delicate columns and deep, dark chambers leading to more than 60 kilometers of caves that then link to other sinkholes. On our second dive, we surfaced briefly in the Bat Cave, a large air dome populated by vampire bats, with sunlight beaming like a laser through a small opening to the surface, where a rope led to a platform in the water. I liked diving the cenotes -- I had never done it before -- and sites like Dos Ojos with its dark, forbidden tunnels gave me a taste of what cave diving could be like. But in the end, I'm a fish freak and longed for the open ocean.

The following day, we met at the dive shop for two ocean dives. Six Belgians formed one group, while my partner and I made a second group with a young Swiss woman with 10 dives. The gear was wheeled from the shop down to

the beach, while we divers, in our wetsuits tied off at the waist, walked to the beach. Oops, not enough tanks. So the crew ran back to the shop to collect more, while we hung around in our wetsuits for too long in the morning heat. I waded to the 30-foot covered panga, clambered aboard the stern between the two outboards, and set up my gear before we finally took off for the 15-minute ride to Tortugas. With 10 divers, two guides, and a captain, the boat was crowded, and I wondered why they couldn't put out two boats if the rides were only 15 minutes. After a short briefing, I backrolled into 82-degree water and dropped to 70 feet over a flat sandy reef. The current was running at about one knot, and I drifted past enormous barrel sponges tilted away from the flow. Eventually I spotted a few of the hawksbill turtles that the place is named for, but

Yucatek Divers, Playa del Carmen	
Diving (<i>experienced</i>)	★★
Diving (<i>beginner</i>)	★★★★
Diving (<i>cenotes</i>)	★★★★
Snorkelling	★★★★★
Accommodations	★★★★★
Food	★★★★★
Service and Attitude	★★★
Money's Worth	★★★★
★ = poor ★★★★★ = excellent	
World Scale	

An Alternative Whale Shark Dive

One of our longtime travel writers also dived with the Yucatan whale sharks in August, and here is her report.

I went with Andy Murch, owner of Big Fish Expeditions (www.bigfishexpeditions.com), with whom I traveled last year to snorkel with sailfish. I stayed at the Na Balam Hotel on Isla Mujeres (www.nabalam.com). Each morning, my group of eight had the included continental breakfast around 7:15 a.m., then waded out to the boat. About an hour later, we were usually one of the first boats to arrive at our destinations. We spent four days snorkeling with whale sharks, manta rays and a few smaller mobula rays. The first and fourth days were mellow, but days two and three were kick-ass, with four or five whale sharks often in view at the same time, and sharks and rays swimming side by side. I had to continually look in all directions; the whale sharks seemed to enjoy running us over if we weren't paying attention!

My group was met at the Cancun airport by Na Balam's Andy and Laura, then taxied 30 minutes to the ferry depot for a 20-minute ferry ride to Isla Mujeres. Two-thirds of the hotel is on the beach side of the road; I was on the other side of the road, with the small pool. My room was large, with plenty of storage. It was air-conditioned but the maids turned it off during the day,

and it took until late evening to cool down sufficiently. Na Balam is a couple blocks from the main town, where I enjoyed different restaurants each evening, usually with outdoor dining. One complaint: the extremely loud music that carried on until 2 a.m. on Saturday and Sunday nights from the Fenix bar (not part of the hotel) across the street from my room. Get a low-numbered room far, far away from the loud music.

By 9 a.m. each day, there were 30 or 40 boats spread over a wide area, so there wasn't really any crowding; just wait and the sharks come to you. I had read that only two snorkelers from each boat were allowed in the water at the same time, but we all jumped in together, remaining for up to two hours, then we climbed into the boat for food, water and rest. Solo Buceo, the dive operator (www.solobuceo.com), provided plenty of water, sandwiches, soda, fruit drinks, cookies and even beer. Then back into the water for a couple more hours. By 2 p.m., the whale shark activity started dying down as they went deeper, and we headed back to Isla Mujeres, exhausted and happy.

Big Fish Expedition's trips next year are \$1,960, double occupancy.

— J.D.

there weren't a lot of fish, surely nothing sizeable. Polo inflated his surface signal at 800 psi, and we were soon back on board. The Belgians stayed down another 10 minutes, but in my mind the site didn't justify more time.

Polo handed out bottled water (no snacks), and we went ashore near a Mayan archeological site to do the necessities in the bushes. A second dive at Sabalos proved more interesting -- hundreds of blue-striped grunts huddling out of the current under low coral ledges, a school of horse-eye jacks, southern rays, lobsters and a lionfish. Now here, I could have stayed longer. My partner had 1200 psi in her tank after a 49-minute dive, but Polo enforced the 800 psi limit, which the newbie we were paired with reached well before we did. The Belgian group again surfaced after we were back on board. For comparison, although the isle of Cozumel can be viewed from the mainland, the underwater topography there is much more dramatic and the sea life larger and more diverse.

On Wednesday, a van picked us up at our hotel and we headed to Cancun to begin our whale shark expedition. During the ride, the guide handed out brochures advising what to do -- and mostly not do -- around the sharks. We were asked not to use sunscreen, because the nonbiodegradable stuff comes off in the water and apparently is ingested by the sharks, to their detriment. Regardless, most of the 12 adventurers greased up, then piled aboard a 35-foot modified panga to set off past Isla de Mujeres for the 90-minute ride to the feeding frenzy.

But it wasn't the sharks that were in a frenzy, it was the tour operators. At least 60 boats clustered in a half-square-mile of blue water, maneuvering slowly around several hundred sharks. Snorkelers milled around the surface, three or four to a shark, often ignoring the two-meter distance limit. Some waited for a shark to come to them. Others thrashed off in pursuit.

Suunto Recalls Dive Computer Hoses

The Finland-based company just issued a limited recall on one specific batch of high-pressure rubber hoses that comes with various dive computers. The reason: The U.S.-made rubber is defective, causing the hose to leak or rupture, and leading to a higher-than-normal loss of air. Suunto apparently caught the problem during the manufacturing process; no known injuries have been reported.

The suspect batch is #1812, and the number is stamped on the hose. Products that use this high-pressure hose include Cobra, Cobra 3, SM-36 pressure gauges and gauge combos, as well as Vyper and Zoop when purchased as dive computer combo products.

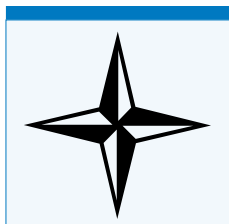
Suunto officials say don't dive with this hose, and are instructing all customers who bought any of the products listed above after November 2012 to look at the manufacturing batch code number on the hose. If it lists #1812, return the computer for a free hose change. Either bring it to the nearest Suunto dealer, or use the company's Online Service Request (www.suunto.com/servicerequest) to get your computer picked up and delivered for the hose change.

Our boat had a different, and I hope, kinder plan. The captain hung around the edge of the feed, away from a lot of the chaos. We had been set up in groups of four and cautioned to stay with our guide, Luis. We'd be in the water for 10 to 15 minutes, then climb out so the next group could go in. "When I say 'jump,' you jump," Luis said. "Don't wait. When I say 'out,' get out, don't worry. You'll get to jump many times." So after 791 dives that lacked swimming with one Rhincodon typus, I jumped.

