

undercurrent

The Private, Exclusive Guide for Serious Divers

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Living Underwater, Cozumel, Mexico

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www.undercurrent.org

Editorial Office:
Ben Davison, Publisher and Editor
3020 Bridgeway
Sausalito, CA 94965
EditorBenD@undercurrent.org

back to my first love, who still looks fantastic

Dear Fellow Diver:

I like to dive the Caribbean: 10 different countries so far, and multiple locations in half of those. However, Cozumel is my first and best love. We have a long history together. In January, I visited the island after nearly a seven-year separation, largely caused by what Hurricane Wilma had done in 2005. Wilma, the largest storm ever measured in the tropical Atlantic, did serious damage to the island and its reefs. While the island's topside, a major cruise ship destination, recovered quickly, developers can't speed the natural recovery of the coral oasis. Nevertheless, I was pleased to see underwater Cozumel, famed for its formations, currents, visibility and marine park status, looking good upon my return.

On my second day of diving, the fast boat from Living Underwater headed north of town -- not to the marine park, but probably where the snapper I ate the night before was caught. It's the location of Eagle Ray Wall, which for a winter month or two is a go-to spot for its migrating namesakes. During the short ride, the sun came out and stayed out, as it did most of the week, giving better color underwater. Winter weather is a concern, as a north wind (called a "noreaster" back home) could lock a diver on shore for a couple of days. I lucked out: Daytime temperatures were in the low 80s, and water temperatures were 80 to 81 degrees. Perfecto.

I backrolled into a modest current, headed to the top of the wall, then eased along at 85 feet. The main show is in the blue, but I left that



The Jewfish (an inside joke)



watch to Jeremy Anschel, the owner of Living Underwater, and checked out the nooks and crannies on the wall. Drifting ahead of the pack, I startled a spotted moray, which rushed into a hole and disappeared in a swirling cloud of sand. When the water cleared, a spiny lobster sat calmly in the hole, and the chastened moray peered out six feet away. I looked at Jeremy, who was staring intently into the blue. A barely visible squadron of eagle rays moved out of sight. We stayed put for a couple minutes (I was glad I added two pounds of lead for this dive). As a bicolor damsel, defending its algae farm, nipped at my legs and arms, seven eagles, flying in formation, banked right

by us, giving a perfect show. We saw another squadron later, and several individual rays. One cruised just a meter over my buddy, who didn't see it until it passed over and startled her, to the amusement of the other two divers with us. I passed well above a huge school of yellowtail snappers. Because it's a food fish, I was surprised to see so many here in the northern fishing zone. After nearly an hour, my computer was at the deco line, and I started up in blue water. At the long safety stop, I watched a few houndfish that seemed to be chasing after nothing, while my partner studied comb jellies, which seem to favor a 20-foot depth and provide a sideshow for the long Cozumel hang time.

Cozumel reefs look good. My partner and I kept notes on post-Wilma differences. Soft corals and some sponges were fewer or smaller as they regrow. Some fish species may be sparser, especially larger parrotfish. We dived Colombia Shallows one morning, because Jeremy had two newbies on the boat. The sand bottom at 25 feet was a killing field of acropora pieces, mostly staghorn. For the most part, the reefs and fish life are vibrant, taking into account that live coral cover has been reduced here and all over the Caribbean because of global ocean degradation. Jeremy thinks the invasive lionfish has already done more damage to the reef ecology than Wilma. But the formations at Palancar, Colombia and Punta Sur are as dramatic as ever, and a big reason for the flotilla of dive boats headed out each morning.

Cozumel above water is a tale of two cities. Along the glitzy malecón, dozens of shops post hawkers out front, promising overpriced jewelry and 60 percent discounts on Viagra. I counted two to seven cruise ships docking each day but even on the high days, the hawkers looked forlorn and the shops were sparsely populated. Just two blocks from the water, the other Cozumel is a lot more fun. I ate lunch and dinner at a different spot each day, and paid \$5 for lunch, \$10 for a full dinner, half as much as on the malecón. Sabores, a lunch spot with a chalkboard menu, served up great soup and low prices in a backyard garden. Bahia del Caribe, a restaurant owned by the fishermen's cooperative, offered fantastic lionfish cooked to order, and a bunch of sides, including two ceviches of lionfish and octopus. The clientele was mostly locals, although we provided menu interpretation for some Dutch tourists whose English was better than their Spanish. When I mentioned this place on the boat, divers staying at the pricey hotels south of town turned green with envy. Why don't more divers get off Cruise Ship Lane?



The balcony at Casa Mexicana

Jeremy is a Minnesota expat who has lived in Cozumel for 12 years and owned Living Underwater for eight. He offers a fast boat with twin 115-hp engines, a competent crew of two on every dive, 120 cu.-in. tanks, and premium service. The evening I arrived, Jeremy met me at my hotel and took my equipment; the next time I handled it was when I left. Towels, bottled water and parkas for the chilly were ready after each dive, and Jeremy provided snacks during the 90-minute surface intervals, usually spent at Playa Palancar. Jeremy is now a Mexican citizen, but he showed his gringo side each day at 7:40 a.m. when his boat, the Jewfish, was exactly on time at the pier across the street from my hotel, and he made clear that he expected the same from me. I was back at Casa Mexicana by 1:30 p.m., ready to kick back or explore the back streets of Cozumel. (Some may regard "Jewfish" as an odd name for boat. Jeremy is Jewish, so it it's an inside joke. I told him it has been called the Goliath grouper for a decade; he replied, "Not in Cozumel.")

Casa Mexicana is a first-class hotel right in town. My room was on the fourth floor, lacking an ocean view but otherwise fine. I put six Leon Negras in the mini-fridge and sat on the second-floor terrace, near the pool and tiny bar, to gaze at the ocean. There are plenty of other hotel options near the zócalo, some very inexpensive. I prefer being in town, rather than the high-rises south and north of town.

On my one non-diving day, I rented a cheap motor scooter and headed for the reserve at the southern tip of the island. (Our scooter rental involved a guy at a booth on the street, set up for cruise shippers, who asked twice the going rate of \$20 but was easily bargained down.) In the lagoon, we saw saltwater crocodiles and a variety of spectacular birds. There's still some dead mangrove cover -- a Wilma graveyard -- but a naturalist told us the birds are steadily coming back. It sure seemed so.

It's nice to have a final dive be a special one, and Cedar Mountains, at the south end of Cedar Wall, didn't disappoint. I saw turtles on most dives, but this was turtle soup. As I got down to the reef, a curious juvenile hawksbill came within 10 feet of me within moments before heading to

Hunting Lionfish, Then Eating Them

How are lionfish changing reef ecology in the tropical Atlantic and Caribbean? It's a question on the mind of marine conservation scientists, divers and Cozumel dive operators, who depend on the health of their marine park for their future.

Divemasters on Cozumel routinely remove lionfish and report the numbers they removed to a central count. It probably does decrease the numbers on the heavily-dived sites. I noted that Cockroach Wall, north of town and much less visited, was loaded with lionfish. On that dive, Jeremy offered a tiny, spring-loaded pole spear and protective glove to any diver who wanted to join a hunt. He gave a stern warning about avoiding the venomous spines, noting that it will hurt bad and "there is nothing we can do to help." Two of my group took a spear and helped Jeremy kill 15 on that dive. Six of the larger ones went onto Jeremy's stringer for dinner.

The divemasters acknowledge that hunting only limits the species in the heavily-visited areas, as lionfish are widespread and live below normal dive depths. What's their impact? Jeremy said it's too early to tell, but he's worried. He asked if I had seen any black cap basslets, usually common under ledges on deeper reefs. No, I hadn't. He feels certain this is due to the lionfish.

A recent study in a Bahamian marine park shows that grouper have started eating lionfish, but apparently not yet on Cozumel. When the lionfish are speared and killed, other fish do eat the carcasses. I saw two ocean triggers fight over one.

And I ate a few myself. As *Undercurrent* reported in January 2012, conservationists on the island of St. Maarten reported some concern about potential ciguatera poisoning. But in Cozumel, they are eaten daily by fisherman, divemasters and those who dine at Bahía del Caribe, a restaurant owned by the fishermen's coop. I had *pez leon* ceviche with *mojo de ajo* (garlic lime sauce). Delicious.

