

undercurrent

The Private, Exclusive Guide for Serious Divers

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MV Infiniti, Andaman Sea, India

the last of the untouched ocean

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Dear Reader:

From a mile away, I could see a small island with a cloud hovering. Coming into focus, the Barren Island volcano announced itself with frequent spewing of ash and thick dark smoke. Closer, I could easily see centuries of lava flows cascading toward the sea, with lush foliage elsewhere. By the time we stopped a couple hundred yards off this uninhabited island, *Infiniti* was lightly covered with black ash. Coming back to the mother boat at dusk after a dive at Barren, I saw bursts of flaming red in the smoke plume.

In underwater caves at the Grotto dive site, I had great views of the deep gray basalt lava formations -- impressive in their sheen, smoothness, and variety of shapes. The surge was powerful kicking into the cave, but worth the effort as I felt I was entering a modern art exhibit of brightly painted rocks, the colors from sponge growth. Surfacing inside for a look, the tall igneous rocks sharp angles were mind-boggling. Continuing on, I came across a field of tall garden eels waving in the black volcanic sand and spotted two stark-white eels, an amazing contrast.

I had been worried whether this trip would be



The Barren Island volcano spews ash and smoke.



worth it and became more concerned when I stepped off the plane at Port Blair, India (population 100,000) at 7 AM, where the April heat and humidity hit me as if I had run into a brick wall. I was on an island chain in the middle of the Bay of Bengal, about 700 miles from India's Eastern Coast, nearly 500 miles west of Phuket. I was here to board the luxurious, 133 ft., MV Infiniti the next day, but after thirty-eight hours of traveling and I was dragging. After having my Restricted Area Permit to dive the Andaman Islands stamped (I had completed the form at home), I was met by a hotel representative and whisked to my accommodations.

This trip, only offered a few times a year, would journey 327 miles round trip to dive the ultra-remote islands of Barren and Narcondam in the Andaman Sea. The eight-night voyage is advertised for experienced divers only, which I interpreted to mean for those who have proven ability to handle strong, rapidly changing currents and surge, an

intimate relationship with their dive computer, and a willingness to dive on air since the Infiniti did not provide nitrox.

Sunil Bakshi, an avid scuba diver and Indian businessman, had his all-steel, four-deck Infiniti custom-built in Thailand and began his Andaman trips in April 2013. India's first and only liveaboard, she's a beautiful, well-designed, diver-friendly vessel, with an all-Indian crew. With only six staterooms for 12 divers, it seemed like a private cruise. Air-conditioned throughout, the very comfortable middle deck lounge had a good stock of videos, books, and large LCD screen, as well as a bar with wine, beer, soda, and snacks. Two other lounge areas were open air. My room, brightened up by a large window (not a porthole), held two comfortable twin beds separated by a set of drawers, and a desk area with chair. The crew changed the bed linens and duvet cover midway and twice changed the towels. The sizeable bathroom had plenty of hot water for the shower.

After traveling four hours from Port Blair, we spent the day diving around Havelock, popular for land-based diving from resorts on the island. On my first dive (to 103 feet), schools of jacks, smaller striped bass, Napoleon wrasse, emperor angelfish, crocodile fish, and an octopus greeted me. A good checkout dive, though visibility was 30 ft. But next dive, it was 60 ft. at Johnny's Gorge, where bumphead parrot fish, a swirling school of barracuda, rainbow runners, grunts and snappers, and mobula ray, swam against a colorful soft coral background.

Then, it was a 15-hour steam, mostly overnight, to Narcondam, a four-square-mile island. With visibility 100+ at Headquarters (named for the tiny encampment of park rangers), the terrain of this dormant volcanic island enthralled me -- coral bommies with open-top swim thrus adorned by schools of colorful tropical fish and even a dozen grazing nudibranchs in very calm water. A photographers dream: soft corals in a large crevice



Infiniti's ample launching deck gives good access to the tenders.

with black snappers and orange anthias in the background. Peering into a shallow cavern, I saw large puffers and oriental sweetlips. Devils Ridge was a beautiful contrast, with soft corals and huge sea fans. Weaving around volcanic bommies to get out of the current was a fun challenge, as I never knew from which direction the current would come. While sheltering, I saw a three-inch semi-circle juvenile angelfish (also called Koran) doing the same: beautiful with its bluish-black with narrow blue and white semi-circle stripes. Venturing forth, I watched a white tip reef shark and dogtooth tuna cruise over fields of healthy hard corals. After three dives at Narcondam, I was stoked, ready for the second day, in the warm, 84-86 degree water.

The eleven divers and one non-diver were a diverse and friendly group: six from India, some of whom were repeat guests, two French, two Brits, and us two Americans. There were two sets of retirees: one pair in their 70's and the other early thirties (a star professional athlete from India and his fashion model/TV host wife). After watching the sunset from the upper deck, most guests congregated at mid-deck bar and tables and out would come the board games, cigarettes, and booze. The smoke got unpleasantly thick, even in this outdoor area, for we non-smokers from America, and we headed for the non-smoking, air-conditioned lounge.

On our second day at Narcondam, slight current met me at Lighthouse Reef as I descended to view gigantic barrel sponges, one at least ten-feet tall. A manta flew by, and a large deep green moray swam from its crevice in the dramatic volcanic topography. After our tender picked us up, we motored between tiny islands to watch two threatened Narcondam hornbills soar above the trees.

At Kabootar Canyon, where the soft coral was stunning at 60 feet of depth, I descended to 109' past dramatic barren black sand terrain with tall boulders, accompanied by butterfly, and bannerfish, rainbow runners, large black jacks, grouper, white tip sharks, huge eight-foot dogtooth tuna, and bumphead parrotfish. Splendid diving, indeed.

As for the food, breakfast was made-to-order eggs and French toast, but I was on an Indian vessel and the buffet lunches, and dinners were heavily spiced Indian cuisine, well received by most, but not so much by me. It included a good mix of aloo paratha (potatoes), chicken sausages, tomato chutney, soybean masala,

Fifty-Nine Missing Fish Species

Divers who have been around awhile know how reef fish have declined, and we search for more distant shores to do our diving. The Philippines is one such spot, but in the past 65 years, changes there have been enormous.

Scientists conducted 2,655 interviews with fishermen, learning that 59 fish species have gone missing from catches between the 1950s and 2014. "Similar to the Newfoundland cod, where we saw stocks crash due to overfishing, these reef fish populations have been overexploited, and they may never recover," explains Professor Nick Polunin, of Newcastle University, UK.

The team highlighted five finfish that are now fighting for survival – the green bumphead parrotfish, the humphead wrasse, the African pompano, the giant grouper and the mangrove red snapper.

Polunin says, "These losses we've recorded in the Philippines are reflective of unsustainable exploitation affecting this exceptionally species-rich ecosystem and region, but they mirror what is happening in ecosystems around the globe. The knock-on effects of losing these species are huge: loss of the big predators is likely to radically affect the structure of the whole system."

Before you order a fresh fish dinner on your next dive trip, you might want to give a little thought to the dying reefs.

And you might want to give thanks for the last refuges on our planet – such as the Andamans in our current travel story – where nations police the waters and protect them from unsustainable fishing.