I'd like to believe the sharks were unaffected. They never seemed to change course. They just swam slowly through the food, oval mouths agape, tiny eyes watching the curious human-fish trying to keep up as they swam sinuous S shapes in the blue. The largest were probably 20 feet long, cruising close to the tiny humans, daring us to grab a fin. Nobody did. Feeding mantas clustered in twos and threes, and held our attention until the next shark came into view. Then we were off again, full speed ahead. My best encounters were away from guide and group. I'd pick a shark, wait, and then have it to myself, 30 seconds with the biggest fish in the sea. An awesome and ancient power, unconcerned with money, man, politics or the spectacle surrounding itself. Marvelous, stunning, inspiring, humbling. I loved the sharks. I hated the human spectacle.

On the way back, we anchored in the shallow lee of Isla de Mujeres with many of the other shark boats. Cervezas and sandwiches were handed out, and fresh ceviche prepared. I chilled in the calm water and considered the events of the day, weighing the wonder of the whale sharks against the impact on them, wondering if I was part of a larger problem.

-- D.L.



Divers Compass: Cancun is easy to reach nonstop from many cities, with low prices (\$650 from Newark, as little as \$514 from LAX); to get my dive bags' weight below 50 pounds, I checked three bags and paid \$40 extra because each bag over 50 pounds would have cost me \$200 . . . I reserved a car from Thrifty for only \$42 for the week, and then found that if I didn't take the \$140 Limited Damage Waiver insurance, they wouldn't rent to me . . . Yucatek Divers would have picked us up and returned us to the airport for \$70 each way, and they would also have taken us from the hotel

to the dive shop for a fee, but when I added it all up, a car was cheaper and gave us the freedom to check out other attractions and restaurants . . . I went to the Mega store in town and bought a case of water, snacks, and sun lotion; they have everything you need, including beer and well-priced tequilas . . . The Maroma Beach Resort set me back \$3,300 for the week for a pool-view room with king bed and a brilliant table-service breakfast included . . . If you don't

mind a huge hotel, Island Dreams (www.divetrip.com) offers packages at the beach-front Playacar Palace, just one block from Avenida Cinco and its rope-a-dope carnival atmosphere . . . Bring your own gear and Yucatek Divers charges \$75 for a two-tank ocean dive and \$120 for a two-tank cenote dive, or you can book three two-tank ocean dives, one two-tank cenote dive and two tanks in Cozumel for \$380; the whale shark snorkel trip cost \$220, including the round-trip van ride from my hotel . . . In the afternoons, I drove to attractions like the ruins at Tulum, where ticket lines were long, and the weather is hot (join a group, if you can); the ruins at Chichen Itza are spectacular and well worth the trip, but it takes an entire day . . . Websites: Yucatek Divers - www.yucatek-divers.com; Maroma Resort and Spa - www.Maromahotel.com

Eritrea, Kiribati, Sipadan . . .

why to consider Wananavu, when not to consider the Odyssey

M/Y Suzanna. This liveaboard plies the southern Red Sea, and Mel Cundiff (Broomfield, CO) took a trip in May, hoping the southernmost reefs near Eritrea would have greater biological diversity, as he had heard. He reports that the 10-cabin boat has lots of common space, but a malfunctioning generator meant cabin A/C was shut down during daytime hours except in the common areas. "The boat catered to European clients, with only three dives a day. It was only with insistence that we managed two night dives. Our two divemasters could remember Americans being on the boat only one other time. Our typical dives were in pursuit of deep-water sharks, with European divers going down to 250 feet to photograph them. Our first dive briefing dealt with how to communicate to the divemasters the depth ceilings and decompression times we had accumulated. Everyone went into deco, with the Italians doing so multiple times a day. It was common for dive computers to be locked out during the over-limit violations. By naively following the divemaster, I too went into deco and needed the larger tank to maintain the one-hour dive time. One of the Italians who violated his computer limits had visible and physiological symptoms of decompression sickness. He was administered oxygen for three hours and most of his symptoms subsided . . . Our two Zodiacs didn't have ladders, and some divers found it uncomfortable to be pulled onto the boat after a dive. The stern part of the lower dive deck on the *Suzanna* was high off the water, and a diver carrying a 90-cubic-foot steel tank needed to take one step down a ladder, step onto the gunnel of the Zodiac and then take a long step onto the floor. Three divers with their tanks on fell into the Zodiacs; fortunately, they were not hurt. Our itinerary took us 200 miles south of Port Sudan, near the border of Eritrea. These southern exploratory dives were a trade-off from the reefs of central and northern Sudan. I dived the 18 dives available, with several being repeat sites. Being interested in, and teaching about, the diversity of reef critters, I rely on a divemaster's younger, experienced eyes to help me locate critters. On this boat, with the emphasis on sharks, this didn't happen. By resisting the deeper dives and hugging the reefs, I still managed to see five species of sharks, but they weren't up close. A titan trigger bit my fins four times, and not being satisfied with the results as I kicked her away, she blindsided me with a bite to my left elbow, drawing blood and leaving a scar. My buddies were amused and disappointed they didn't get it on video! In my less-than-expert opinion, I feel the coral reef diversity of the southern Sudan was no greater than of the northern Red Sea." (<http://scubaadventurefleet.com>)

Bonaire's Wild Side. It's not in the bars. It's diving the east side. We've written about the unique dives here led by Bas Tol, and one of his fans, Wally Szaniawski (Greenwich, CT), reminds me, "Some years ago, I wrote to you about East Side diving with Bas. My enthusiasm is as fresh as ever! Disregarding windy weather, there was almost always an accessible dive site, and Bas' expertise and knowledge of marine life has been unequalled." (www.basdiving.com) If you're headed to Bonaire, you might be interested in inside tips from one of our long-time travel writers who is currently living there for a few months. You can find

We Need Your Reader Reports

You may still be browsing through our *2013 Travelin' Divers Chapbook* (or you can get it at www.undercurrent.org/members/UCnow/chapbook2013.php), but we're already starting to gather reader reports for the 2014 edition.

To send us your reviews of dive operators, liveaboards and resorts, complete the online form at www.undercurrent.org/members/UCnow/SubRRTopMA.php. You can also follow the link "File a Report" on the left side of our homepage (www.undercurrent.org); or after logging in, follow the "Reader Report" link in the top navigation bar.

them in our online blog at www.undercurrent.org/blog/?p=1509

Kiribati. Located south of Hawaii, this will be one of the first nations to disappear as ocean levels rise. There in August, Peter Deegan (Erskineville, Australia) found the dive sites "pleasant and pristine, with lots of hard coral and small fish, however, the sites had a sameness, with the identical varieties of fish and coral. Some morays and other eels. One large green turtle appeared for a few seconds, a lone dolphin for a fleeting moment. There's a large manta ray population feeding in the shallows (snorkeling available but the water

is often murky). Visibility was usually 100 feet, unless there's rain or tides unfavorable. Water is around 82 degrees. Most dives were 60 feet or less, but the dive to Boland Caves went to 80 feet. The trip to dive sites lasts 20 minutes max. Ikari House was the only place that offered diving. The meals are good quality. Ikari is close to the wharf, only a few minutes' drive, while other Kiritimati hotels are a tedious, speed-bumped, 20-minute drive away . . . Ikari House runs, shall we say, an irregular accounting system. Quotes are a single amount for a week, with no breakdown into room, meals, diving, etc. At the end of the week, there was unnecessary confusion about what has to be paid, particularly on my shortened visit due to a three-day flight delay. The staff had no change available, making final payments difficult and guests scrambling with each other to get smaller-denomination notes." (www.ikarihouse.com)