-- M.A.

Living Underwater, Cozumel

Diving (experienced)	★★★★1/2
Diving (beginner)	★★★1/2
Snorkelling	★
Accommodations	★★★★
Food	★★★★
Service and Attitude	★★★★★
Money's Worth	★★★★★

★ = poor ★★★★★ = excellent

Caribbean Scale

the surface for air. I cruised over the "mountains" of coral mounds, with a fast current up top and more leisurely below. In a low spot, I slowed down to entice a mantis shrimp out of its hole, as a queen angel circled me. At another low spot, I stopped to watch Jeremy kill a lionfish. After he removed it from the tiny spear, two ocean triggerfish dashed in to gobble the carcass. That stop cost me a patch of hydroid stings as I put a hand in the sand. My buddy, a naturalist by profession, thinks hydroids have proliferated on some Cozumel reefs. That didn't ease the itch I had the next day. As we came up one hill, I was lucky to spot a well-camouflaged, bright green peacock flounder on an algae patch. The sixth turtle I saw on this dive was a large one just off the

reef, with gray and French angels busily picking tidbits off its shell. Later Jeremy told me that I misinterpreted this -- they were nibbling scraps left behind by the feeding turtle.

Jeremy is a keen observer. I use a magnifier to view macro life, and he accommodated my interest in the small and unusual. On San Francisco Wall, he found two spectacularly painted, half-inch elysia sea slugs that I would surely have overlooked. In Colombia Shallows, he tied a piece of algae to a string and jiggled it in front of a hole until a splendid toadfish, a Cozumel endemic, snapped it up. A disappointment for that carnivore but a chuckle for five divers. As my computer went into deco status, my buddy and I signaled to Jeremy we were going up, and he put up a float before he and two other divers headed on. As I left the top of the reef, I saw several big almaco jacks in the blue water. After a six-minute safety stop, I did a 360-turn for safety in Cozumel's heavy traffic. The boat crew of Francisco and Ricardo was always nearby and ready to help lift gear through a door opening on the side of the boat, and they seemed to have it set up for the next dive (or ready to wash) by the time the last diver came up the ladder.

It wasn't the first time I surfaced "early," which was usually after an hour. I told Jeremy that because my partner and I are senior citizens, we dive conservatively and would appreciate a slightly different profile. His response was direct: Surface when you feel you should because the float will be up and the boat will be there. There were two to four other divers on the boat each day, mostly experienced Canadians and Americans who regularly went into deco. It's an operation for experienced and confident divers. I would recommend that beginning divers ask in advance to be part of a novice dive group.

On my last evening, I ate at Casa Denis. My first meal on Cozumel was here in 1986, and the place is still attached to the family home, just steps from the central plaza. After snapper and a couple of beers, I visited with the waiters there and then moved on to another bar. Everyone I talked with, both here and in the state of Campeche a few days later, blamed the global recession for the business slowdown. But some also noted the unfounded fears in the U.S. of widespread crime in Mexico. In reality, the drug cartel violence is confined to a few areas, mostly near the U.S. border. Cozumel and all of the Yucatán are safe for tourists. When I asked for a key to lock my room at a little inn on the mainland, near Guatemala, the owner said not to bother locking it. I won't try that back home.

-- M.A.



Divers Compass: Cozumel is an easy and relatively inexpensive destination all around . . . I flew on Delta one morning, connecting through its Atlanta hub, and was on the island before 1 p.m . . . Living Underwater charges \$87 for a two-tank dive (discounts for groups of four divers; nitrox is available at extra charge) and you can scan and email your c-card along with their litigation waiver in advance . . . I booked a double room at Casa Mexicana through Orbitz.com for \$91 per night, including tax, with an excellent breakfast included . . . Most visitors use ATMs and

credit cards, but I hate bank fees, so I carried a good bit of U.S. dollars and changed them at a good exchange rate at convenient outlets (don't change money at the Cozumel airport) . . . I took the ferry (\$12) to Playa del Carmen, a cheap place to stay and eat although crowded with visitors, and rented a car through Orbitz to drive five hours south to visit a few Mayan sites and see another side of Mexico . . . Websites: Living Underwater - www.livingunderwater.com; Casa Mexicana - www.casamexicanacozumel.com

Nautilus Swell, British Columbia

and next time, north to Alaska

Dear Fellow Diver:

I was ready to jump into the 49-degree water at a never-dived site. Our group of Canadian, American and Dutch divers was aboard the Nautilus Swell, a 99-year-old converted tugboat (although refurbished in 2005 for more than \$3 million) based out of Port Hardy at the northern tip of Vancouver Island. After diving several spots in the Browning Pass area, we had moved to a virgin kelp-covered spot that Captain Al had been eyeing. Once I jumped in, I felt like I was inside a popcorn popper. Thousands of small crabs were moving everywhere, as were larger crabs, shrimp, nudibranchs and myriad fish. My eyes darted around, trying to keep up with the activity. I surfaced, whooping and hollering. So good, it was the only site we repeated, with a bonus of a giant Pacific octopus on the second dive. When I offered it my hand, it just looked at it and blew water toward me, totally unconcerned.

One can fly to Vancouver, then catch a small plane to Port Hardy, but after my buddies and I flew into Vancouver, we spent a day hiking and touring the aquarium, then rented a van and, after a ferry ride, spent another day driving up the beautiful eastern coast of Vancouver Island. Spending two nights at the Orange Tabby B&B, we explored the Port Hardy area (note: the best homemade soups and fish dinners are at the Sporty Bar and Grill), and I observed many soaring eagles, a couple of otters and a black bear mother and cub. After paying \$10 to park our vehicle for the week, we boarded the Nautilus Swell at 5:30 p.m.

The Swell, 90 feet long with a 22-foot-wide beam, is fitted for 14 guests. Four bunk rooms are tiny; ok for one person but I can't imagine two people with heavy clothing and drysuit underwear sharing the small closets and two small drawers under the lower bunk. The larger cabins have double beds with two large drawers below, a small closet and a small four-drawer chest. There were a couple of hooks on the wall. The private bathrooms were decently sized, with plenty of hot water. Each cabin had heaters, and I always cranked mine up to rewarm after



Nautilus Swell



a dive. (Mike Lever, who owns this boat and the Nautilus Explorer, plans eventually to enlarge the cabins and refit them with a lower double bed and a single upper bunk).

For every dive, we boarded the Swell's roomy 38-foot aluminum skiff. About half is covered, which is good for rainy days -- we had a few in early October, with blustery winds, so I wore my drysuit underwear even on land. The skiff's uncovered portion was good for gear rinsing when it rained. They timed many dives for

slack tides, but occasionally we ran into strong tidal flows because local tides didn't always match the charts. At Alex Rock, my buddy and I kicked valiantly to keep the island in sight, but the current was too stiff, so we surfaced early. Other dive sites were in protected coves, such as Fishbowl. Our only night dive at Staples Cut highlighted two-foot-long orange sea pens with bright green bioluminescence appearing when I stroked them. The boat lacked a divemaster, out due to illness, so we did most dives on our own after thorough briefings from Captain Al, who joined a few dives to find wolf eels or octopus, and to see what we liked so much at Critter Corner. Al was very professional and friendly, not hiding out in the wheelhouse as some captains will. Karl, the tall, cheerful, always smiling and non-diving first mate, took over many of the surface duties. Due to the tides, the three daily dives were often two hours apart, especially on the first couple of days when the diving, which started at 8 a.m., was over by 4 p.m. I sometimes felt rushed gearing up in my layers of drysuit clothing but got used to it.

Mark, the new chef, and Meg, the hostess, kept us going with hot cocoa, cookies and muffins between dives. If there was time, a pre-breakfast was offered before the dive, then a full breakfast with pancakes or French toast. Lunch might be tuna melts, tacos or rotini, and homemade soup. Sit-down, family-style dinners consisted of salad, meat, fish, vegetarian choices and dessert. The food ranged from very good to excellent, and was tailored to guests' dietary needs. Leftover cookies and muffins were wrapped and available for snacking, and coffee, tea, cocoa, sodas and hot water were always available. Wine or beer you paid for.