The Infiniti has six staterooms for only 12 passengers.

lentils, fresh fish in sauce and kadai chicken, but no beef or pork. A plate with sliced cucumber, tomatoes, peppers, and onions was for all to share. For me, the cook prepared either fish or chicken (sans spices), boiled eggs, and one day made a chicken burger. Oranges, apples

and cut fruit were always available. A stalk of bananas hung on the dive deck. Desserts were most often tasty custards, once a delicious chocolate mousse. The last night the cooks grilled freshly caught lobster and fish on the outdoor upper deck.

The first dive briefing each day could be as early as 6 AM while we had toast, fruit, and coffee or tea; a full breakfast followed the dive. They offered three to four dives daily and two night dives, twenty-four total. For the three-minute trips to dive sites, they divided eleven divers into three groups for the two RIB tenders, mine having the boat driver, two dive guides, and three divers. After the briefing, divers put on equipment on the gear-up deck, walked down a few stairs to the ample launching deck, and stepped into the tender, with fins, and camera. I'm not up for walking stairs geared up, so the guides, husband/wife Katya and Shyam, carried my gear into the tender and helped me don it. It was a backroll in, and an exit up the sturdy, well-anchored ladder, after removing gear in the water.

On many dives, the guides asked us to keep near a line they had attached to a buoy or even grasp it to not get swept away and miss the dive site or the boat. There was an unspoken "rule" not to stray too far from the dive guide, and not to fly with the current. My photographer buddy and I got frustrated always having to move onward into current, however mild, when we really wanted to pause and investigate. One day we "rebelled" and just stayed put; Katya got the message better than our repeatedly telling her, and joined us. My trip found calm seas and modest, manageable current, apparently a rarity.

Another rule, of course, was don't go into deco. Although they are well equipped with O2 on board, the hyperbaric chamber was back in Port Blair. Because I was so enthralled with the beauty of colors, fish, and habitats, I found myself frequently getting a minute or two away from deco at depths of 100' plus.

We made the 11-hour trip between Barren and Narcondam at night. I was dubious about diving Barren's Washing Machine, because of the turbulence the name implies, but we had no current. It was a stunning dive with more than 100' visibility. The volcanic wall was encrusted with multicolor life -- bright with lots of reds; thousands of dancing anthias added magic. Sea snakes undulated into crevices looking for prey. On top of the wall, hard coral thrived, and jacks schooled. A couple of mantas made close passes. Large bushy gorgonians grew on the sheer wall, a couple with long nose hawkfish hiding. Purple Maze was ablaze with purple soft carnation coral (*dendonephthya*), surrounded by orange anthias. Coral outcroppings gave the illusion of floating on the black sand -- reminiscent of a well-cared-for Japanese garden.

We spent two days diving Barren, ten dives, repeating three sites, because some sites were too heavily covered by volcanic ash to dive. Infiniti's decks and rails too remained lightly covered with ash.

Dozens of dolphins escorted the Infiniti as we left Barren Island, heading toward our last day of diving around Havelock, where Johnny's Ridge dished up an impressive school of about forty, four-foot long, bumphead parrotfish.

Think of all the tropical fish you know, and diving Barren and Narcondam will seem to have them all. Sometimes I struggled with ID, as the species varied in size, like a 20" bannerfish. Butterfly fish were a challenge, too, with the unusual Indian teardrop, exquisite, triangular, and the blue spot added to a plethora of other. I've seen a lot of bumphead parrotfish diving, but never in such a large schools. It's rare these days to see dizzying numbers of fish, from the small colorful juvenile emperors to impressive mantas, but they are not rare here, nor were whitetip reef sharks, seen on most dives. With few divers and India enforces regulations on commercial fishing, the islands provide a haven rarely found elsewhere. And, of course, there is no human-produced runoff, just the natural volcanic ash.

Apparently, maintaining a crew familiar with liveboards is a challenge, perhaps reflective in having four captains in as many seasons and a change of cooks. I seldom saw the captain, but the chief officer was frequently on-scene, friendly and helpful. The three divemasters, three instructors, and two boatmen formed a tight, well-orchestrated team. All had the made my trip as safe and satisfying as any diver could conceive.

I had arrived a day of ahead of boarding the Infiniti, to give my luggage a chance to catch-up, if needed, and to shed jet-lag, and gave myself a day afterward to off-gas before the multiple flights back home. I had made reservations at Fortune Bay Resort at Port Blair, paying ahead by a bank wire transfer, but I was advised at the last minute the money had not arrived, and it was a hassle for me to resolve. I more easily could have paid with credit card upon checkout. Fortune Bay has a beautiful view of the bay, but it was undergoing renovation. My room was clean, comfortable, and air-conditioned. Reception and drinking and dining areas are covered, open-air; a comfortable bar/lounge area had simple Indian food buffet and a talented singer with a huge repertoire. One floor down, full dinners were served, but no alcohol was offered there.

Yes, diving Barren and Narcondam in the Andamans was definitely worth the loss of sleep and the uncomfortable layovers required in traveling to this remote location. Few places in the world are fishier or have healthier corals. While the corals aren't as numerous as in Raja Ampat or Fiji, their purple haze is something I won't ever forget. I'd return in a heart beat -- if the flight wasn't so bloody long.

J.D.

Our undercover diver's bio: J. Diver says, "I began diving 12 years ago, quickly becoming obsessed observing fish and critter behavior. A thousand dives later, with plenty of time to burn, I've made half my dives in the Caribbean and the remainder mostly in Indonesia, Philippines, Japan, Palau, Papua New Guinea, the Solomon Islands and Turkey. Using the excuse of absorbing local culture, I've drunk kava in Fiji, penis soup in PNG, and spat betelnut juice in Palau. I'm convinced it helped my fish ID skills in those regions. My last Undercurrent article was in August 2015: the liveboard Arenui.

MV Infiniti, Andaman Islands, India: Barren & Narcondam

Diving (Experienced).....★★★★★

Diving (Beginning)*Don't go!*

Accommodations.....★★★★★

Food.....★★★★ ½

Service and attitude.....★★★★★

Money's Worth.....★★★★★

★ = poor ★★★★★ = excellent

Worldwide scale



Divers Compass: Infiniti Liveboard, eight nights, \$3828.50. www.infinitiliveboard.com . . . Infiniti makes the Barren-Narcondam trip only in March and April; she travels December-May in the more southern Andaman Islands to avoid the monsoons. . . . Bluewater Travel agent Adam Gibson made the reservations for us, and both he and cohort Mark Strickland (Bluewater Photo), who has written about and frequently photographed in the Andamans, were kind in answering a zillion questions www.bluewaterdivetravel.com . . . Several divers rented gear on-board; there was a well-maintained stock of Scubapro equipment. . . . They supplied safety sausages; I carried my Nautilus Lifeline emergency device. . . . My round-trip flight from St. Louis to Port Blair involved United, Lufthansa, Jet Air, and Air India (does not allow bags to be checked through from or to other airlines - an inconvenience) which I arranged myself through Expedia for \$1311, rough trip; I did it leg by leg; My dive buddy went through Boston, and paid over twice as much. Because of my cheap fare, I splurged for business on the 16-hour Delhi to Newark leg home. I flew St Louis-Frankfort-Chennai-Port Blair Required India e-tourist visa, obtainable 30 days in advance, and \$60. Fortune Bay Resort Port Blair, two nights, \$250, and included lunch and dinner. www.fortunehotels.in Wine and beer were on the honor method: wine from India \$10 USD per bottle, beer \$2. Before the trip, we were advised to bring our favorite bottle of alcoholic beverage, as it is not available onboard.