Sipadan Security. If you have read our quirky dive book *There's a Cockroach in my Regulator* (order at www.undercurrent.org), then you're aware that Philippines terrorists kidnapped 20 people, including 10 divers, who were staying on Malaysia's Sipadan Island in 2000. Seems as if another run was made there on August 27. This time, thugs, believed to be bandits with guns from the Philippines, kidnapped a Malaysian fisherman and ordered him to guide them to Mabul Island, in the province of Sabah, where dive resort boats visit Sipadan daily. When the gunmen discovered there was a Malaysian military outpost on Mabul, they turned back towards the Philippines, but briefly abducted more Malaysian fishermen along the way. We reviewed Mabul this past January, and after hearing about the latest incursion, our reviewer said he still harbors no security concerns. The military keeps gunboats and helicopters in the area and has ramped up patrols this year. That's because in February, 200 armed followers of a self-proclaimed Philippine sultan landed in eastern Sabah, claiming it for their leader and reviving a centuries-old dispute over Sabah's sovereignty. After a long standoff, Malaysian forces cleared out the guerrillas. Dozens died in the drama. What does this mean for divers? If I had a trip planned, I'd say the hell with the crazies and be on my way. But if you're concerned, you can get U.S. State Department travel warnings at http://travel.state.gov/travel/cis_pa_tw/tw/tw_1764.html. Malaysia is not on the list.

Wananavu Resort, Fiji. A three-hour van ride from the Nadi airport, this resort has long been a favorite of *Undercurrent* readers, but it has had its troubles. Nearly a decade ago, Dan Grenier, who took resort guests on dives, disappeared while on a charter boat dives. Ra Divers, located on the premises, upped its service, then pulled out three years ago, leaving an uncertain diving future. Now, says Philip Nicozisis (West Palm Beach, FL), it's surely worth the trip. "When I arrived, the room's A/C was not working properly, so they moved me to a smaller room in which it worked better. The manager gave me a free massage for my troubles. The best dive sites are an hour away, and up to 23 miles from the dock. We had personalized service, which included a captain, a deckhand and a divemaster who came with us on dives, and on some days, the two managers came. These guys knew the waters like the backs of their hands, and found

the best sites 20 miles out without GPS! The best reefs were in the upper passage of the Vatu Ra Strait. Unfortunately, there was a cyclone last year, so a third of the reefs are in extremely bad shape. But these reefs on a bad day are better than some other places on their best day. The closest dive sites were most affected by the cyclone, but the dive shop is committed to showing you the best dive sites, which are farther out. The reefs are mind-blowing. There are some unpredictable currents, but they would never put intermediate or beginner divers in them. They took us to some challenging dive sites -- one was called the Maytag Reef, which, as the name implies, has crazy currents. I saw at least one shark on every dive, usually white-tip reef sharks. The fish population is abundant -- all kinds of beautiful and interesting species of angelfish, butterflyfish, and too many others to mention. Wananavu's rooms are clean but could use a little sprucing up, especially some new air-conditioners. The food is excellent, and the Indian chefs turn out an international cuisine." (www.wananavu.com)

Turtle Bay Eco Resort, Honduras.

This resort on Cayos Cochinos is too often overlooked by Caribbean-focused divers. It takes divers to the ecological preserve, where fishing is limited to native hand-line, says Wellington Lee (Washington, DC). "It has some of the

"I believed my PADI advanced certification and my Nitrox card would be sufficient for diving here, but I was wrong."

most dramatic reef structures (walls and pinnacles), coral diversity and fish density I have seen in the Caribbean. Beautiful sea fans, gorgonians, elkhorn, staghorn, sponges. Visibility at the Banks dive sites, 40 minutes out, was 100-plus feet. Most sites were a 15-minute ride from the dock, but only averaged 55 feet visibility. Macro subjects were excellent: harlequin pipefish, whitenose pipefish, pipehorse, nudibranchs, sea slugs, squid and octopus. Not much big stuff -- a few eagle rays, a nurse shark, one turtle but many huge snappers and groupers. The house reef is a five-minute kick out from the dock in calm water, excellent for new divers. The resort is small but accommodations are charming -- open air, screened windows, and mosquito nets. It's extremely quiet, with iguanas, hummingbirds and crabs right by your room. Food was solid, including some lionfish killed that day. No A/C, only fans, but cool enough at night. I was bitten by sand fleas while sleeping; DEET was moderately effective." (www.turtlebayecoresort.com)

The *Odyssey*. This serious liveaboard in Truk Lagoon is a favorite of *Undercurrent* divers. But we know many divers who make the long journey there and never quite get adjusted to either the depths or penetrating the shipwrecks. I'd like to thank Barry Fox (Apple Valley, CA), who just returned from there on August 26 and wrote us to honestly appraise his own skills and, therefore, send a cautionary note to some divers considering the trip. "The crew was top-notch, very professional and kind. Aboard were 13 Australians and three Americans. My accommodations were in cabin #9, with a full bed, and a twin bed as the top rack. It worked well for me and my dive buddy. The beds were comfortable and both had reading lamps. I thought the food was great, but one of the Australians said that the *Odyssey* definitely catered to American taste buds . . . I had in excess of 250 dives, and I hold a PADI advanced certification along with a Nitrox card (almost mandatory in Truk), but that did not prepare me for diving Truk Lagoon. Thorough dive briefings were held each morning at 7:30 a.m. and lasted 40 minutes, by far the best dive briefing I have ever heard. They covered both descending from and ascending back to *Odyssey*, where there is a deco bar at 12 feet and a full tank on a line in case you need it. You can dive steel 80s, steel 108s or multi-gas setups with backpacks. I grew up listening to stories of the Pacific Theater from my Dad, who served in the Navy during WWII. I also served in the Navy so that added great interest for me. I believed my skill set would be sufficient for diving Truk, but I was wrong. They say the visibility is anywhere from 40 to 85 feet, when in reality, the viz on the best day was a hazy 40 feet. The wrecks I dove had a bottom from 100 to 130 feet. I averaged over 85 feet for my max depth during the week, but I stayed shallow in comparison to other divers to make my air last longer. You can stay out of the holds if you choose, or you can go inside the bowels of the ships. I stayed mostly on the outside of the wrecks, and would go inside only if I knew I had a clear path

out, with some ambient light penetrating the wreck so I could find my way out. I tend to get claustrophobic, plus I am 6'4" tall and weigh 275 pounds, so getting into tight dark spaces doesn't appeal to me. *Odyssey* guides will take you anywhere you feel comfortable going. There was no pressure to go on any dive I didn't feel at ease with. In fact, a divemaster will take divers on a tour of the outside of the ship, which for me was wonderful . . . Though I felt out of my skill level diving Truk, I got everything I wanted from my trip there. *Odyssey* is an outstanding dive boat with a great crew. So if you have a skill set similar to mine, do what I am going to do for my next dive vacation: Go back to the Caribbean." (<http://trukodyssey.com>)

-- Ben Davison

An Analysis of Rebreather Deaths

why rebreather diving is 10 times more dangerous

Closed-circuit rebreathers were introduced to sport divers in 1998, but it wasn't long before they were associated with a number of deaths. Given the small number of rebreather units out there, compared to open-circuit scuba, the number of rebreather-related deaths seemed out of proportion. It raised the question that there may be some factor intrinsic to rebreather use that increases the risk of death. To answer that question, Andrew W. Fock, head of the department of intensive care and hyperbaric medicine at the Alfred Hospital in Melbourne, Australia, decided to look at rebreather fatalities recorded between 1998 and 2010 by Deep Life, a British manufacturer of rebreather gear.