There's not much common area aboard the Swell. The salon had two tables, each handling seven people. There was a flat-screen TV and a serving area. Out back, often nippy in the wind, was a small area for hanging drysuits and three wicker couches for gearing up. The hot tub on the top deck was a fine place to warm up or just pre-warm wet gloves and hoods before dives. Nearby, a two-tiered camera area, somewhat exposed to weather, could handle half a dozen large camera rigs and several small cameras.

Everyone wore drysuits, and most wore dry gloves. Any time a diver didn't quite get a zipper fully zipped or a dry glove seal secure, it was amazing how fast he or she came out of the water for help. I started getting cold after 40 minutes and was out of the water by 50 minutes; our limit was 60 minutes. Thankfully, most skiff rides were short, as the air was about the same temperature as the water.

I saw plenty of small crabs, fish and nudibranchs on dives. Giant sea stars and strange-looking anemones were everywhere.



The Swell's Aluminum Skiff

The 18-inch-long orange peel nudibranchs are impressive, as are their egg masses. The carapace of the Puget Sound King can be a foot across. On a Browning Pass dive, I saw one floating past and tried to place him back on the wall but I was interfering with his will; he just pushed himself off again and plummeted into the depths.

I could have used a guide at Dillon Rock in Shushartie Bay. Captain Al hunted for wolf eels to show us. My buddy and I wandered around the rock walls, not sure where we were supposed to be, but eventually all the divers ended up in the same area right when Al showed up with a four-foot-long wolf eel. There was also an octopus with suckers an inch-and-a-half long, and a four-foot lingcod.

Barri Island was another dive where the tide was supposed to go slack, but it just kept getting stronger. After flying down one side of the island, we hid in the lee amongst the kelp, and a few sea lions visited. I found a thick stalk of kelp to secure myself for a safety stop, helpful since air doesn't vent quickly from a drysuit.

At Hussar Point on the last day, we dove specifically to see the dozens of hooded nudibranchs that look like an underwater Venus fly trap. I got stuck at 40 feet with an excruciating reverse squeeze; it took me 10 minutes to manage an ascent. When I boarded the boat, I couldn't hear out of my right ear, which

Nautilus Swell, British Columbia

Diving (<i>experienced</i>)	★★★★★
Diving (<i>beginner</i>)	★★
Snorkelling	★
Accommodations	★★★1/2
Food	★★★★
Service and Attitude	★★★★★
Money's Worth	★★★★★

★ = poor ★★★★★ = excellent

World Scale

The Trouble with Artificial Reefs

Artificial reefs, created by deliberately sunk ships and other structures, may not be all they're cracked up to be, according to two American academics.

William Lindberg, a professor of fisheries science at the University of Florida, says that artificial reefs may actually hinder rather than improve levels of marine life in the surrounding area. His logic is that fish populations can be drawn to an artificial reef - and then be destroyed by fishermen who are drawn to the same place. "You can use them as a tool for economies," he told the *Herald Tribune*. You may be able to use them as a tool for ecological benefits, but you can't necessarily do both simultaneously with the same reef."

The way around such a problem is for fishing bans or restrictions to be put in place. These do exist for some ships sunk as reefs and diving attractions because, apart from anything else, masses of fishing hooks and masses of visiting divers do not mix well. However, another less easily solved problem is that of a shortage of food

that can occur on artificial reefs for, say, grouper and snappers. A study five years ago by Lindberg and five other scientists found that the grouper that chose the safety and shelter of an artificial reef were significantly lighter than those living in less sheltered but more nutritious areas. Likening an artificial reef to a city, Lindberg said, "You can have a city of several million people, but you better have some farmland out there producing food for them."

James Cowan, a professor of oceanography and coastal science at Louisiana State University, agrees. He says a number of studies, some dating back 25 years, have shown that some fish species need to travel to find their primary food source if they are to grow and reach adulthood. He also mentioned that reefs are often placed where people want them, rather than where is best for regional marine life. Sometimes a reef is created in an area that "would be, in nature, the nursery habitat." As a result, adult fish can end up living among and competing with juveniles, and more predators are drawn to the nursery area, further threatening the young.

-- DIVER magazine

dripped blood. I guessed I had popped an eardrum and my diving was done, but back home my doctor reported it was a weird blood blister, and my eardrum was luckily intact.

Being a warm-water diver, I wasn't sure how I would like diving where both the air and the water are 50 degrees, if you're lucky. However, with the great food, warm after-dive treats, interesting diving and the heaters in the cabins, I more than survived; in fact, the Swell's Alaska trip is now on my radar.

-- J.D.



Divers Compass: I booked the seven-day, six-night trip directly through the Swell for \$1,950 . . . Nitrox is available at additional cost, but it wasn't necessary with time and depth; steel 100 cu-ft. tanks were available for \$32 for the week . . . The Swell spends winter weekends diving out of Vancouver, summers in Alaska, and spring and fall in British Columbia. . . Our minivan rental was about \$700 for the week . . . Don't forget, you now need a passport to travel to Canada . . .
Website: www.nautiluswell.com

Cozumel, Anguilla, Palau...

plus a shark dive with no sharks, and two resorts to avoid

Aldora Divers and Villa Aldora. Cozumel surely has more dive operations per square mile than any other Caribbean destination. Aldora Divers and Villa Aldora have been a favorite of *Undercurrent* readers for more than a decade. Reader Ronald Riesenbach (Toronto, ON) says, "The staff is friendly, helpful and service-oriented. We had a dedicated divemaster for our five divers. You can leave most of your gear on the boat, and everything is ready to go when the boat pulls in to pick you up in the morning. We mostly dove on their smaller boats, which were relatively roomy and fast but didn't have a head; however, most dive sites were within 30 minutes. Villa Aldora has no restaurant or bar, but dozens of bars and eating places are a 20-minute walk to town (or borrow a free bicycle or flag a taxi). It's safe, well kept, quiet, comfortable and welcoming. Steve, the manager, drove us to pick up groceries and offered us lifts several other times. He ensures that you are ready for your dives when the boat arrives. Most rooms have little kitchenettes, and we filled our fridge with hard-boiled eggs, bread and jam, yogurt, cheese, fruit and coffee for breakfast. Lunch is purchased during your surface interval at a beach club called Mr. Sanchos. (www.aldora.com)

"Buzz" Waterston (Wallingford, PA) says diving with Aldora is always a treat, but he has a couple tips for surface intervals in town. "We've been eating at the local food mercado at Avenida 25 for years. For lunch at Tres Hermanas, my wife had huevos rancheros while I had menudo and Yucatecan-style pork. With a drink for her and a banana liquado for me, it came out to the princely sum of US\$9. At the fairly new Argentine restaurant at the corner of Calle 3 and Avenida 5, I had a large portion of grilled mollejas (calf's sweetbreads) for \$7. Warning: Many stores along the main drag sell synthetic gemstones. They quote a high price for Mexican fire opal, tanzanite, etc., and then 'allow' themselves to be bargained down to a fraction of that price. The people at Opals Mine will be happy to show you the difference between synthetic and real gemstones. *Caveat emptor!*"

Vigilant Divers, Anguilla. While it's a ritzy island that gets little diving press, long-time *Undercurrent* correspondent Daniel Spitzer (Piermont, NY), who was in Anguilla in December, says there is decent diving to be had. "Vigilant Divers, operated by an ex-British SAS (equivalent to our Navy SEALs), is a very professional operation -- never before have we reviewed man-overboard procedures prior to lifting anchor! Dives are typically on wrecks sunk for that purpose at 80 feet, with shallower drift dives on surrounding

reefs. I sighted Atlantic spadefish, large horse-eye jacks, one complete with his own remora, and a spotted eagle ray that turned circles around us. The M/V Commerce is covered with orange cup coral -- no need to visit Bonaire's Town Pier for this! I have been visiting Anguilla for 19 years and have sighted schools of barracuda and several dolphins, many stingrays, turtles and numerous spotted eagle rays. Having travelled far and wide, I can say that some of my more memorable dives have actually occurred in Anguilla." (<http://vigilant.webeden.co.uk>)

Day Trips in Palau. Longtime subscriber David Shem-Tov (London, U.K.) was out of luck finding space on a Palau liveaboard but decided to go ahead with the Fish 'n Fins land-based operation over Christmas. "This was my third time in Palau, and I was leery of the limits of day-boat diving for my party of four, and concerned about being limited to the typical 'two outside reef dives and optional Chandelier Cave dive' template. Navot Bornovski, who owns the operation with his wife Tovah, addressed my concerns by email before we arrived. During our stay, Navot called each evening to enquire how satisfied we were, and where we wanted to go on the next day. After a couple of days, we were effectively assigned our own boat, with a couple of like-minded divers we met there. Boat driver Silas and divemaster Clint delivered superb diving. We were able to return to the best sites, Blue Corner and Ulong Channel. We had excellent dives in Peleliu Cut, Express and at German Channel. I was impressed with Navot's willingness to accommodate our requirements." (www.fishnfins.com)

Here's a First: A Shark Dive with No Sharks. Steven P. Smith (Loudonville, NY.) was on the *Belize Aggressor* in November and reports, "No sharks. None. Not even on the shark-feeding dive. Everyone waited by the bait, chum, whatever, and no sharks came. After a very decent wait, we all went our separate ways and did a regular dive. On the way back to the boat, the chum ball was virtually untouched. Not even any grouper or jacks. Very odd."