Turks and Caicos Explorer II

great boat, great food, but degraded reefs

Last year, I enjoyed a trip aboard the T&C Explorer II enough to return; the boat was very comfortable, and though the food was pretty bad, it was clearly a quality operation. The vessel is 124 feet long, with two king bed VIP cabins on the upper deck, five doubles with comfortable beds on the main deck, and three bunk bed cabins below for a total of 20 divers. Every type of late model TV and video is in the main salon. On last year's trip, sponsored by REEF, we explored the virtually uninhabited Bahamas islands of Lesser and Greater Inagua. The reefs I saw there were pristine, and I wanted to see a more conventional itinerary starting to the northwest, in Providenciales (Provo).

I came away still impressed with the boat, but with misgivings about the health of the reefs. Most dives featured a couple reef sharks, sometimes half-a-dozen. I don't know about you, but I am never bored when there's a shark in the water. But having dived here some 30 years ago, I was aware that things had changed. Maybe it's not fair to compare places so many years apart; after all, people who haven't seen "the old Caribbean" are often happy divers in these waters, as most aboard this trip were.

I learned to dive off Provo in the mid-1980s, and it was lush and pristine. The diving I've seen in and around Provo since then has declined, based on at least fifteen trips between the 1980s and 2005. Grace Bay was rapidly transformed into a series of high-rise hotels, whose construction and sewage runoff killed the reefs. So when I booked this trip, I looked forward to seeing better reefs the farther we

got from Grace Bay. However, when I saw algae often covering the patchy reefs far beyond Grace Bay, I did some research.

According to a recent study published by Alan Logan and Kathleen Sullivan Sealey, "The Reefs of the Turks and Caicos Islands" (www.academia.edu), both human and global climate problems are undermining reef health. The Turks and Caicos Islands use reverse osmosis to produce enough fresh water to develop the islands, but the subsequent sewage runoff (solid waste treatment is a problem) encourages the growth of algae that cover the reefs and kill the coral. The authors report a surprisingly low live coral coverage around all the islands of the Turks and Caicos, 10%-20% overall (and I can report, about zero in Grace Bay). Bleaching events in 1987 and 1990 and Hurricanes Irene (2011) and Ike (2008) destroyed areas of coral; and dredging and cruise ship props stirring up the bottom kill corals. Invasive lionfish gobbling up juvenile fish just make it worse.



The Explorer II runs two itineraries, one that starts in Provo and travels to Northwest Point, West Caicos, and French Cay, and another starting in Grand Turk. This trip was the Provo itinerary. Engineer Ross Burk proudly showed me around the engine room. Two new 500 HP diesels can put out up to 650 HP, all computer-controlled. Two reverse osmosis water systems produce 5000 gallons per day. The room was as spotless as an engine room could be.

We made our dives from the main deck, either with a giant stride and a five-foot drop or from the transom, a five-inch drop. There's a head on the dive deck, two hot showers on the transom, and the clean camera table had a dedicated air nozzle for drying gear. The crew did indeed emphasize safety; before embarking, we had a drill meeting at the muster station and donned life vests. This boat is known for swinging rather wildly on its mooring in a modified figure-8, but in fact, it isn't that different from a conventional V-hull's swing and scope. I remember Mel Brooks' "Two Thousand Year Old Man" and his advice on how to live a long life: "Never run for a bus; there's always another coming." The same applies to a swinging boat. The boat has a rigid inflatable dinghy that can pick up a stranded diver in a pinch as well.

And then there's the food. After years afloat, cook Stanley was on leave. While last year the food was barely acceptable at a junior high school cafeteria,

this time, the replacement chef, Jim P. McCullough, ran a floating high-end restaurant. The crew grumbled that they would get fat! Every day began with a hot breakfast, including omelets, huevos rancheros, eggs Benedict with salmon or ham, banana pancakes with sausage, and French toast. Mid-morning snacks were baked treats like white chocolate chunk or butterscotch almond cookies or lemon poppy seed muffins. Lunches might be enchiladas, chicken and avocado wraps, hamburgers, and kebabs grilled on the upper-deck barbecue. Dinners featured mahi mahi, ginger chicken, eggplant parmesan, or slow-cooked ribs (so tasty that the European guests agreed this was American food at its best).



Turks & Caicos Explorer II

Side dishes like cauliflower with garlic, carrots with dill butter, quinoa, and Szechuan cabbage kept plates full. And both meals included a big salad. Chef Jim's desserts should be controlled substances, particularly his bread pudding with rum sauce and boca negra, and a death-by-chocolate cake. It helps that Captain Jean-Francois Chabot is himself a passionate cook. He loved the grill and baked mouth-watering focaccia. Yes, I have gone on about the food, but that's because it was outstanding, especially in light of the defrosted-then-burned offerings of Stanley. And if dives become disappointing, great food will take the bad taste from your mouth.

Thanks to north swells, our diving was confined to the reefs around West Caicos and French Cay. First up was Yankee Town off West Caicos, offering a wall with nice black corals and a few reef sharks, though a lot of sand. The Gully, nearby, had a steep wall with a swim-thru and sandy shallows dotted with coral heads. My buddy found a flying gurnard in the sand, and we viewed some reef sharks, Nassau grouper, and barracudas. Yet my log also notes that this was "a dull dive" because of the patchiness of coral cover and the relative paucity of fish.

What Happened to Palau's Jellyfish?

Some of Palau's rock islands bear unique ecosystems caused when lakes got landlocked over eons of time. Some of these saltwater lakes are full of jellyfish, and without any predators, they have evolved into a sub-species without any powerful stings. One of the great attractions of Palau has been the possibility to snorkel in Jellyfish Lake. But where have the jellyfish gone?

Previous estimates of jellyfish populations have numbered around eight million, but now it seems there are only a few hundred thousand surviving. In recent weeks, tourists have struggled to find any. Scientists blame a severe drought coupled with raised seasonal air temperatures caused by the El Niño effect.

Palau has always enjoyed a regular tropical deluge in the past, but rainfall during the first quarter of this year has been the lowest recorded for 65 years. The Coral Reef Research Foundation noted that the lack of rain and reduced run-off of rainwater has resulted in an increase in salinity of the lake.

While scientists say there's every chance that jellyfish numbers will rebound when conditions improve, Collin Joseph, a coastal manager for Palau's Koror State, thinks adult jellyfish have pretty much died out completely, while some juveniles remain.

In April, local operator Sam's Tours told its sales agents, "Many tour companies including ours that have been taking guests to the [jellyfish] lake have not seen any jellyfish. We at Sam's Tours have, therefore, decided to suspend our tours to Jellyfish Lake with immediate effect until further notice."

The golden jellyfish population may be on the verge of crashing, although it crashed in 1999 but recovered within eighteen months. Tova Harel of Fish & Fins wrote to tell us it had started raining at last and hopes things will improve. However, if you've already had the experience of snorkeling with the jellyfish, you'd better treasure it. It might not be possible to repeat!