Since 2007, Deep Life founder Alex Deas has tried to document all known civilian rebreather deaths in an Internet database. The information appeared to be derived largely from the internet forum Rebreather World. Reports on the site's "accident forum" were not independently vetted, but they had details of the victims and analysis of the events. Then in 2008, Divers Alert Network (DAN) held a technical diving forum and invited prominent members of the dive industry to discuss this database and its consequences. The scrutiny revealed significant inaccuracies in several cases, so they agreed to review the database and cases reported, correcting errors and adding information on the remaining cases.

Using this updated Deep Life database, holding discussions with training agencies and rebreather manufacturers, and then getting additional rebreather death data from the British Sub-Aqua Club (BSAC) and the DAN Asia-Pacific database, Fock sought to answer some key questions: 1) what's the rate of rebreather diver deaths compared to normal sport diving; 2) what are the major causes of rebreather deaths; and 3) what changes should be made to rebreather training and/or design to minimize future deaths?

Rebreather Numbers and Death Rates

Between 1998 and 2010, 181 rebreather deaths were recorded in the Deep Life database. There was a peak of 24 deaths in 2005 (prior to that, deaths averaged eight per year and afterwards, deaths averaged 20 annually.) Between 1995 and 2011, the three major training agencies conducted 18,000 entry-level rebreather certifications, and 500 each of intermediate and advanced certifications annually during that same time-frame. Thus, Fock estimates that in 2010, there were approximately 14,000 active rebreather divers worldwide, making an estimated 30 dives per year. At an annual death rate of 20 divers per year, this equates to a death rate of 4 per 100,000 dives per year -- 10 times that of non-technical sport diving.

Of the 181 rebreather fatalities recorded by Deep Life, 80 were attributed to equipment problems, 43 to diving-related problems, and 57 had insufficient data to form any conclusion. In the 27 deaths recorded in the BSAC study, 14 cases were associated with either equipment failure or the unit being turned on incorrectly; in only five cases was the cause of death thought to be unrelated to the type of dive gear used. Looking at all the cases, Fock believes two-thirds of them are associated with high-risk behaviors.

The Most Common Risk Factors

Fock writes that it's hard to estimate the number of active rebreather divers because manufacturers are unwilling to divulge the number of units sold, due to liability risks. And connecting risk of death to a rebreather type or brand is also hard because the number of units sold doesn't necessarily represent the number of units now in active use. Nonetheless, Fock stands by his death rate of 4 per 100,000 dives. This makes rebreather diving five times more dangerous than hang gliding and 10 times more than horse riding (but eight times less dangerous than base jumping).

The BSAC study was of importance because it showed that British rebreather divers were four times more likely to be in a fatal accident than open-circuit divers -- they only represented four percent of all dives but 14 percent of all fatalities. Also, 38 percent of deaths were associated with diving to depths greater than 130 feet, regardless of what dive gear was used. Diving below that level represented 11 percent of total dives in that study, equating to a three-fold increase in risk of death associated with just depth alone. With the assumption that rebreathers are used for deep, mixed-gas diving, this raises the issue as to what extent the breathing apparatus itself is responsible for increased risk, and to what extent it is a function of a deeper, more dangerous environment.

Two types of cases appeared in the Deep Life database most frequently: divers attempting very deep dives with limited experience, and divers continuing to dive despite rebreather alarms indicating problems with their units. Despite more than a decade of warnings, the dangers of overconfidence don't seem to have been taken to heart by many new rebreather divers. Furthermore, there have been a number of near misses reported on Rebreather World forums that seem to arise from misinformation via the Internet. Those issues continue to be a challenge for rebreather safety.

While much of the increased mortality associated with rebreather use is related to high-risk behavior and the risks of diving at depth, the complexity of rebreathers means they are more prone to failure than standard scuba gear. The risk of purely mechanical failures results in a theoretical increase of failure risk to 23 times that of a standard open-circuit tank setup. But redundancy in some sub-systems can reduce the risk of failure, particularly in key areas like electronics. For example, a rebreather that has two computers with twin batteries has a lower failure risk than that of a simpler rebreather with its single O2 display. And the

Your High-SPF Sunscreen May Not Be So Great After All

Over the years, too many of my fellow divers have been diagnosed with melanoma. So, my friends, if you're headed to the tropics to go diving, sunscreen is a must. Sunscreen labels have new information designed to make the products more effective and easier to use. But despite these changes, many sunscreens continue to carry sun protection factor (SPF) ratings that some experts consider misleading and potentially dangerous.

New rules from the Food and Drug Administration ban terms like "waterproof," and require that sunscreens filter out both ultraviolet A and B rays. Still, one in seven products boasts SPF ratings above 50, which have long been viewed with skepticism. Many consumers assume that SPF 100 is twice as effective as SPF 50, but dermatologists say the difference between the two is actually negligible. Where an SPF 50 product might protect against

97 percent of sunburn-causing rays, an SPF 100 product might block 98.5 percent of those rays. "The high SPF numbers are just a gimmick," Marianne Berwick, professor of epidemiology at the University of New Mexico, told Fox News. "Most people really don't need more than an SPF 30, and they should reapply it every couple of hours." She says sunscreen should be used in combination with hats, clothing and shade, which provide better protection against ultraviolet radiation.

Consumer Reports recently did a review of sunscreens based on SPF and UV protection, and selected as its one "Best Buy" product Equate Ultra Protection Sunscreen SPF 50. Five more products got marked as "Recommend": UP & UP Sport SPF 50; Coppertone Water Babies SPF 50; Walgreens Continuous Spray Sport SPF 50; Hawaiian Tropic Sheer Touch 30; and Coppertone Sport High Performance SPF 30). Two zinc oxide-based products, Badger and All Terrain, pretty much failed. If you're headed to the tropics, stick to the proven performers.

ability to “plug in” off-board gas via totally independent mechanism, which some rebreathers have, reduces the risk of mission-critical failure by threefold.

Human Errors

There is little data on the actual mechanical failure rates of both open-circuit and rebreather dives, but failures are commonly reported on Internet forums. Analyzing human factors in rebreather failures, Fock estimates that more than half of them were attributed to poor training or poor pre-dive checks. The experienced open-circuit diver who takes up rebreather diving is at particular risk of overestimating his ability. With open-circuit diving, there is usually only one correct response to failure. But the complexity of rebreather diving with its interaction of physics, physiology and equipment means there may be many possible responses that allow the diver to keep breathing, but not all of them will result in a successful outcome.