Henry Morgan Resort, Honduras. Here is a cautionary note from John Drummond (Del Mar, CA), who was there in November. "Henry Morgan fell well below my modest expectations. The food was very poor. Lunch tomorrow would invariably be what you could not manage to eat at dinner today. The sluggish food delivery process amplified the problem. And don't let me forget the bar. You expect small, watery drinks and slow bar service at an all-inclusive -- expectations met. Dive staff and boats were good, but the boats did not carry tanks for the second dive, so they returned to the shop between dives to pick them up. The boat never went far from the shop, so the result was that all the dives felt much the same, with only minor variations in reef topography. The boat anchored off the beach with the stern in five feet of water. Every time you got dry, it was time to get wet again wading ashore. (In fairness, and to be complete, we did in fact go round the west end of the island on the last day to do a single tank of very different diving off the southwest shore.)"

And a Final Cautionary Note. This time about Maya Palms Resort on the southern end of the Yucatan Peninsula. Milann C. Reynolds (Crescent City, CA) visited in March. "The diving on the south reef was good, but we were informed that to go back there (a five-minute boat ride) would cost an additional \$40. The reef in front of the resort was full of sand, low visibility, so my wife and I didn't want to dive it after the first four dives. You dive via a 16-foot panga, not the 40-foot boat anchored in front of the resort. We stayed in the north wing, and the room was in good shape but the beach

We Need Your Reader Reports

You may still be browsing through our *2012 Travelin' Divers Chapbook* (or you can get it at www.undercurrent.org/members/UCnow/chapbook2012.php), but we're already starting to gather reader reports for the 2013 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.

view consisted of rusty chain-link fencing. The AC was only on while the generator was running, usually between 4 p.m. and 3 a.m. The food was bad - - I never want to see scrambled eggs and a tortilla again. We did manage to get hot cakes a few times, and after asking for bacon or ham, we finally got two strips of bacon with the eggs for breakfast. Lunch consisted of more tortillas with a slice of cheese in them. Dinner wasn't much better. We had one pork dinner that was up to standards, followed by not-fresh fish another night. The cook quit while we were there. We were consistently told that to get supplies was a two-hour drive, and that's the excuse for poor food. However, we could get in the car, drive four miles on the beach road and get anything we wanted to eat, including excellent ribeye steak, pasta, pizza and fresh fish. The clubhouse was never open; as soon as we were done with the meal everyone disappeared, the place was locked, and that was it. You couldn't go in and watch TV, except when a group of 10 was there for a couple days. We decided to leave, so asked after breakfast to get the bar bill together, and packed the car, but it took three hours to get out. The clubhouse was locked, and we looked everywhere for these people. You are behind a locked gate, so you can't just leave. Finally, I just laid on the horn until someone came. I realize that it requires a lot of work and money to operate a resort, but I have been in resorts all around the world in extremely primitive areas and had much better service."

- - Ben Davison

Death Due to Poor Gear Maintenance

are you more careful than this Virginia police department?

I have friends who religiously service all their gear after every dive trip, and others who just rinse it and put it away. Most have had some minor gear problems while diving, but never fatal ones. So I found the following events shocking. It's hard to imagine that a police department would be so lax in its dive equipment maintenance that it would lead to a diver's death. But it's also hard to imagine that someone as experienced as this diver would die under the circumstances described. - - Ben Davison

* * * * *

Two pieces of a police officer's diving equipment failed during a December dive team training exercise, leading to the drowning death of 41-year-old Timothy Schock in a lake in Greenbrier, VA. Adding to the tragedy, no boat was on hand at Oak Grove Lake Park to respond when Schock went diving and failed to surface. Nor were emergency responders standing by to help him the moment he went into distress, according to findings released by Police Chief Kelvin Wright.

Schock's troubles began when a button on his power inflator fell off, but he went underwater with no problems, and he could manually inflate or deflate the vest. Later, when he went back down with his buddy to continue training, the power inflator stopped working and the vest wouldn't hold air. Then, when he tried to release the weights from the vest by pulling on a ripcord, it didn't work, Wright said. In fact, in testing afterwards, the weight releases of the other 12 divers were tested and they all failed. "I can't explain why," Wright said.

On the second dive, Schock's buddy noticed Schock was having trouble ascending, and that his BC was not filling with air. So his buddy inflated his own vest to float to the surface with Schock. When they surfaced, Schock removed his face mask and inexplicably told his partner he was out of air, even though his tank still had enough air in it "to sustain him throughout the training exercise," said police spokeswoman Kelly O'Sullivan.

As Schock held onto his buddy, they alerted other officers around the lake that they were having problems. The partner tried to blow air into Schock's vest, without success, and offered his regulator. Schock

took a single breath and then pushed it away. When his partner told Schock to release his weights, he said, "I can't." Both Schock and his buddy decided to swim to shore, and Schock held onto his buddy's neck and scuba tank. Schock's buddy told him to loosen his grip because he was choking him. When Schock did, he let go completely and slipped underwater. Another rescue diver brought Schock to the surface a short time later and began CPR until emergency crews arrived.

Wright said the age, wear and lack of proper maintenance caused the power inflator to fail. The officers maintained their own gear. Schock had been wearing a Zeagle SR BC. Weights are stored in the pockets. When a diver pulls a red handle on the BC attached to a thin, plastic cord threaded through nylon loops, the bottom of the weight pockets open, dropping the weights. Apparently, Schock was storing weights in the correct pockets on his diving vest.

Wright had one of his officers test a weight-release system on one of the team's BCs, but the officer could not release the weights.

Dennis Bulin, president of Florida-based Zeagle Systems has yet to see the equipment, but he said he wants to inspect it to understand what happened. "We've sold thousands and thousands of these, and we've not had these kinds of problems. If you take care of your gear and have it inspected, you'll lower your risks of anything like this ever happening."

Bulin's comment hit on a key element of Wright's reforms in light of Schock's death: maintenance. Under old policies, it was left to police officers to maintain their own equipment, with the dive team's equipment officer visually inspecting it on a quarterly basis and the team's commander inspecting it annually. Last year, equipment was inspected only three times during the year because of "workload requirements." Officers no longer will be allowed to store equipment in their vehicles or in the department's dive truck for long periods, as they had been doing. The police department will buy all new equipment and maintain it on a regular schedule by a certified technician. They will incorporate a "buddy check" of all equipment worn by a diver prior to submerging. If something isn't working properly, the officer will not be allowed to dive.

Divers Alert Network did an 11-year study that looked at 346 cases in the United States and Canada where a specific cause could be cited. Equipment was at fault in 15 percent of the cases. "Equipment was really a very small percentage, and most of the time it was the ability of the diver to handle the equipment error (rather) than just the pure failure," said Petar Denoble, co-author of the study. "I'm not trying to put all the blame on the divers. We are monitoring for possible equipment failures because we want manufacturers to know about... design errors to improve it."