However, this was not due to the dive staff, particularly Jo Swannell, whose dive briefings were often in costume (Cyndi Lauper for Rock Garden Interlude -- rock, get it? -- Elvis for Rock and Roll) and my favorite, Tutu Tuesday, when six lucky divers wore tutus over their wetsuits. The other primary divemaster, Joe Lamontagne, is a marine biologist and made sure that each briefing included tips on finding creatures or fish. Buddy diving was fine, or you could go with the guide; certified solo divers could rent additional tanks and go it alone. April water temperatures ranged from 77°-79°F, and I was comfy in my 7mm, although less wimpy divers were fine in 3-5mm suits. In the summer, water is always much warmer.

At Spanish Anchor off West Caicos, fish were relatively few (though most dives offered a reef shark or two); Rock Garden Interlude was the fishiest of the West Caicos sites. The wall encouraged

currents, which brought schools of horse eye and crevalle jacks, Atlantic spadefish, various grouper, and teeming schools of blue chromis and Creole wrasse. Fish were so much denser than all previous dives that my buddy and I exchanged high-fives instead of the yawns we had exchanged earlier. Ironically, the night dive at this site was notable largely for teeming bloodworms, which obscured the view of lobsters and hunting jacks. Some night divers even found bloodworms in their camera gear. If you haven't seen a bloodworm, they are pretty disgusting little worms that feed at night, attracted to lights, and whose entertainment value to divers is to feed them to coral polyps.

Elephant Ear Canyon boasted handsome underwater topography as well as eponymous sponges. When we moved to French Cay, fishiness ticked up, including more reef sharks, the occasional Cubera snapper, and clouds of wrasse and chromis. There was still too much algae on the substrate, yet the fish life seemed denser. At Rock and Roll, Jo pointed out a male yellow-headed jawfish incubating eggs in its mouth, while I spotted a handsome large hawksbill turtle swimming slowly over the edge of the reef. At Sand Spit South, southeast of French Cay, my buddy found two enormous nurse sharks snuggled together under one of the many shallow coral heads that dotted the area. Other dives included hogfish, queen triggers, rock beauties, queen, gray, and French angelfishes, and small swarms of juveniles.

Yet overall, my anecdotal view was that the numbers of fish were fewer than ever, and the condition of the corals was degraded. A lot of the yellow-brown algae covered what had been live coral, and there was more filamentous red algae than I like to see.

The guests were a mix of Americans, Canadians, and Europeans, and I wondered if the Europeans, who came so far, were happy with the diving, though none complained. Do you know the saying that "there's a jerk on every boat, and if you don't know who it is, it's you?" Well, one diver distinguished himself by wearing tank tops with reactionary conservative political slogans, like "Obama Can't Take THESE Guns" (with arrows pointing to his arms). My buddy had to explain to the Italian divers what the shirt meant; when they understood the slang for biceps and the passion for firearms, as well as the disrespect to the President, they rolled their eyes.

This diver couldn't restrain himself from loud tirades about "the worst President EVER" (clearly, this thoughtless nonscholar had never heard of consensus presidential bottom dwellers James Buchanan and Franklin Pierce, both Democrats he would be delighted to know) and buttonholed the American divers to demand to know for whom they were voting. My mother never let us talk about politics at the table or in social settings, but clearly this diver's mother felt differently. It was unpleasant, and most of us avoided contact with the in-your-face fellow. Living on a boat makes a live-and-let-live attitude essential.

If you dived these waters in earlier years, you might find the reefs less lush, although the boat is terrific. Compared with areas with long-standing reef conservation, like Bonaire, it seems the Turks and Caicos, at least this itinerary, have come to the conservation party a little late. Anthropogenic (or human-induced) effects abound on its reefs.

MV Turks and Caicos Explorer II

Diving	★★★
Boat.....	★★★★★
Food.....	★★★★★
Service and attitude.....	★★★★★
Money's Worth	★★★

★ = poor ★★★★★ = excellent
Caribbean scale

Our undercover diver's bio: A.E.L. loves to dive (and to eat!), and does around 150-180 dives a year all over the world. Diving since the mid-1980s has turned A.E.L. into a passionate marine conservationist and maybe a fussy budget on that front.



Divers Compass: A typical trip in a main deck cabin is usually around \$2495, though the company runs special trips and promotions; nitrox was usually 31%-32% and a flat fee of \$130 for the week; the crew can make small repairs and has backup and rental gear available. . . . Provo has a hyperbaric chamber that can accommodate multiple divers. . . . Several airlines fly here directly from the U.S. and Canada. British Airways flies from Heathrow. . . . The Grand Turk itinerary requires a plane transfer from Provo . . .

. . . Tips can be left on your credit card or in cash, and there's no charge for booze (which includes call brand spirits, drinkable wines, and good beers), but a drink signals you are done diving for the day.

Yes, Sexism in the Diving Industry Exists

a famous female cave diver examines the subject

As scuba diving developed as a recreation and sport in the 1950s, it had emerged from and was heavily influenced by the male-dominated military. We speak nostalgically of Lloyd Bridges, Navy Frogmen and Captain Jacques Cousteau — yet rarely mention Zale Parry, the heroine of Sea Hunt fame, and one of the first women to engage in technical diving.

I was considered a bitch if I stood up for myself or I was being 'too sensitive'.

To learn more about women and diving today and to gather community opinions about women's issues in diving, I turned to the fabulously scientific Internet diving forums. I started threads entitled "Sexism?" on numerous social platforms.

Some participants felt that sexism in diving is nothing more than a microcosm of what we experience more widely in society. A PADI course director and active technical diver said, "Sure, sexism is there... but I'm not sure it's special to the diving environment. That is, I don't think the non-sexist person suddenly changes stripes when they put on a wetsuit, or vice-versa. There are just more opportunities for it to arise in the diving environment..."

heavy equipment to be moved around, swim suits, lots of opportunities to show off 'superior' knowledge, skills, and strength."

A noted female physician and very active diver took it one step further, saying, "I think it takes two to be sexist. First, you have to have the man with the attitude, and then you have to have the woman with the chip on her shoulder. I have never carried that chip, and it takes fairly egregious behavior to register as sexist to me."

The pithy stories that broke my heart were mostly off-the-record, but were real stories of harassment, discrimination and even criminal behaviors. As one woman put it, she tolerated the behavior because she didn't want to be labeled as a diving "Femi-Nazi" — a derogatory term for strong, committed women popularized by Conservative radio host Rush Limbaugh.

I read complaints of women being held back in training and career advancement, feeling invisible, and given the silent treatment at dive shops. A few nervously shared accounts of overt intimidation by male divers, boat captains and storeowners. I read stories of sexual groping by male peers and general workplace harassment, a pattern made even more intolerable by lack of professional opportunities and severe pay inequality.

\$25 Million Lawsuit on Rebreather Death

Wes Skiles, with more than 7,000 dives, was a world-renowned underwater photographer known for his beautiful photographs of cave systems. He died in 2010 at age 53, during an ascent from an easy open-water dive, after shooting goliath grouper for National Geographic off Florida's Boynton Beach. He was using a Dive Rite O2ptima FX closed-circuit rebreather (CCR), which he had borrowed.