Fock uses this case as an example: A diver entered the water with his rebreather turned off. He had pre-breathed the unit before entering, but not for enough time for the oxygen partial pressure (PO₂) to fall to a critical level. His descent resulted in an increase in PO₂, despite the consumption of oxygen from the loop. At 45 feet, he became aware that the electronics were not turned on. His options were: 1) bail out by switching to open-circuit scuba; 2) ascend to 20 feet and flush the rebreather with oxygen to get a breathing mix that’s non-hypoxic on the surface; or 3) turn on the electronics (not recommended because the unit would try to calibrate the oxygen cells underwater, but it would be possible if the correct sequence was followed).

Mantas Are More Valuable Alive than Dead

Like sharks, manta rays too are under threat. They’re being hunted by fishermen for their gill plates, highly desired in Asia as a tonic for many medical conditions. A 2011 study by the Manta Ray of Hope Project estimated the value of this market at \$11.3 million annually. But a recent study reported in PLOS One states that manta ray-watching tourism, if managed properly, can be a far better economic alternative in countries where the animals are big attractions.

Three researchers from the conservation nonprofits WildAid, Shark Savers and the Manta Trust reviewed 23 countries that have manta-ray dive and snorkel operations, then estimated that direct revenue to the dive operators is at least \$73 million annually. Direct economic impact (hotel rooms, restaurant meals, etc.) on those tourist regions is \$140 million annually. Ten countries account for 93 percent of that revenue estimate -- Japan, Indonesia, the Maldives, Mozambique, Thailand, Australia, Mexico, the U.S., Micronesia and Palau.

One example where tourism trumps fishing as the top job for locals is in Indonesia’s West Papua Province, where manta rays and sharks are big tourist attractions. A 750-square-mile conservation zone was established through lease agreements between villages, that own the fishing rights for the area, and Misool Eco Resort, built on an island previously used as a shark finning

camp. Locally-hired rangers, some of whom were formerly in the shark-finning trade, now enforce regulations in the conservation zone. The villages benefit from lease fees, employment, the resort’s purchases of their fish, and improved fishing in the waters surrounding the no-take areas of the conservation zone. Recognition of the value of marine ecotourism has since led to legal protection in Raja Ampat for manta and mobula rays, sharks, turtles and dugongs.

One downside is overcrowding at some of the sites where people go to see the mantas. All the attention could negatively impact the rays’ behavior; one dive operator surveyed said that manta ray sightings had decreased at very crowded sites.

Still, the decline of manta rays from overfishing, combined with their slow reproductive rates, means that manta fishing revenue will disappear. Meanwhile, the demand for marine-focused eco-tourism is expected to grow significantly over the next 20 years. While that may not keep this threatened species off the extinction list, the study asserts that development of well-managed tourism offers a promising alternative – for the rays and for the people.

“The Global Economic Impact of Manta Ray Watching Tourism,” by M.P. O’Malley, K. Lee-Brooks and H.B. Medd; PLOS ONE 8(5): e65051. doi:10.1371/journal.pone.0065051

PS: Shark Savers has recently merged with WildAid. For more information on WildAid’s important work, go to www.wildaid.org

While the PO₂ in the rebreather's loop was still quite breathable, an understanding of physics and physiology would have told him that to ascend without the addition of oxygen would result in a rapid fall of PO₂ in the breathing loop. He was an experienced open-circuit diver, so his first reaction was to return to the surface to correct the problem. But he became unconscious from hypoxia just below the surface and drowned. The entire event occurred in less than 150 seconds after he started the dive.

There was nothing wrong with his rebreather. Rather, he failed to make a pre-dive check to verify that the electronics were turned on, and did not take enough pre-breathe time. This type of problem can occur when a diver has completed standard checks but then delays the dive while making some adjustments, e.g., re-siting the shot line. He may respond by turning off the unit in a misguided attempt to save battery life, then fail to turn it on again because he was distracted with "getting on with the dive." The scenario above was eminently salvageable without the need to go "off the loop," but the failure to understand the consequences of the various options resulted in a tragic outcome.

What Can Be Done

The use of basic checklists and "good design" can eliminate the chance of human error wherever possible. In Fock's opinion, good design should make the execution of action and the system's response visible to the diver, use constraints to lock out possible causes of error, and avoid multimodal systems.

Training should hammer home the basic skills so that they become "hard wired" into the diver's brain, thereby allowing clear thinking in times of stress while making critical decisions. Fock believes that one way to do this is not to offer decompression diving in the initial rebreather certification course, which would then mean only a limited failure response would be required, similar to open-circuit diving (like open-circuit bailout as the only option). Once the actual diving skill set and basic rebreather management is well ingrained, then more complex teaching of physics and physiology can be introduced in conjunction with discussions on alternative bailout options and decompression diving.

"Analysis of Recreational Closed-Circuit Rebreather Deaths 1998-2010," by Andrew W. Fock, Diving and Hyperbaric Medicine, June 2013, pgs 78-85.

The Disappearing Recompression Chamber

there are more than ever, but fewer are for divers

Undercurrent reader Michael Marmesh (Miami, FL) was aghast to hear that there's no recompression chamber for divers in Miami any longer. That doesn't mean it has closed down. It just means that the chamber, located at Mercy Hospital, just isn't available to injured divers any more.

"As a lifelong scuba diver, I am disturbed," he wrote (and cc'ed us) in a letter to *Miami Herald* reporter Susan Cocking. "I had reason to consult with them three years ago after a 90-foot night dive. My right leg had been completely numb for half an hour, but the doctor was very helpful and reassuring. Turned out to be a pinched nerve and not a bends hit. Still, the resource needs to be available locally."

Unfortunately, that probably won't happen in the near future. Diver-friendly recompression chambers are closing down in the U.S. on a regular basis. The hardest-hit area is Florida. The Divers Alert Network (DAN) says seven facilities in the last three years have become unavailable for the treatment of decompression sickness (DCS). Cocking tells us that she only found out about the Miami chamber shutdown when a friend of hers got bent and had to be evacuated to the Florida Keys for recompression. "The doctors told us at the time that the only recompression chambers in Florida are in the Keys, Orlando and West Palm Beach."

Which Divers Get DCS? DAN Tries to Determine

Credible estimates of the incidence of decompression sickness are difficult to find. But Peter DeNoble, director of research at Divers Alert Network (DAN) led a team to analyze the rate among DAN members, and published the results in the journal *Undersea and Hyperbaric Medicine*.

They estimated the annual per-capita incidence rates among DAN members who bought dive accident insurance and submitted injury claims between 2000 and 2007. (They didn't know how many dives each member had made, however.) They found that men submitted 28 percent more claims than women. The male-to-female

difference was greatest between 35 and 40 years of age, and disappeared by the mid-50s.

The highest DCS rates showed up in the age 30-39 category, after which DCS-specific claims declined with increasing age, which DeNoble's team assumes is a result of more conservative diving. Divers who submitted claims in their first insured year were more likely to drop out than divers who submitted claims in later years, which suggests that treatment for DCS early in one's diving experience may be a disincentive to keep on diving.

"Per-capita Claim rates for Decompression Sickness among Insured Divers Alert Network Members," *Undersea and Hyperbaric Medicine*, Vol. 39, No.3, pgs. 709-715.

Ironically, there has been a huge increase in the number of recompression chambers in the U.S. over the past decade, both in hospitals and as stand-alone clinics. Dick Clarke, president of the National Board of Diving and Hyperbaric Medical Technology, says the number of chambers has risen from 200 ten years ago to more than 1,400 today. "The problem for divers is most of that increase is related to a business model designed to maximize profits and minimize expenses." Treating divers for DCS is not part of that model.