Wright has said the age, wear and lack of proper maintenance caused Schock's power inflator to fail. The faulty power inflator was not manufactured by Zeagle, and it wasn't clear who made the piece because there was no label on it. The team's buoyancy compensators were bought in 2002, and Schock was wearing more than 40 pounds of weights. He was wearing a drysuit, which neither he nor his buddy tried to inflate.

Wright said he had one of his officers test a weight-release system on one of the team's buoyancy compensators after Schock's death, and the officer could not release the weights. Wright then reached over and tried to pull the cord on his officer's vest himself. "I had difficulty doing it," he said. "It required a great deal of effort."

Some in the dive community suggested silt or muck might have gummed up the weight-release system, or that other equipment Schock was wearing obstructed his ability to engage the system. However, Wright said both have been ruled out.

Bulin of Zeagle said diving equipment can reliably last for years when properly serviced. "It is a very simple system," Bulin said of the weights. "Again, even simple systems have to be maintained."

They have to be put together right. Maybe it wasn't put together right. Maybe they modified it. We don't know."

(Note from Ben: We have reported many times on incidents where divers wearing weights integrated into their BCs have been unable to release them. It's not a new or unknown problem.)

-- Compiled from articles by Veronica Gonzalez in the *Virginian-Pilot*

What to Do with Smoking Divers

do they have a right to light up on a liveaboard?

Subscriber Walt Brenner (Jackson, GA) copied us on a letter he wrote to Frank Van der Linde, owner of Worldwide Dive and Sail, about his trip aboard the *S/Y Philippine Siren* last fall, and how the smoking almost ruined it. "Smoking all over the boat and at all times, by crew and a few guests, was intolerable. The captain, whose open helm is in the dining room, smoked like a furnace. Smokers were encountered in the dive gear area, and smoke could be sensed just about everywhere else on the boat above deck. We had several meetings on this issue with the trip hostess, but it seems that without a clear management policy, there was little she could do to improve the situation. I have been on more than 25 liveaboards, and I believe this was the only one that did not have one designated smoking spot for guests and crew. I had a 'smoker's hack' during the entire trip, even coughing into my mask while underwater. Not a pleasant memory."

Tales of nonstop smoking by dive crew in the Asia Pacific are common, as are complaints about European divers lighting up without care. Like Brenner said, the majority of dive boats has smoking rules and designated smoke spots, but are they enough? We asked *Undercurrent* readers what they thought about smoking. Surprising to us nonsmokers, the responses show that American divers are divided on the matter.

For and Against a Smoking Ban

"I feel it's unacceptable to allow smoking on a boat that supports diving and snorkeling," says Jim Elliott (Encinitas, CA). "The times I have experienced someone smoking, it led to a miserable topside experience, and because of my sensitivity to secondhand smoke, difficulty during the initial phases of my next dive."

Fred Turoff (Philadelphia, PA) says smoking should be banned from all boats, "which would promote health and reduce offending those of us who don't smoke. Often smokers light up while chatting with other divers, not caring where the smoke blows, so I end up moving." It can get even more dangerous when a crewmember is smoking, he says. "The worst example of smoking while working a dive boat that I've seen occurred with one of the crew at Bastianos Diving Resort in Lembeh Strait several years ago. This fellow had a lit cigarette on the boat heading to a dive site, and was positioned over an open gas container. When it was pointed out, he just covered the opening with a cloth rather than extinguishing his cigarette!"

"What another person does to themselves is no business of mine, but when the by-products negatively affect me and ruin a dive trip I have travelled long distances to take part in, there is going to be trouble," says Jerre Sadler (Lakeland, FL). "I've been on a Bahamas liveaboard where the tank-filling crew smoked like an old diesel, causing the air we breathed underwater to reek of stale tobacco. I don't care where the offenders are from in the world, I will not put up with their tobacco smoke that bothers me on a dive trip."

Then there's the freedom-of-choice group, like Bill Stallone (Lakeville, MN), who says, "I do not smoke; however, there are generally spots outside on the dive boat that allow smoking. I don't see what the big deal is if someone is smoking in that area. When we charter, we all know we are going to be in a public

place. As long as smoking is legal, people can and will smoke. If one doesn't want to be with smokers, he should book with a dive operation that doesn't allow smoking. I would much rather be on a boat with smokers than drunks."

Sure, there are valid points of views about individual freedom, Big Government and such, but should those really apply when one's individual freedom is a health hazard to everyone around them? Paul McFall (Cumming, GA) thinks so. "Our society is getting to the point where Big Brother is telling us what to do, what to eat, where to live, how to live, etc. I don't like it when people chew gum around me, does that mean everyone should be banned from chewing gum in the presence of other people? We once had a country devoted to individual freedom, now it is getting more like a nanny state ruled by pussies."

"If the smokers use the designated places to smoke, then leave them alone, says David Reazor (Chesterfield, MI). "Non-smokers have the right to enjoy the time on the boat and not be around smokers, but they do not have the right to prohibit smokers from smoking. I have heard non-smokers complain, be rude and state that people should not smoke, it's bad for their health, etc. Most of these happen to be Americans, the same ones who use tons of plastic that often winds up in the oceans, but if you smoke, you are killing the world." Not to mention this country's obesity problem. "I would rather rescue a thin smoker than an overweight diver."

But what if that smoker ruins your day of diving, asks Yvonne Lanelli (Alto, NM). "While diving at Bohol in the Philippines, one of the divers on my boat was a fortyish female who smoked from the time she got on the boat until she put her regulator in her mouth. After 10 minutes at 45 feet, she signaled low on air, and the divemaster had the entire group surface. As soon as she was aboard, the regulator came out and the cigarette went in. After our surface interval, we dived the second dive and again, after 10 minutes, she signaled low on air and everyone came up. I spoke to the divemaster about having to curtail our dives. He didn't reply, only shrugged and took another pull on his cigarette."

How Smokers Really Ruin Their Diving

While the addictive aspect of smoking is well known, less known are the other physiologic changes that can affect chronic smokers' diving. Subscriber Edmund Doering (Jupiter, FL), a pediatrician and member of the Undersea and Hyperbaric Medical Society, explains. "Heavy smokers have 5 to 7 percent less hemoglobin available to bind to oxygen, nitrogen or other gases used. This altered oxygen saturation in the blood significantly changes the formulae used to program dive computers and decompression tables, because carbon monoxide binds more tightly to hemoglobin than the other gases."

"Secondly, smokers have altered pulmonary function. Parts of the lung get lots of blood supply but little aeration by alveoli, while other parts get lots of air but little blood. This produces markedly inefficient nitrogen off loading. The second part of smokers' lung is chronic bronchitis, producing the "smokers cough," as well as diffuse inflammation of the airways. The inflammation reduces overall lung function, again in a direction favoring reduced nitrogen offloading."

Ern Campbell, who writes the ScubaDoc blog, also warns about the effects of carbon monoxide. "Your carbon monoxide (CO) level varies with the number of cigarettes you have smoked that day, the length of time since your last cigarette, and your level of activity on the day of the reading. Acceptable CO level for diving is 10 parts per million (ppm) by volume; 10 to 20 ppm yields a mild frontal headache, 20 to 30 ppm gives a throbbing headache associated with nausea, 30 to 50 ppm causes severe headache, fainting and weakness, and 50 to 80 ppm results in coma, convulsions and death.

"Typical end-of-dive-day readings are as follows: 0 to 10 ppm of CO for a non-smoker, 11 to 20 ppm of CO for a light smoker, and 21 to 100 ppm of CO in a heavy smoker. To work out the approximate percentage of oxygen being replaced by CO in your blood, divide your reading by six; 18 ppm of CO means three percent of oxygen in your blood is being replaced by carbon monoxide. If you are a heavy smoker, up to 15 percent of your oxygen is possibly being replaced by carbon monoxide."

Campbell adds that smokers also have nasal and sinus drainage problems. "This markedly increases their chances of middle ear and sinus blocks and squeezes."