His death became the subject of a \$25 million lawsuit against the rebreather manufacturer, with Dustin Herman the attorney for plaintiff Terri Skiles, Wes Skiles' widow, claiming Dive Rite had produced the rebreather Skiles was using without proper testing. He stated in his opening statement, "This is about failing to do safety testing on a piece of life safety equipment."

Dive Rite states on its website, "When we created the O2ptima the design parameters were simple; keep the breathing loop as short as possible, use state of the art proven electronics, and be able to use the MicroPore Extendair cartridge without extra O-rings. In the end, we were able to achieve these goals making the O2ptima one of the smallest rebreathers suitable for cave exploration."

David Concannon, an experienced, winning rebreather trial lawyer and the attorney representing Dive Rite (actually, the real name of the company is Lamartek, which does business as Dive Rite), countered that Skiles was responsible for his own death. He argued that although Skiles was a very experienced and accomplished scuba diver, he was not certified to use the device, and he violated several safety procedures common to all divers.

The evidence also showed that Skiles was taking both a drug to treat insomnia and a narcotic painkiller. He lost consciousness and drowned when he lost his mouthpiece during an ascent from 83 feet. Key evidence was a 45-minute video of the fatal dive.

Hermann said the video showed the equipment malfunctioned – the O2ptima's oxygen sensors were supposedly blocked by water, causing their readings to freeze and deprive Skiles of oxygen until he succumbed to hypoxia. Concannon countered that it showed that Skiles made many mistakes and that the warning systems of the CCR were working but ignored. He alleged that Skiles turned off his oxygen supply, adding, "Is it because he is impaired? Is it because he is inexperi-

enced [in using that type of CCR]?"

As the trial progressed, it was revealed that key evidence — the rebreather's oxygen sensors, CO2 scrubber canister, and Skiles' Shearwater dive computer — had been kept by his widow and never turned over to her own expert for testing, let alone to Dive Rite.

After only four hours of deliberation, a Palm Beach County FL jury of six, including two scuba divers, cleared Dive Rite (Lamartek), of wrongdoing. David Concannon said later, "Although it was a relief to win this case, it was still sad to show that a good man lost his life because he cut corners. The case provides a valuable lesson - that complacency kills."

Lamar Hires, owner of the 32-year-old family-operated dive equipment business in Lake City FL, and a friend of Skiles said, "This is a win for the entire diving industry because people have to take responsibility for their actions."

Concannon, a diver himself who has developed a specialty in sports and recreation law, agreed with Hires' assessment that the verdict had a far-reaching impact. He said he had been getting phone calls from throughout the world about the two-week trial that unfolded in Palm Beach County Circuit Court.

"Not only was Skiles a celebrity diver, but other underwater adventurers were worried about what would happen if Dive Rite was held responsible for his death," Concannon told Undercurrent. "A verdict against Dive Rite would have destroyed this branch of the diving industry. If a company could be held responsible for someone who was not certified, not trained, was on drugs and borrowed the equipment, everyone would have been at risk. It's a high stakes game for the entire diving industry."

"Here was a man who made a name for himself making dangerous dives into caves and in sub-zero water, yet his life was snuffed out on what is known as a "baby dive" into 80 feet of water on a beautiful day. It's a sad, sad tragedy," he concluded.

Immediately after Skiles' death, National Geographic featured his photographs of the interior of Blue Hole cave systems in the Bahamas and named him 'Explorer of the Year.'

The stories were visceral and some of these women had never openly shared these truths. They wanted the information broadcasted to the diving community, but they did not want to be identified as an informant. A competent, skilled young woman saidwrote, “One of the most difficult incidents I experienced was when I worked for a dive center in Florida. I had been with the organization for almost three years, and a divemaster employed there less than three months (I even assisted with his divemaster course) was moved up to manage the

The instructor went as far as trying to get her to take her wetsuit off on the pool deck instead of in the locker room.

facility. The store owner sat me down and explained how ‘girls aren’t successful in this industry’ and that ‘it’s a boys’ club.’ He even went so far as to tell me that, ‘no matter how hard I work, it just won’t happen.’ He said I might have a little chance in the industry if I moved to the Caribbean. I was considered a bitch if I stood up for myself or I was being ‘too sensitive.’ I worked twice as hard to not even be considered equal. I filled tanks, carried tanks, unloaded gear and prepped the boats. I was the second highest rated instructor at the store, an equipment technician and even had a Master’s degree, yet I was the lowest paid employee and never considered an equal.”

The Educational Setting

Many anecdotes revolved around ‘first contact’ within the sport of scuba diving: the Open Water Diver class. Experiences were wide-ranging for observers, practitioners of discrimination, and victims. From a private message, a male reader who had experienced reverse discrimination wrote:

“I have observed clear sexism. The females are always walked gingerly through lessons, while it appears that the instructors assume the males just get it right away. On boat trips, everyone is careful to watch over the female divers, often going out of their way to extend some courtesy to help the poor female with the big heavy equipment, or the slippery deck, when boys with less strength are not helped, and sometimes even teased or chastised when they struggled.”

But a busy Florida dive shop instructor and captain wanted to point out challenges he faced trying to teach a mixed-gender class. “I routinely had more

Tiger Shark News

If you’ve seen an up-close photograph of a tiger or lemon shark, we’d bet it was taken at Tiger Beach, an area close to Grand Bahama and visited by shark diving operators from the Bahamas as well as American liveboards from Fort Lauderdale, FL. The sharks, mainly lemon and tiger sharks, are there year-round, but why?

Recently researchers from the University of Miami’s Rosenstiel School of Marine and Atmospheric Science and the University of New England performed in-water ultrasound imaging technology on live tiger sharks and took blood samples for hormone analysis to determine the reproductive status of females.

“Using the same ultrasound imaging technology used on pregnant women, we discovered Tiger Beach was important for females of different life stages, and that a high proportion of tiger sharks were pregnant during winter months,” said Professor James Sulikowski.

Study co-author Neil Hammerschlag, a research assistant professor at the UM Rosenstiel School and Abess Center for Ecosystem Science and Policy, said, “Our data suggests that Tiger Beach may function as a refuge habitat for females to reach maturity, as well as a gestation ground where pregnant females benefit from calm, warm waters year-round that help incubate the developing embryos and speed up gestation.”

The study has been published in the recent edition of *the Journal of Aquatic Biology*.

Meanwhile, down under, a female tiger shark was tagged near Exmouth in Western Australia. Nominally “Catalina,” she made her way north into the Timor Sea before being tracked all the way south, a distance of around 3000 nautical miles, where she has become the first tiger tracked onto the continental shelf of South Australia, an amazing feat because the water there is thought to be too cold for a tiger shark, says Dr. Mark Meekan from the Australian Institute of Marine Science. “But these big sharks can be full of surprises.”