Besides treating DCS, recompression chambers are also used for wound healing and treating chronic diseases. Most of those treatments are classified as hyperbaric oxygen therapy (HBOT). "The difference is most HBOT treatments can be run like an industrial factory line," says Mauricio Moreno, founder of SSS Recompression Networks, which runs a dozen chambers in dive destinations worldwide. "You can schedule them easily, and run the treatments either with nurses or physician assistants. DCS treatments are different. Patients come in on an emergency basis, and treatments require a board-certified doctor and internist. The cost of having them on standby for a chamber that is not regularly used for DCS is huge." What's more, those costs are not reimbursed easily. Insurance and Medicare reimbursements for HBOT treatments are low, and DCS treatments are placed in that category. "The payout is low so the chambers lose a lot of money," says Moreno. That's why chamber operators see that service as red ink."

In the past, most U.S. chambers were available on a 24/7 basis. But because they were losing money, many operators decided to limit hours or just shut down. These days, the majority of chambers are available only to outpatients, typically those needing wound therapy, and operate weekdays during normal business hours. "Most dive accidents occur on the weekends," says Clarke. "Chambers have no interest in treating divers, because divers simply get bent at the wrong time of day and night. That has become a national crisis. An increasing number of divers go without HBOT and suffer the long-term medical consequences."

Clarke also runs National Baromedical Services, a hyperbaric medicine consulting firm for hospitals, in Columbia, SC. It's affiliated with the University of South Carolina's medical center, which has a 24/7 recompression chamber. Now it's the go-to chamber for Charlotte, NC, which lost its sole 24/7 chamber. "Atlanta has four million people, and it used to have two 24/7 recompression chambers in hospitals. Today, there are 14 HBOT programs in hospitals but none are available 24/7."

The situation is better overseas. As with much of healthcare, Americans can find it cheaper and more efficiently overseas than they can in the U.S. Same goes for recompression chambers, says Clarke. "The international ones run 24/7, and they're in places where most divers go to dive, because they were put there to treat divers. But in some cases, these chambers struggle to maintain high levels of clinical and operational capabilities."

Still, it's not uncommon for overseas chambers to have disputes with the insurance companies about reimbursement. Ten of them, led by Moreno's SSS Recompression Networks, got into it with DAN America back in March 2006. They issued a press release stating they would not take DAN America's insurance at their chambers, most in popular dive sites like the Bahamas, Belize, Cozumel and the Galapagos, and the policyholders would have to pay their costs out of pocket. The reason was due to unpaid medical claims, some dating back two years, causing some chambers to consider closing down. Moreno led a lawsuit against DAN America in U.S. federal court. DAN's response was, "It is [our] view that reasonable and customary means the usual charges of similar chambers. It is the view of Mr. Moreno that reasonable and customary means what the chamber charges, even if the charges are significantly higher than charges of other similar chambers." Yet a month later, the two parties reached a confidential settlement over the billing practices, and SSS's chambers announced they would accept DAN America insurance again.

But today, Moreno is still critical of DAN and what it's doing in the wake of constant shutdowns of DCS treatments at U.S. chambers. "DAN is supposed to be monitoring and leading the charge. What are they doing to convince local hospitals not to close their chambers to divers? What are they doing with their money? This issue is right on their doorstep, but DAN is not doing much about it."

We asked DAN for its take. "DAN does everything possible to ensure U.S. chambers are available to divers," DAN spokeswoman Rachelle Deal wrote in an e-mail. "We also maintain a database of all chambers available to treat injured divers, and have programs which allow chambers to become part of DAN's preferred provider network. As part of DAN's mission, we regularly review and consider new programs as circumstances change. Our goal is to make sure injured divers have access to: 1) quality medical care which allows for evaluation of a diving injury; 2) appropriate medical facilities which are operated in a safe, efficient and cost-effective way; and 3) the best treatment available in a given region or territory."

In the meantime, what can divers do? Always buy policies for travel medical insurance and emergency assistance when you're diving abroad. If you are on Medicare, you must have a supplemental policy that provides foreign medical coverage. "It's imperative that you're covered for medical accidents when you travel internationally," says Clarke. "From time to time, some insurance-lacking divers treated in remote areas who can't pay the bill are prevented from leaving the country until someone can pay up. Sometimes passports are removed until they can pay. So have some form of insurance that covers dive-related accidents, and always read the policy to see how you're covered."

As for keeping U.S. chambers open to divers, Clarke doesn't have any good advice. "There have been some initiatives by local diving groups and local chambers to try and stem the tide of disappearing 24/7 programs, but I don't know of any that have been successful. It's a huge financial barrier for chambers. But for divers and others who need this type of emergency treatment, it is a national crisis."

-- Vanessa Richardson

Are You Diving Less These Days?

why divers are making few trips or quitting altogether

Diving has changed over the years, as have we divers, but it seems like the sport, and many who have participated in it, are parting ways. While scuba was once a fresh, exciting and less expensive pastime -- and for most of us, it still is -- we're finding that it has lost its luster for many.

While I have long pondered the reasons why people dive considerably less or even drop out, I became especially interested when I received an e-mail from *Undercurrent* subscriber Bobby Marie (Mableton, GA) earlier this summer. He wrote that he was renewing for another year because "I have saved tons of money by living vicariously through the travels and reports of your writers. I personally,

however, don't expect to dive anywhere farther away than a couple hours' flight from Atlanta, if I dive at all. While I am proud of my underwater history, I have essentially stopped diving. I would be curious as to why other healthy, long-time divers have decided on their own to stay home and why."

So I put the question, "Why have you stopped diving" to readers of our monthly e-newsletter a couple of months ago. I was surprised at the number of responses I received. Of course, one obvious reason for giving up diving is for health reasons -- our readers are primarily an older bunch -- but there were plenty of other reasons, and readers made some unique points about why they're hanging up their fins.

For many seasoned divers, a general sense of ennui has set in. Phillip Alspach (Boulder, CO) says he is bored with the "same ole, same ole." "I've been diving since the 60's, traveled the world and have dived at many of the 'best' places in their prime; now I am generally disappointed in what has happened to the locations, the beaches, the industry and our oceans. Call it a change of life, a mid-life crisis, I don't know. It's not as much fun as it used to be -- too many people, too much effort, too little fun, too little return."

Travel Hassles and Heartaches

One reason cited for cutting back or giving up diving is the increased hassle it takes to get to any dive destination. Crammed airports and planes make travel a no-fun experience, and prices, especially to the Asia-Pacific region, are sky high. For Denise Kalm (Walnut Creek, CA), that's the prime reason. "Air travel sucks. Between the trouble of trying to get a decent rate (and forget trying to cash in my million-plus air miles to make it cheaper), the TSA, and then the long flights in increasingly uncomfortable seats, it just seems too difficult to go to great places like Palau."

The weight restrictions for luggage are also affecting divers. "My husband and I do not dive as often as we did because of the hassle with airline baggage allowances," says Wendy Mcgeown. (Ipswich, U.K.) "We like to take our own equipment, and we used to be allowed a free 20 pounds for each piece of dive equipment. Not anymore." She says the cost of paying for standard luggage, dive gear and the overall ticket price to a decent destination is just too much.