Liveboards and Their Layouts

We asked liveboard fleets what their smoking policies were. Clay McCardell, president of Explorer Ventures, sums it up for U.S.-owned and operated ones. "Although we do allow it on each vessel, smoking is strictly limited to an outside area chosen to minimize or eliminate its impact on other guests. We very rarely get any comments or complaints regarding this policy, from either smokers or nonsmokers. I would imagine the limited space on day boats presents different issues, but aboard a larger vessel where smoking on the stern, for example, eliminates the possibility of smoke bothering other guests -- and assuming that

Why You Should Skip Trip Insurance

Dear Ben,

This is a response to "Insurance for Your Next Dive Trip" in the January 2012 issue. We've been around this issue before, as you may well remember, but the topic makes me so crazy that I simply have to write again. It is guaranteed that the insurance companies that sell travel insurance are going to make a profit. It then follows from that fact, with absolute mathematical and logical certainty, that the people who buy travel insurance, over the long haul and on average, are going to come out paying more for the insurance than they get back from their claims.

Imagine someone who did the following. Every time he booked a drive trip, he drove to the nearest casino and put down \$50 on a single number on the roulette wheel. On occasion, he might win and get a free dive trip! His winnings of \$1,800 would pay for the trip he had just booked! But over the long haul, he is going to lose 37 times out of 38, and his \$50 will be wasted.

You write that trip insurance costs 5 to 8 percent of the cost of the trip. Let's take the more conservative figure of 5 percent. Do your readers really believe that canceled trips are as frequent as one trip out of every 20? The insurance companies are not going to lose money. Whatever percentage they pick, it is because they know from their data and experience that with insurance at that price, the buyer will lose over the long haul, and they will profit.

-- Samuel Johnson, Greensboro, NC

Dear Dr. Johnson,

Of course travel insurance companies bring in more money than they put out, just as all insurers do. However, that doesn't stop me from buying fire insurance on my home. Though, I will admit, as a frequent traveler, I rarely buy trip insurance because of the reasons you cite. I see long odds in my favor that my dive boat will not sink, floods will not prevent my plane from landing, and my travel agent won't keep my money and run.

That said, there are a few circumstances when I consider trip insurance. One is if I'm taking a liveboard, and my arrival time is too short before the boat's departure -- and I know the boat won't come back to get me. The second is if I'm traveling smack in the middle of hurricane or cyclone season. Third, if it's a trip that if I don't take now, I can never take again, like seeing an eclipse aboard a ship in the Straits of Magellan.

You overlook one thing: One may have to cancel the trip before or during for health reasons. So if one has aches and pains he's concerned about and has never seen a doctor for them, that might be a consideration. And trip insurance is necessary if one is on Medicare and without supplemental insurance that covers health problems abroad. I have anxious friends who just feel more comfortable when they're traveling abroad if their trip is covered. But I don't, because most of the cost of airline tickets can be reused, and you can usually get some accommodation from the resort (maybe not a liveboard) for future travel. I can't predict whether I'll break an ankle on a dive boat or drop dead before I depart, so I don't buy trip insurance for medical reasons. As our article said, if you travel a lot and don't buy insurance, you're probably far ahead. I am.

I think our article tried to show what surprises may greet travelers, and how trip insurance has flaws, but I should have been a more careful editor and not let us suggest that trip insurance is a wise investment for everyone. For two people to pay \$500 to \$800 to insure a \$10,000 trip is not, in my mind, smart consumerism except, perhaps, under the circumstances I suggested earlier. I'd prefer to pay my money and take my chances, which are very much in my favor.

-- Ben Davison

the area is kept clean -- we rarely have an issue. We've found that smokers are fairly good about making sure that no one present takes offense."

That may be true, but some liveaboards may be built and organized better than others to accommodate both smokers and nonsmokers. Those who hate secondhand smoke may need to research beyond the smoking policy and see the boat's dimensions and layout, says Dave Thompson (New Smyrna Beach, FL). "On liveaboards, the smoking area tends to be on the top deck. If that area is partly enclosed, it becomes inaccessible to nonsmokers, unless you like secondhand smoke. Sitting elsewhere on the upper deck, you inevitably get some whiffs of smoke, even if you're upwind."

Lin Dysinger (Wasilla, AK) says, "I have been on a small boat, where the only place where I wasn't subject to smoke was during my dive and in my cabin. I have been on boats where I was forced to enter through a smoke cloud to get to my food, to the dive deck, the sun deck and into my cabin. I have been on a boat where the one place where smoking wasn't allowed was in the dining hall, but smoking right outside the door was just fine. I have found secluded spaces only to have them found soon after by smokers. While peacefully enjoying my morning coffee it was usually interrupted by a smoker, so I would sit inside to avoid the smoke and miss out on the morning sunshine."

Eric Ressler (St. Louis, MO) remembers how half of the *Okeanos Aggressor* was taken by a dive group of Germans and Austrians who smoked continuously, but he suffered in silence. "The boat had a designated smokers area, aft on the upper deck, but that was about the only decent spot for sitting and relaxing outside the salon. The divers were scrupulous about adhering to the restrictions, so I can't blame them, but it did leave us wanting. Still, they were otherwise delightful companions, and we probably wouldn't have met them if the boat had a strict no-smoking policy."

That sums up the dilemma for divers. Does others' smoking ruin your entire dive trip, or is it a minor nuisance you'll suffer in order to dive the world and meet other divers? We don't know of any no-smoking-allowed liveaboards so if your group really wants to get away from smokers, probably the only way to do so is to charter the entire boat. If you don't mind so much, it's still a good idea to check with the dive boat before booking about their smoking policies and designated areas (many liveaboards only ban smoking in the indoor salons, cabins and dive decks).

Dive operators should be willing to listen to and accommodate both parties, says Ray Moore (Independence, MO). "They should inform all customers what they allow or don't allow, and let the customer make the decision."

- - Vanessa Richardson

How Divers Can Give Back: Part II

more ways to make your dive trips count

In the February issue, we listed some exceptional dive trips hosted by 501(c)(3) nonprofit organizations that allow you to deduct most, if not all, of your expenses. But if the joy of diving for a good cause is the primary reason for a trip, and you're not so concerned about the tax deductions, there are a few overseas nonprofits that offer great trips worth considering, despite their lack of a 501(c)(3) status.

Jenny Collister at the dive travel agency Reef & Rainforest is promoting trips with Divo Dive Voluntourism, an Australian nonprofit planning dive trips in Asia and Australia. Founder Elaine Kwee works with community groups and NGOs to create "voluntourism" dive trips. First up is a trip to Lord Howe Islands, considered the Galapagos of the western Pacific, on May 5-11. Take a two-hour flight east

of Sydney to Lord Howe to join marine park rangers in underwater survey protocols, and collect data on the native, threatened marine life that will be applied to the ongoing monitoring program. The US\$3,300 approximate price includes the round-trip flight from Sydney, transfers, accommodations, dives and boat transportation. On August 4-10, Divo Dive is sponsoring two back-to-back trips in the Great Barrier Reef, starting with a rare opportunity to dive at Orpheus Island Research Station and get trained as a Reef Check coral reef surveyor, then dive the Whitsunday Islands and get a behind-the-scenes-look at how the Great Barrier Reef Marine Park Authority manages its territory. The price is US\$2,900 for airfare from Townsville and transfers, accommodations, dives, boat transport and some meals. (www.divevoluntourism.com)

Kwee warns that these trips are not for those who want luxury resort accommodations. "Be aware that voluntourism in rural or research-oriented settings may not have the usual creature comforts of hotel accommodation. Sometimes you have to share rooms and bathrooms, you may not have air-conditioning, you may have to pitch in to cook. That kind of camp-bonding atmosphere is part of the fun, but divers should inquire of conditions before the trip and set their expectations accordingly."

Reef Conservation International offers dive-survey trips on Tom Owens Island in the Sapodilla Cayes of southern Belize. Based on the time of the year, you can assist in surveys for lionfish, spiny lobster and conch. Trips leave weekly every Monday and return on Friday. Marketing director Jo Audinett says at least two out of the three daily dives are monitoring and research dives, and dive methodology training and coral and fish ID sessions are offered in between. Five-day trips are \$995 and include all dives, meals, island transfers, accommodation and training. Keep in mind that while the private waterfront cabanas have amazing Caribbean views, they are "basic but comfortable." (www.reefci.com)

Resorts and Liveboards

More dive resorts and liveboards are giving back to the oceans and local communities that keep them in business. A favorite for Collister is Matava Island Resort in Fiji. Besides being an eco-friendly resort,

That Hovering Fish May Want a Massage

While we often admonish divers and divemasters who manhandle fish and other marine creatures, we were intrigued by a study in *Nature Communications* that says fish get just as stressed as humans do, and therefore may be in equally need of a massage.