Scientists attach radio tags to track sharks. Each time a tagged shark’s dorsal fin breaks the surface of the water, it transmits a signal to a satellite, which in turn transmits an estimated geo location. You can follow Catalina, the tiger shark, on the Global Shark Tracker page at <http://www.ocearch.org/profile/catalina/>

men than women in my open water certification classes. The men always wanted to assist the female students in the class, in any way possible. This would be especially bad when couples took the class together. On numerous occasions I had to prevent doting husbands or possible suitors from setting up dive equipment for the female students in the class... Some of the women in my classes would take advantage of this and have nearly everything done by the male student of her choosing. Obviously this was stopped so that everyone met the performance requirements of the course. It made for some awkward conversations.”

This respondent saw a different dynamic at the leadership levels of training. “Divemaster and instructor level training was a whole other ball game. The roles were somehow reversed from the get-go. It seemed that the ladies had something to prove by the time they got to the professional level, and would train intensely. I never encountered the ‘oh, I’m just a helpless woman, please do everything for me’ attitude at these levels. The men in the class always hated to be outperformed by the female students, and they were intensely aware of it when it occurred. Sometimes it would motivate the male students to do a bit better, other times I had to put an end to sexist remarks.”

The student’s viewpoint was sometimes eye-opening, observing unprofessional behavior of instructors or divemasters. “I cannot tell you how many times an instructor is completely distracted (to say it nicely) by a pretty diver/student. In my OW course, there was a petite, pretty blonde and she got three times the attention than any other student. The instructor went as far as trying to get her to take her wetsuit off on the pool deck instead of in the locker room. It was bad. Needless to say, it was the last time I trained with that instructor.”

At the recreational diving level, DEMA reports that 35 percent of open water divers are women and that 23 percent of continuing education students are women.

In leadership, PADI reports that there are currently more than 25,000 women who are members at the Divemaster level and above. The reality is that less than 20 percent of PADI professionals are women. At the Master Instructor level, only 13 percent of PADI Master Instructors are women.

Diving Equipment for Women

The single greatest number of complaints I received from women was that the industry did not offer the correct, comfortable fit, or type of gear they desired. They felt like manufacturers saw

them as an afterthought. (We used to call it the SAP Principal in the 1990s. Take a piece of men’s equipment, make it “Small And Pink” and you have

All About a Bag

Dear Ben,

Reference the lead sentence from your article on Palau in the May issue “*Waiting to collect my bags at Tokyo’s Narita airport in January, before transferring to my Palau flight, I was shocked when my dive bag containing \$3000 worth of gear didn’t arrive. It never did, apparently having been purloined by a baggage handler in Seattle or Portland, who couldn’t resist a bag marked “ScubaPro.”*

Let me pass on my own practice for thirty years of dive travel — thirty years in which I never had a bag stolen or ‘lost.’

I always use beat-up military cargo bags, reinforced with cardboard, for my dive gear. The more the bags looked as if they contained dirty laundry, the better. No travel or scuba gear company ever paid me to advertise their products, so I see no need to label my bags with their names advertising the expensive gear inside.

I never use nametags furnished by travel agents or dive companies. Rather, I print my name and itinerary outbound (or inbound for the way home) and glue it on to sturdy plastic luggage tags, then cover with clear sealing tape. I put two or three of these tags on each bag with sturdy cable ties. Also, right inside the top zipper, on top of a towel I lay over my gear (some people use dirty laundry), I place a more detailed itinerary with way stops and destination information as well as home address and contact numbers. Finding my luggage in the ‘go to customs’ area is pretty easy — my bags stand out, not because of brand names or dive tags plastered on them, but because they are the rattiest bags coming off the carousel.

Another benefit: the bags are easy to fold and stow in small closets or under liveboard bunks.

– Ed Donohue, Fiddler’s Green, Maryland

Ed, I fully agree. My dive bag today is a soft-sided suitcase that remained in my Cayman Island hotel room in 1989 during Hurricane Gilbert, while I spent the night at the East End Community Center. When I returned to my room, the soaked bag was floating in the sea surge left behind, and, rusted zipper and all, has traveled with me ever since. – Ben

the SAP Principal in action.) Fortunately, the availability and selection of dive gear made expressly for women is on the rise. Dive shops that cater to women with gear made expressly for them will be rewarded with customer loyalty. Those that don't will simply not get their business.

Most women who described discriminatory dive operations said they would never return to that business.

At The Dive Site

Both men and women related stories of how women are pre-judged to be diving novices regardless of their certification or skill level. Recently, I was teaching a photo intern when his dive buddy came up to say hello. After the greeting, he turned to me and asked if I was diving or just hanging around. Before I could reply, he invited me to join him for an easy dive in Ginnie's Cavern — where he would "take good care of me." I let it go. My student's face reflected acute embarrassment.

A male reader shared a similar story, which I've often seen played out in North Florida. He said, "I was gearing up with 15 other divers, among them a single female, and watched the person in charge bypass every single male diver and walk straight to the woman in the group to ask for her credentials and experience. Aside from coddling (enquiring whether she needed help to carry her scooter down to the water), he asked if she needed a buddy or any pointers on how to get around the flow."

Some women described how they felt unwelcome at particular dive sites and on certain charter boats. They felt there was an immediate assumption that they were less skilled than their male counterparts. As a result, they felt they were under greater surveillance in general, and were more likely to end up as the subject of somebody's Internet rant. Men often suggested these stories were not about gender, but rather, about capability. Men said that "nobody wants to buddy up with a lesser diver," who might limit their own experience in the water. Women countered, saying this argument was an excuse, and maintained they are equally capable of participation.

Another woman brushed off unwanted attention, "At first I was kind of taken aback by the number of times I got hit on, but then I realized diving isn't unlike any other co-ed sport. It's human nature.

People are going to flirt with each other and think that they need to help 'the weaker sex.' As long as everything is kept respectful on all sides, there is nothing wrong with having a little clean fun now and then."

A Florida charter captain said he liked to include women staff on his boat. "As a captain, I always made better tips when I had a female divemaster (DM) on the boat. No exceptions. If everything went well, this DM got great tips. Some of the gratuities came from other women who would say things like, 'It's nice to see a competent woman guiding dives.' If the shit hit the fan for any number of reasons, we would still make great tips. Maybe the mostly male clientele thought, 'she's a woman and she's trying.' I'm not sure, but I can tell you that when the customer service was lacking with a male DM on the boat, the tips would suck, and the male customers wouldn't hesitate to call him out. Not so with female DMs. It seems there would be some sympathy for a female DM, even if she was doing a bad job."

A woman boat captain and professional diver in the Caribbean told me, "When I used to drive the boats in, people would clap their hands if I docked in one smooth maneuver, yet if a guy did this, it was considered average, routine."

A Northeast wreck diver intentionally sought out mixed-gender charter opportunities, saying, "On the dive boats in New Jersey, there are lots of women divers. I'm sure sexism is alive and well aboard these vessels, but for the most part, I've seen very capable women divers 'holding their own,' and male divers treating them with respect and as equals. I do notice a little less trash talk when there are ladies on-board."

Strategies

For women trying to find a gender-neutral diving context, there are some strategies. Women frequently seek out advice on 'women-friendly' operations and boats. They search for guidance on selecting appropriate instructors and sometimes specifically seek out other women as mentors and teachers. Women choose to avoid certain operations, instructors, and notorious shops, rather than face discrimination or harassment. A self-described male 'senior diver' said, "Some women may get into diving because they are a wife, daughter or friend of a diver. There seems to be full and immediate acceptance of a girl or woman brought to a dive shop for training by the man in their life. However, I have observed on more than one occasion that when a professional independent woman visits a shop, she

finds the shop staff ‘cold’ to the idea of taking her on as a student.”