And, of course, the price of resorts and diving continues to climb. While there are still decent bargains to be found, some of the old standbys are no longer with us. Kalm mourns the loss of good live-aboard pricing. "Some of my favorites, like the Nekton line and the former *Aquanaut Explorer* have ceased operations. The ones that are left are pricey, so I only do them rarely."

Bikini Protest

"I was on a palm-fringed island in the Maldives when I saw two girls, both instructors with the dive centre at Vilamendhoo, coming in from the beach and looking happy in their bikinis. One, Leila, was Swiss and married to a Maldivian, while the other, Sylvita, was Spanish and partnered with an Austrian.

"I asked them to go back and recreate the moment, and photographed them for the cover of *Diver* magazine's Travel Guide. They were happy to oblige, and I grabbed a few images of them acting it out again. It took only a few minutes to do, but it seemed to me to encapsulate what a tropical island holiday was all about.

"The trouble started when I innocently posted

one of the pictures I'd shot at the Facebook page of a closed group of photographers that I was a member of . . ."

To find out what uproar long-time Undercurrent contributor John Bantin caused, keep reading his latest blog post at www.undercurrent.org/blog/2013/08/29/bikini-protest



The Offensive Photo

Development has also besmirched much of the tropical paradise we once loved. "Cozumel used to be wonderful -- loads of local restaurants and quiet streets," says Kalm. Now, with many cruise ships there, it has all the overpriced jewelry stores, more chains and less of the local feel. I see this happening to Isla "Mujeres and Ambergris Caye -- big chain hotels come and wreck the environment." Like many of us with fond memories of "the old Caribbean," she laments the growth, but then a great majority of the local people love the greater income it provides. We travelers often survived on the backs of the poor.

For others, the Caribbean is just tired, the reefs are fished out, and it's no longer a value. "After seeing what I saw in the 60s through the early 80s, it's sad to see how depleted the ocean has become of large creatures," says Ken Labarbera (Grass Valley, CA). "Now, lots of dead reefs and polluted water." On a recent trip to Utila, Lynn Powers (Brooklyn, NY) was devastated to see "acres of what looked like a reef grave site, bleached-out dead coral all around. Interestingly, new divers were so psyched. I too was once that new diver who thought seeing one or two turtles was the greatest thing when divers in the 70s would have seen schools of them. Now it's just too depressing to be fun anymore."

"The more I dive, the more my standards are rising, but the cost and the hustle of the 40-hour trip to Indonesia is just not as attractive as it used to be."

Michael Redberry (Sacramento, CA) has been diving for 25 years, starting first with Grand Turk and then Little Cayman before he discovered Fiji. "I went to Provo after that. It was a waste of money. I do not see myself going back to the Caribbean. Palau and Raja Ampat maybe next, but the cost of these remote dive trips keeps rising much faster than my bank account. Twenty years ago, Grand Turk was dirt-cheap. A week on the Nai'a and five days in Lalati this year cost the same as my new Honda Accord. I think the more I dive, the more my standards are rising, but the cost and hustle of the 40-hour trip to Indonesia is just not as attractive as it used to be."

Undercurrent readers are frequent travelers, but as diving quality slips, other places beckon, some that may not even have a body of water in sight. Nickie Nelson (Salt Lake City, UT) is one of those travelers. "There are a lot of places in the world I have yet to see that are not associated with diving. I've already booked a trip to Russia next year."

Medical Hazards and Headaches

Few readers wrote to say they were feeling too old to dive. But Norma Goldberger (New York, NY) says one reason she stopped diving is because of a medical condition she developed due to her diving. "I used to love to go diving two or three times a year. Now nothing. Why? I developed a stage 1 melanoma on my neck which my dermatologist said was due to the sun reflecting off the water onto my neck. Presumably this was from bobbing around on the surface of the water waiting to be picked up after a dive. My husband and I were slow breathers, so we were always let off the boat first and picked up last once the divemasters knew how little air we used." At age 67, Goldberger believes age is another reason why she and her husband are slowing down. "I blew two discs while gardening and now am worried about the weight of the tanks on my back and whether or not I would twist my body under the water, which could result in walking issues after the dive. And the weight of my equipment -- dragging it in and out of the car, airport, resort, etc. Maybe snorkeling will suffice."

Rich Erickson (Marietta, GA) has no medical issues, but he is honest enough to admit that he just feels too out of shape. "I'm 66 and frankly in the worst shape of my life. Too much eating and vino, and not enough exercise have taken their toll. I don't feel safe or comfortable to go diving in this kind of shape. I am resolved to do something about it, though. I've begun to ride my bike on a regular basis and hope to lose 30 pounds in the process. When and if that occurs, I'll be back in the water." Good luck, Rich, and we hope you get wet soon.

For many divers, the b.s. at many resorts about medical issues and liabilities is just too much. Even if you're healthy now, checking any "medical condition" box on the liability form at a dive destination can be a time-waster or even a diving deal-breaker. Roger Addis (Edwards, CO) had an emergency bypass surgery in 1988, due to an error during a routine heart test. "When people hear heart surgery they seem to assume I had a heart attack. I didn't, and this is stated in my medical reports. I am 66 years old but my medical test results would be average for a 40-year-old man in good health. I have letters from my cardiologist and regular doctor, and the PADI medical form stating I am fit for recreational diving, and I travel with these documents. Whenever I would book a trip, I would always contact the dive operator and provide my medical history. The problem I have run into is when I arrived at the dive destination, I was told I could not dive or that I must go see their doctor to be examined before diving. This could take as much as two to three days. By then, the dive boat would be long gone or most of the dive week was over. I cannot take the risk and expense to travel for diving if I know there is always the possibility of being told I cannot dive."

"It started in the early 90s, with the big rigs taking over dive boats. Now, those of us who do not 'shoot' are shuffled off so the camera wonks can have their moment."

Too Many Rules and Divers

Bobby Marie, who wrote the letter that started this article, says one reason he doesn't dive is because the industry has too many rules. "They have dumbed down the experience to a restrictive environment so that it's not enjoyable anymore." The other problem is divers with

cameras. "It started in the early 90s, with the big rigs that began to take over dive boats. It has gotten worse so that those of us who do not 'shoot' are shuffled off to the background so the camera wonks can have their moment."

For Stephen Garriga (Atlanta, GA), there are just too many lousy divers around. "Air-hogs who blast through their air, then complain about waiting for other divers to return; cruise-ship passengers who arrive late but demand to be back on time; selfish wannabe photographers with no buoyancy control who snap-and-silt everywhere. Perhaps I'm just old-school, but the level of the average diver seems to have dropped."

David Skinnell (Los Mochis, Mexico) says diving is literally for amateurs now. "Diving has become a box to tick while on your vacation or your cruise, and has the same importance as parasailing, or falling asleep on the beach and getting sunburned. Divers are less competent because they are churned out of diving 'factories.' Dive operators run 'cattle boats,' cramming as many divers (read: "dollars") on to boats as possible. Many of these boats insist on bottom time for the entire group being determined by the diver who uses air the fastest. I have even had some operators say going in that this dive will be limited to 'X minutes.' This is because not only are they maximizing the number of divers on the boat, they are also maximizing the number of trips in a day, and to get them all in, they need to time limit each trip and visit only the (usually over-dived) sites closest to the marina. Diving has become too much of a business, fueled by dive organizations whose interest is in producing volume to drive the bottom line."