Surgeonfish make regular use of cleaner wrasse to remove their parasites and dead skin. Marta Soares of the ISPA University Institute in Lisbon, Portugal, noticed that the cleaners seem to offer another service too: They can placate an agitated surgeonfish by rubbing back and forth on its pelvic and pectoral fins.

Soares and her team wanted to see if it was the social interaction or the feeling of the massage that kept the surgeonfish at ease. To test this, they studied two groups of eight surgeonfish. They confined each fish in a small bucket for a short period to simulate stresses they encounter in the wild. They then placed the surgeonfish into tanks with a model cleaner fish. One group was given a stationary model, the other a model that moved back and forth, and so could provide physical stimula-

tion. All surgeonfish readily approached the model, but those in the tank with the moving model were able to position themselves beneath it and use its fake fins to gain a back rub. These fish were more relaxed, with lower measurements of the hormone cortisol, which is released in response to stress.

Soares says that the tactile stimulation by cleaner wrasse definitely offers the client surgeonfish a benefit, and that her research may mean that pathways for sensory information processing in fish are more similar to humans that previously thought. "Humans go to have massages when we feel sick or just to feel better, so maybe the reasons are basically the same," she says.

Her results come as no surprise to diver Dan Lufkin (Frederick, MD) who writes that several species seem to find divers interesting, and will often hang around to be scratched and patted. "Groupers, in particular, like to have their bellies rubbed. Recently, diving off Little Cayman, I met a grouper about 30 feet down, which swam below me for 20 minutes. I could put my hands around it and squeeze. The fish would shimmy out ahead, then come back into position for another treatment. Personally, I could no more eat a grouper than I could a cocker spaniel."

Matava helps its community by hiring only locals for its staff, supplying local farmers with seeds and then buying the produce back from them, and it's currently funding the building of a local community center. Matava also helped the village of Nacomoto establish a marine reserve in its waters, and each time it takes divers there, it makes a contribution to the village via marine park fees. (<http://matava.com>)

Collister also recommends Misool Eco Resort in Indonesia's Raja Ampat. Besides hiring its staff from Yelu, the closest local village, Misool offers them health insurance, job training and English lessons. It also sponsors four local teachers and provides books and supplies to the schools. In return, the local staff educates Misool management on local remedies, traditions, language and culture so they can pass that information on to guests. (<http://misoolcoresort.com>)

Cindi La Raia of Dive Discovery likes the Siren Fleet for the special conservation trips it holds annually. It teams up with Shark Angels, a shark conservation NGO, to offer a trip to a shark hotspot in the Indian or Pacific Ocean, so divers can help note the numbers and species of sharks sighted in the area, and the information is given to local scientists to push for stronger enforcement and marine sanctuaries. This year, the trip will be June 26 to July 6 aboard the *SY Oriental Siren* to Layang Layang and the Spratly Islands in Malaysia. The \$3,600 trip price is per person, double occupancy, and covers four daily dives, all meals, nonalcoholic drinks and beer, gear rental, nitrox and round-trip transfers from Labuan airport. From July 23 to August 2, Reef Check Foundation founder Greg Hodgson hosts a trip on the *SY Philippine Siren* around the island of Cebu. He'll give lectures on reef survey techniques and offer insight into the Philippines' marine protected areas, many of which he helped establish. The \$2,600 trip covers the same items as the Shark Angels trip, except transfers. (<http://worldwidediveandsail.com/special-diving-trips.html>)

The Kosrae Village Ecolodge in Micronesia has been running a coral monitoring program annually since 1996, and the data gathered by volunteers has been used by the State of Kosrae to declare the bumphead parrotfish a protected species in the island's waters. This year's monitoring period will be held October 6-20. Gale Young (Seattle, WA) did it last year, and is going back this fall. Besides collecting the environmental data and doing fish counts, Young and her fellow divers also helped to drill a new site for mooring buoys. "It's a win-win situation for the divers, the island and the global community," Young says. "I learned a lot about the environment, coral and the inhabitants of the reef." (www.kosraevillage.com)

Wayne Hasson, president of the Aggressor and Dancer fleets, says his boats give back to their local communities many ways. The company contributes funding and marketing for Shark Savers, the Oceans for Youth Foundation and Jean-Michel Cousteau's Ocean Futures Society. It gives free liveaboard trips to auction off during fundraising events. Last month, it gave a trip to the Wounded Warriors' charity event. Hasson says that the boats in Fiji and Papua New Guinea support local communities by taking guests ashore to their dance and singing ceremonies. "We donate money and support the local schools with books and supplies, and divers who go ashore can donate more. The Fijian village didn't have a public bathroom, but our donations helped them build one last year, complete with running water and toilets." Over in Costa Rica, the boats shuttle rangers to and from Cocos Island, and the locals take

Do Water and AEDs Mix?

After reading last month's article "A Shock to Divers' Hearts" about automated external defibrillators, reader Ken Freedland (St. Louis, MO) had this question for us. "When I was trained in automated external defibrillator (AED) use at the medical research lab where I work, we were taught that it is essential to make sure that the patient is on a dry surface, so that the AED operator and/or bystanders don't get shocked. Is it actually possible to have a dry surface on board a boat when a diver has just been pulled out of the water? What procedures should be followed to ensure that the surface is sufficiently dry to use the AED?"

We had Bret Gilliam, who gave his opinion as a dive expert and maritime captain for the story, offer his advice again. "Ken, you're correct. Ideally, you do want a dry surface and dry patient. That is attainable fairly easily, however. Simply putting a patient down on a towel usually works fine. And a quick wipe-down of the chest area to remove actual "standing" water takes only seconds."

divers on tours to view their conservation efforts. Says Hasson, “We ask them to help pick up trash and fishing lines left off the reef.”

The *Nai’a* in Fiji is very connected to the villages it visits, says co-owner Alexxis Edwards. “We always carry extra food supplies because they sometimes have supply boats visit just every two to three months. We also supply boat fuel to help them go between villages and to aid their sustenance fishing. Many times, we’ve offered them emergency transportation.”

How You Can Help

If you’re in the medical profession and willing to donate your skills, *Nai’a* wants you as its guest. “Many times, our guests have offered their medical specialties to the villagers. We have helped with some serious

Nautilus Lifeline: User Error or Gear Malfunction?

In last month’s Flotsam & Jetsam, we reported on the search-and-rescue efforts for a 46-year-old diver who was swept away by the current while diving off Hawaii’s Kaena Point. We stated how the Coast Guard helicopter crew used night-vision goggles to find him in the darkness. Well, it also helped that the diver, named Scott Folsom, flashed a light at the helicopter. Folsom, who was found in good condition, had all the emergency gear recommended for a diver to carry, from a 10-foot-tall inflatable surface marker buoy to extra oxygen. He also had the Nautilus Lifeline, the highly-touted two-way radio that is supposed to broadcast an alarm and one’s GPS location to every vessel within an 11-mile radius -- but when he tried to turn it on, it didn’t work.

We wrote about the Lifeline last November, in particular how its rollout was botched by slow production and bad public relations. But as soon as it was revealed on television and the Internet that Folsom was carrying a non-working Lifeline, CEO Mike Lever (who also owns the *Nautilus Swell*, which we profile on page 5), sprang into action. He contacted Folsom to get his unit sent back to the company for analysis, then sent Folsom two replacement units. Lever says he plans to publish a comprehensive analysis report on the unit after all the testing, but he did give *Undercurrent* the status, which is “We don’t know.”

“We have tested Scott’s Lifeline extensively in the lab,” he wrote us. “Radio frequency output is normal. Firmware is working fine. We disassembled his unit and put the board through all the manufacturing QA tests. We did discover the current draw at full transmission power was 19 percent higher than our benchmark units, but that is within limits. The battery has been sent to the manufacturer for analysis to see if there is anything wrong with the cells. One interesting note: There are only a handful of battery manufacturers in the world. Those cells are repackaged and sold under many different name-brand labels.