Most women who described discriminatory dive operations said they would never return to that business. They were unforgiving of this type of behavior.

Many women on Internet forums sought out social, collective experiences such as women’s dive events and clubs. These activities are not just women only. They are organized around a completely different way of enjoying the sport. They tend to emphasize a supportive environment where a woman can expect equality and mentoring. Organizations such as the Women Divers Hall of Fame unite accomplished women in a way that bonds them on common causes by creating scholarship and internship opportunities for women divers.

Some women found these events and clubs to be uninteresting or needless. Their coping strategy involves blending in and de-emphasizing gender. These women tend to reject the necessity for organizations such as the Women Diver’s Hall of Fame. They feel that their personal empowerment is achieved not by being a great ‘woman diver’ but by simply pushing themselves to be a ‘great diver.’ These same people downplay their gender, rejecting colorful equipment that may emphasize their

gender. Despite a sometimes diminutive size, these women carry tanks that are just as large as those carried by their male dive buddies, who dwarf them. They wear black gear and attempt to blend into a group.

Still others pursue a strategy that’s quite the opposite, wearing gear that highlights their femininity, such as pink or stylish equipment. They proudly display themselves as feminine, strong and capable women. A good example is a social group called Scuba Diver Girls. These active and experienced divers flat-out reject the notion that women are less capable and instead emphasize their experiences in diving. In doing so they help change the image of women in diving.

In the end, we need to be open-minded in our understanding of sexism. Men have ruled the planet for the past five million years. Feminism is not trying to rewrite history, but instead, chart a course for a more equitable future. The mainstream women’s movement seeks to acknowledge the real differences between men and women while balancing power equitably. Women’s rights activists ask us to use feminist nomenclature that supports that cause.

To this end, our community can embrace some simple social manners:

Vinegar for your Salty Gear

It’s inevitable that once you get back from a diving trip, even though you think you have rinsed all your gear thoroughly, you will have missed something. In fact, rinsing it in a fresh water tank before you leave a resort can be perfunctory; the “fresh” water can be diluted with seawater once many people have used it. It’s when you start getting prepared for the next trip that you discover that small salt crystals might have formed in places you wished they had not.

This is especially true of camera equipment. Buttons can stick, and filters and adapters can end up jammed together.

To solve the problem, first soak the offending items in clean, warm water. If that doesn’t work, try soaking the offending area in a weak solution (1:10 of water) of white vinegar. The vinegar leeches out the salt. *Do not under any circumstances soak a wet camera lens, or anything with an optical coating, in this way. It will almost certainly etch the coating and ruin it.*

Ken Kurtis, owner of *Reef Seekers* in Beverley Hills, found he hadn’t separated or cleaned two stacked fil-

ters for his GoPro after his last trip and he could not get them apart. He says he “placed them, still screwed together, in the bottom of a tumbler-sized glass, poured in full-strength vinegar and let them sit for a few hours. Then I washed them off with fresh water and . . . voila! They came apart easily.”

After long trips, some underwater photographers fill a large garbage can with water mixed with such vinegar (around 1:100 of water) and soak their underwater camera rigs in it, pressing all the buttons and operating all the controls, before rinsing them off with fresh water and disassembling. There’s an argument for doing this diluted vinegar treatment with all your diving gear after it’s been on a long journey. Don’t forget to rinse it off properly afterwards.

Klaus Glismann, an *Undercurrent* subscriber from Hamburg, Germany, tells us he soaks a new mask in neat vinegar to get rid of that silicone vapour deposit we wrote about last month, but we say don’t do this with a mask that has coated glass.

– Ben Davison

Try to view all your fellow divers without pre-judging their capabilities. Quite simply, avoid making assumptions. Don't conclude that women are tag-alongs. Err on the side of positivity. Assume all divers are capable, equal members of the dive team until personal observation tells you otherwise. Avoid offensive comments and sexual remarks about your fellow divers. Whether you have made an off-color remark in person or on social media, remember that we all live in an increasingly public world. Anything you say will likely come back to you at some time in life. Above all, don't be afraid to call out bad behavior.

Let's celebrate the individuals in our community for excellence. Let's enjoy travel and underwater experiences in a way that lifts all participants. If we wanted to be highly competitive, we would have picked another sport. This is a sport where an adventure shared can create a lifelong bond, regardless of age or gender. — *Jill Heinerth*

Canadian Jill Heinerth is a pioneering underwater explorer and filmmaker, leading technical diver and world expert in rebreather technology. Abridged from an article first published in Diver Magazine (Canada).

A Galápagos Meltdown

bitter disappointment far from home

Imagine planning the dive trip of a lifetime to the Galápagos that included both a scuba safari to the remarkable Darwin and Wolf Islands, together with a land safari around the main islands to see the unique wildlife. The lucky traveler can expect a spectacular experience, if tempered by a considerable cost.

That was exactly the expectation of Jeanette Hartshorn (Kansas City, MO) when she booked a

Imagine traveling to such a remote destinations and learning your trip had been cancelled.

trip for herself and her partner, Kurt, with booking agent DiveTheGalápagos based in Signal Mountain, TN, a company with ground representatives in Santa Cruz, Galápagos. She had meticulously planned their trip, the main event a dive safari aboard *Galapagos Sky*, a vessel with an enviable and well-earned reputation, co-founded by the Ecuadorian owner, Santiago Dunn, and dive operation veteran Peter Hughes.

Suppose you would have booked this trip. Imagine how you would feel if you made the complex journey to San Cristobal via Guayaquil on the Ecuador mainland, only to find that there was no boat available and no record of your booking for that date.

That's what happened to Jeanette and Kurt. Angry? Most of us would have been apoplectic with rage!

It was a Sunday when they arrived. In the Catholic country, everything is closed. Jeanette told us that when they arrived and the local agent representative told her at the airport in Ecuador that the departure had been cancelled, "I called all the contact phone numbers for *Galapagos Sky* including the emergency contacts and no one answered their phones. What a huge waste of time and money!"

We contacted Leslie Thomasson of DiveTheGalápagos, who booked the entire trip, including the *Sky*, who told us "This was devastating for Jeanette and Kurt and shocking for us. Imagine traveling to such a remote destination and learning your departure was cancelled and no one had informed you? They were justifiably outraged. There were two other divers in their same situation, booked by one of the largest, oldest, and most reputable dive agencies, Caradonna Dive Adventures."

When we talked to Peter Hughes about this, we learned that the person responsible for managing the passenger bookings had experienced a serious breakdown after receiving bad news, and simply failed to inform anyone that *Galapagos Sky* would be out for maintenance that week and that bookings had to be cancelled. Amy Lesh, at *Galapagos Sky*, was quite emotional when she told us that the person responsible had been dismissed, though he had more than nine years' exemplary efficiency at the job.

Thomasson, who only books Galapagos' trips, told us "I was shocked this occurred with an operation I had 100 percent confidence in, and an employee who had almost a decade of complete reliability and professionalism — one I always trusted completely and loved working with."