Fewer Dive Buddies

A shrinking industry means a smaller amount of divers out there. That makes it tough for divers who want to travel to find those who want to accompany them. Ever since her local dive shop closed, Mary Wicksten (Bryan, TX) says it's difficult to find dive buddies. "Like many other shops, they weren't selling any gear -- people came in, tried it on, and then ordered online. We used to have a club with local activities, but the nearest shop to me now is a two-hour drive one way. Freshwater diving in Texas actually can be quite good, but some people are too fancy for that. Many divers prefer to go on exotic vacations once a year instead of keeping up their skills by diving locally. A lot of people dive once on vacation after certification and then quit. I can't even tag along on a practice dive with beginners anymore."

Divers lacking dive buddies are also discouraged due to the money-sucking “single” supplement. “It’s more difficult to go diving with friends, as it is hard to match everyone’s schedule,” says Vichit Thitiratsakul (Bangkok, Thailand). “But when I want to go diving alone, I have to pay 40 to 65 percent more for single accommodations. I don’t want to stay in the room with someone I didn’t know before, but my own room is too expensive.”

“Though I’m fit and able, one of my buddies is no longer fit, and the other is broke,” says Jonathan Creighton (Oakland, CA). “I’m just not psyched to go by myself and get matched with some random buddy.”

Many younger divers are dropping out, solely because life gets in the way, especially kids. “I traded my regulator for two wonderful boys, and I don’t regret it,” says Gregory Leiby (Greenville, SC). “More than anything, it is the time required for diving. Even if I bring my family on a dive trip, I am not interacting with them the same way I would if we were on the beach or at an amusement park.”

Ken Oppenheimer (Corte Madera, CA) also gladly gave up diving for his nine-year-old twins, “but I will be back in the water with them when they are old enough for certification.”

Here’s to hoping Ken, Gregory and other diving parents can get their children to take up tanks and regulators. For the dive industry to survive, an infusion of fresh blood will help. But with climate change, overfishing and other pastimes competing for attention, is that possible? If *Undercurrent* readers, who are passionate about diving, are dropping out now, what hope is there for a younger generation to replace them?

That’s an issue the dive industry is grappling with. Environmental degradation and skyrocketing costs are largely out of the industry’s control. But other issues -- providing better opportunities for experienced divers, organizing travel clubs, making diving more affordable for single divers -- can help keep people interested. New underwater activities -- promoting reef ID activity, dive caching and creating artificial reefs -- are helpful.

But the old days have passed. While we hardcore divers continue to find the means to travel to warm-water destinations and get our jollies underwater, the truth is that dying reefs, development, mass marketing and accelerating costs are industry problems that will not go away. For our *Undercurrent* readers, we will continue to search for bargains and easy-to-get-to yet out-of-the-way places, and provide as much help as we can to keep excitement high and costs low.

-- Ben Davison

Want to Be One of Our Bloggers?

Have an opinion about the scuba industry, ocean conservation or some other aspect of diving? Can you express it well, and on a regular basis? If you think you have something of interest to say to our readers regularly, I’d be happy to consider it as a blog for our website.

If you haven’t read our blog yet, or recently, check out the latest posts by the best of the best in the diving world (www.undercurrent.org/blog). John Bantin wrote about the uproar one of his photos made in his latest blog post, “Bikini Protest” (see the “offensive photo” on page 16 of this issue). Maurine Shimlock

and Burt Jones described two Indonesia dive trips in their blog post “In the Name of Science,” in which divers identified 200 fish and discovered three new fish species. Bret Gilliam tells a great tale about the challenging assignment a U.S. navy officer gave his dive team in “Filming Navy Subs and Zen Meditation in the Deep.”

If you can write blog posts that are as insightful and humorous as theirs, then I want you. I’d like blog posts that are informative, intelligently written, deal with controversial and unusual topics and are of interest to experienced divers, a.k.a. *Undercurrent* readers. E-mail me at bendavison@undercurrent.org with a sample blog that you think would be a good fit, I’ll read it and get back to you directly about blogging opportunities.

Flotsam & Jetsam

Take Your CO Analyzer to Florida. The dive physician who wrote the article "CO Poisoning Risk Is Higher Than You Think" for our July 2012 issue came back to us with an update to the story. "I mentioned in the story that Florida is the only state that requires its dive shops to routinely test their compressed dive air. That law has now been repealed. In the legislative analysis about why it was, there's a statement about dive training agencies already requiring regular air testing at its members' fill stations. That's false. The only training agency with that requirement is ANDI, which probably represents fewer than one percent of fill stations in the sport diving world. So make sure you have your CO analyzer on you when you head to Florida for dives."

Correction to Our PADI Card Check Story. Dive instructor Philippe Yersin (Vero Beach, FL) wanted to correct us about the way PADI dive shops check information for customers who don't have their certification cards on them. "We don't go through the motions of ordering a replacement card. There is a much simpler way called Dive Chek Online that can be accessed only through the PADI Pro's web site. It is a fast process; we only need a name and a birth date to verify the diver's current level of certification."

No More White Pants and Blue Blazers. During the America's Cup trials in May, the 72-foot catamaran *Artemis* overturned, leading to the death of crew member Andrew "Bart" Simpson, who was trapped under the boat. To avoid future mishaps, a number of rule changes were made to enable crew members to survive similar accidents. What's the diving angle? All America's Cup crew members now carry blunt-nosed diving knives with a serrated edge

to cut themselves free of entanglements. More important, they carry a Spare Air, which can provide a few minutes of air in shallow depths.

An Easy Way to Track Your Luggage. Ken Kurtis, owner of the Reef Seekers dive shop in Beverly Hills, CA, brought this interesting gizmo to our attention. If you want to know exactly where your bag is when you're traveling, there's a new gadget out called Trakdot, recently approved by the FAA (www.trakdot.com). It's essentially a little GPS tracking device you pair up with a cell phone, activate and toss in your bag, and it will transmit the location of your bag to your phone anytime you're both on the ground. The unit costs \$50, works (allegedly) with any cell phone anywhere in the world, plus a \$9 activation fee and a \$13 annual service fee. When you consider the inconvenience of having the airlines lose a bag of dive gear or photo gear, it sounds like it's worth it. And, if you arrive at your resort only to find out too late that someone walked out of baggage claim by mistake with your bag in tow, think how easy this will make it to reunite you.

Diver Tries, Fails to Smuggle Pot into the U.S. Around midnight on August 19, Jess Zunti of Windsor, Ontario, donned his dive gear and tried to smuggle eight pounds of marijuana into Michigan by swimming across the St. Clair River. But someone saw Zunti, 24, swimming in the river and tipped the National Guard, who noticed he was towing a heavy object behind him. The U.S. Border Patrol picked him up at Marine City, MI, and found the pot in a water-tight container tied to a seawall. Despite the current and freighter traffic, Zunti made it unscathed during his swim, three-quarters of a mile (he never submerged), but he now faces four years of prison back in Canada. Ironically, Zunti probably wouldn't have had much trouble transporting pot through legal means -- medical marijuana is legal in both Ontario and Michigan.

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