“So at this point, we cannot find anything wrong with the unit. All we know is that Scott tested the unit when he first got it in November. It was not recharged again until after the incident when it wouldn’t turn on. He took it home after ‘the drift,’ plugged it in and it worked perfectly. I will not and cannot put any blame or responsibility on Scott. If there is any problem, the responsibility falls on my shoulders.

“We have changed our recommended operating procedure to fully charge a lifeline before a weekend of diving or a dive vacation . . . The Firmware v.60 will be released in April, including an upgrade for a self-diagnostic check.”

As for Scott Folsom, he plans to continue using the Lifeline -- but he says he will dive with two of them at once as an insurance policy for the higher-risk type of open ocean diving he does in Hawaii.

It’s an unfortunate PR blow when a product, especially one supposed to ensure your safety, doesn’t work as it should. However, if you’re the buyer of a version 1.0 product, expect to find some bugs and problems. Lever has done the right thing in being quick to respond, and to give as many details as possible. (He got a recent thumbs-up from Dave Dillehay, owner of Aldora Divers in Cozumel, who posted a report on ScubaBoard in late February about his testing of Lifeline units, and proclaimed himself “pretty well satisfied.”) By divulging the problems and describing the fixes, that information helps divers who are interested in a safety tool like Lifeline figure out where to jump in on the innovation curve.

Whether you have a Lifeline (or two) in your gear, it’s essential to check before every dive trip -- and even before every dive -- that it’s working as it should. And keep in mind that Folsom survived and was rescued because he had an arsenal of other safety gear -- and knew how to use them.

injuries, and set broken limbs. One year, we had three full trips of dentists chartering *Nai'a*, asking us to let the villages know in advance when they would be coming. We set up a dental clinic in the village, and our guests volunteered for most of a day. They do this to help, and yet this is still a diving holiday for them."

Even if you can't donate your skills, there are still plenty of things you can do on your next dive trip. Reader Mary Peachin (Tucson, AZ) says she bring a package of sample toothbrushes that the dentist gives out. "I also regularly leave T-shirts and unisex beach shoes in my rooms when I check out."

Query your dive agent, fleet or resort to learn what supplies are needed, and if there is a procedure in place to distribute them. Ken Knezick of Island Dreams Travel in Houston recommends "basic school supplies and children's clothing. Reading glasses and simple sporting goods are also a welcome donation. I've seen a gift as simple as a soccer ball (and a hand pump) bring great happiness to local kids."

Edwards from *Nai'a* asks guests to bring secondhand clothes, hats, battery-operated flashlights, toothbrushes and school supplies. "It is a huge benefit to the villages, and they are very appreciative."

Unique in the dive industry is Good Will Diving, the humanitarian arm of the dive shop Deep Blue Adventures in Swanton, OH, that is doing good things for people who live in tropical dive sites its customers visit. Last year, it started Eyes for Fiji, a donation project to send eyeglasses to Fijian villages, where poor eyesight is rampant. "An old pair of reading glasses sitting in your drawer can dramatically change the lives of many people in a village, not just the recipient, and it costs nothing," says Deep Blue Adventures co-owner Cheryl Patterson. "We've had customers go out to buy new glasses and send them to us." (www.goodwilldiving.com)

Its latest effort is Foundations for the Future, a collection of school supplies for students and teachers in the Philippines. Atlantis Resorts has provided a list of local schools and their needs, and has a collection point at its Puerto Galera site to let guests contribute. Good Will Diving offers divers the list upon request -- most items are light and suitcase-friendly -- and will also handle mailed-in items and cash donations.

More programs on the burner include school supplies and books for children in Mexico, and now Good Will Diving is starting to work with foundations to market organized trips that will allow divers to do

Dolphins Should Be Considered "Non-Human Humans"

Dolphins and whales are so intelligent, they must be recognized as "non-human persons" with their own bill of rights, say researchers. An international team of scientists, philosophers and animal rights groups addressed the American Association for the Advancement of Science (AAAS) in Vancouver last month to discuss the "declaration of rights" for cetaceans.

They say that dolphins have cultures, societies and personalities that are so complex they should be seen as the same as people. They added that isolating dolphins and orcas in amusement parks is wrong because the animals are even more socially driven than humans, and that killing them amounts to murder.

Thomas White, an ethics expert at Loyola Marymount University, said, "The similarities between cetaceans and humans are such that they, as we, have an individual sense of self. Dolphins are non-human persons. A person needs to be an individual. If individuals count, then the deliberate killing of individuals of this sort is ethically the equivalent of deliberately killing a human being. The science has shown that individuality, consciousness, self awareness is no longer a unique human property. That poses all kinds of challenges."

Recognizing cetaceans in law is crucial, White said, because it would change harmful commercial whaling and certain fishing methods that kill hundreds of dolphins and whales a year. Whale watching trips should be regulated to respect the creatures' privacy, and developers and oil companies would have to consider the effect their projects would have on animals' lives and culture.

Recent studies on dolphins' brains show that they are more intelligent than chimpanzees, and the way they communicate with each other is similar to that of humans. They can also recognize themselves in mirrors, teach each other new types of behavior and think about the future.

things like planting artificial reefs, assisting with manta research and marine park monitoring. For details, go to www.deepblueadventures.com and click on "Eco-Friendly Travel."

- - Vanessa Richardson

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Get 32 Percent off a Truk Odyssey Trip. Due to a last-minute cancellation, the dive travel agency Reef & Rainforest is offering \$1,000 off this liveaboard trip to Truk Lagoon, scheduled for April 15-22. You'll dive reefs with hard and soft corals, a wide variety of fish, eagle rays and sharks, but the highlight is the ghost fleet of Truk Lagoon, considered to be some of the world's best wreck diving. Book this trip ASAP for \$2,095; call 503-208-7500 for details.

A Great Dive Buddy Gets Severe Bends. Renowned underwater cinematographer Mike Prickett, known for his work on award-winning documentaries like *Riding Giants* and *Step Into Liquid*, is currently suffering from severe decompression sickness. While shooting a commercial video for dive gear in Rangiroa on March 14, Prickett, 47, went to the aid of a panicking, sinking diver. "I dove down to 220 feet to save him, but he used up all my air," Prickett told KITV News in Honolulu. He had no choice but to go straight to the surface without decompressing. After undergoing hyperbaric oxygen therapy in Tahiti, Prickett was transferred to San Diego in late March. He is paralyzed from the chest down and though he has since regained some sensation in his legs, his condition is still serious. Funds are currently being raised for his treatment; go to www.prayforprickett.com for details.

Is Diving on the Rebound? According to analyst Caitlin Moldvay of IBISWorld Market Research, the

scuba industry has been foundering, but revenue has rebounded since 2009. Luxury expenditures like booking liveaboard trips to Raja Ampat, has rebounded faster than per-capita disposable income. However, the number of certified divers declined at an average annual pace of 1.5 percent over the last five years, and the "number of industry employees is expected to decline at a 2.7 percent five-year annualized rate, to 8,885 in 2012." In the next five years, however, Moldvay expects revenue to rebound "as domestic scuba tourism resurfaces. . . . New technologies like the Nautilus Lifeline, which offers two-way contact for divers and boats, are expected to make the sport safer, drawing more people toward diving."

Do Fastballs and Fish Mix? The Florida Marlins think so, having installed two 20-foot-long tropical fish aquariums on the field directly behind home plate in its new stadium. They think it "screams Miami," while animal rights activists think it screams abuse. Animal Rights Foundation of Florida spokesman Don Anthony told the local press, "Even if the glass doesn't shatter, [stadium noise is] going to cause a tremendous vibration and disturb the fish." To prove protestors wrong, Claude Delorme, the Marlins' head of ballpark development, set up a pitching machine to launch baseballs at the tank with fish inside. The results? "You would see a small reaction," Delorme said. "They would move because they would sense something in that area." He has no plans to remove the fish, so we'll see if they make it through September.

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Letters to the Editor/Submissions
EditorBenD@undercurrent.org

Editorial Staff
Ben Davison, Publisher and Editor
Vanessa Richardson, Senior Editor
Dave Eagleray, Webmaster

Contact Us
Call: 415-289-0501,
Go to: www.undercurrent.org/UCnow/contact.shtml
or write:

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Sausalito, CA 94965

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