With no other liveaboard available on a day's notice, Thomasson found them a one-week Ecoventura naturalist cruise, which they declined. They wanted to dive. "I explained diving in the central islands is not the same as diving

"We would not have taken vacation time and traveled all the way to South America for a five-day land trip on Galapagos."

Darwin and Wolf, but they wanted to proceed . . . [and we] put together a land-based dive program for the week. They wanted to stay in an expensive hotel. *Galapagos Sky* agreed to be billed directly for the hotel and the diving and later approved reimbursement for other expenses incurred during the week [a total of \$6637], as well as for the cancelled trip." The couple took their previously booked cruise extension, and then flew home on their scheduled flights.

Alas, this was not good enough for Jeanette, who told *Undercurrent*, "Our primary reason for going to the Galapagos was for the dive cruise. Had we been informed of the cancellation before the scheduled departure cruise date, we would have been able to cancel or reschedule the entire trip. We would not have taken vacation time and traveled all the way to South America for a five-day land trip on Galapagos." Besides the reimbursement she received, she believes she is due reimbursement for all remaining trip expenses, which would include her pre-planned Galapagos extension and airfare.

When we contacted Peter Hughes, he told us, "We took full responsibility for the mix-up and our entire Ecuadorian team jumped into immediate action, making the best lemonade possible out of some pretty sour lemons. This resulted in considerable expense, which we covered, [including] Ms. Hartshorn's out-of-pocket expenses plus all on-island expenses including hotels and diving." Hughes also offered a full refund or a future trip to Wolf and Darwin Islands, and she accepted the refund.

Hughes says "she apparently felt we [also] owed her the cost of her pre-planned Galapagos extension of one week following her *Galapagos Sky* trip, which I am told, went off without a hitch," but believes what he has paid out is "reasonable compensation." He adds, however, "the fact that, having

Animals Snatching Cameras

The *Melbourne Herald* reported a bizarre underwater crime, when a massive octopus stole a GoPro from an Australian scuba diver, disappearing into a hole in the sea bed and leaving 23-year-old Alanah Kilner both shocked and impressed.

She wasn't sure whether to report her camera stolen or lost — but she is desperate to get it back, saying the recording from the probably still-operating camera in the arms of the octopus might be "epic."

Kilner was diving in only 10 feet of water with a buddy, hoping to spot an orange octopus that had been seen days earlier by some fellow divers. "I saw its eye through a hole in the carpet [of weed] on the sea bed — and it came out all of a sudden," she said. "I was holding the GoPro and its tentacles just came right out and grabbed it from my hand. Perhaps it was attracted to the red light on the camera."

Ms. Kilner's Facebook post about the theft has

attracted incredulous comments, with one witty friend advising, "Octopuses are pretty smart — you might be able to buy it back from him on eBay."

There have been other instances of shiny things being grabbed by marine life. John Bantin was photographing a giant moray eel in the Red Sea with a housed compact camera when it grabbed the glittering Perspex housing from his hand and retreated back into a hole in the reef. He got it back later.

More recently, a large tiger shark, a regular visitor to Tiger Beach in the Bahamas, has taken to grabbing expensive camera rigs with shiny dome ports and swimming off with them. Divers from Stuart Cove's *Dive Bahamas* and Jim Abernethy's *Scuba-Adventures* have experienced this. It gets more serious if it grabs a diver's tank and swims off with that, something that has happened more than once and is described in Bantin's book, *Shark Bytes*.

accepted reasonable compensation, she continues to attempt to further discredit us in any way, does not seem like fair play to me.”

Ultimately, she is out of the cost of her airfares (\$2977) as well as the extension (\$4300), plus trip insurance (which does not cover this turn of events), the cost of getting to and from home to an international airport and an overnight stay nearby (even pet-sitting services). Hughes refunded the cost of the aborted *Sky* trip as well as picking up all expenses in the Galápagos for the week.

Does she deserve more? After all, they would have cancelled all activities and saved three weeks of time had they been informed in advance of the *Sky* cancellation. Instead of which she was forced to make a decision of how to make the best of it at short notice and far from home. We think the *Sky* has been reasonable, but falls short of its ethical obligation.

Vote YES or NO and tell us what you think
<http://www.undercurrent.org/UCnow/GalapagosSkySurvey>

Ethics in Macro Photography

are critters sentient beings?

Underwater close-up or macro photography has always been popular, because even in the more difficult days of film cameras, a diver could go into the water with a camera and strobes pre-set for guaranteed results. With the digital revolution,

“There’s a growing movement among divers and photographers to compel the industry to practice responsible and ethical behavior underwater.”

underwater photography has grown exponentially and macro is the rage.

Whether it is because of the obvious loss of pelagic species or because of the seductive success of macro photography, the minutiae of marine life have spawned a huge interest, hence the wealth of illustrated publications concentrating on colorful nudibranchs and other invertebrates. This in turn has seen the advent of dive guides who have become expert at spotting the tiniest creatures for the benefit of photographers.

It’s not uncommon to see dive guides armed with pointers, searching out these critters and coaxing them into a better position for a clear view for the macro lens. At the same time, underwater photographers, seeking to produce a different result from the mainstream, go beyond moving a gorgonian frond to get a better view of a pigmy seahorse,

to such actions as moving a critter on to a piece of white Perspex or other artificial surface for a more graphic shot.

The Philippine newspaper *Visayan Daily Star* reports how Danilo Ocampo of Oceana Philippines had written to the mayor of Dauin (near Dumaguete - Negros Orientalis) informing him that, together with Laua Pearce, a diving instructor, he had witnessed an underwater photographer and a dive guide manhandling a pregnant seahorse and repeatedly placing it upon a mirror they had brought with them.

Unable to stop them, the two surfaced and sent a message to the local Filipino Sea Patrol via another dive instructor. They then resumed their dive and watched while the two offending divers continued to do the same with a nudibranch and other marine creatures.

Ocampo said the incident “should not be condoned and ignored,” citing a “growing movement among divers and photographers to compel the industry to practice responsible and ethical behavior underwater.”

A video of the two divers coaxing the seahorse on to the mirror for the benefit of the camera led to protests on various social media and a campaign led by one underwater photographer and environmentalist for better ethics. A video of dive guide and client photographer was viewed more than 7500 times and met with as much outrage as a video of a foolhardy diver riding a shark or another grabbing a crocodile by the tail. Of course, the

shark and the crocodile have recourse should they object to the diver, whereas the seahorse can only instinctively do its best to survive.

Where does this leave the more ordinary practices of underwater photographers? It's almost normal to see a macro photographer drive a xeno crab or commensal shrimp along a whip coral for a bet-

If we encourage dive guides to manipulate critters into a better position for the benefit of our cameras, that's our responsibility.

ter picture. Does this harm the creature? Does the macro lens itself, closely adjacent, alarm the animal? Are such creatures sentient, able to perceive or feel, and if so, is this still acceptable?

The problem arises when we attribute them human characteristics. Does the seahorse turn away because it is shy? Is the xeno crab running for fear of its life? Is the nudibranch acting instinctively or thinking?

Dr. Marc Bekoff wrote in *Psychology Today* in 2014 that fish are sentient and emotional beings and clearly feel pain. He, in turn, quoted Professor Culum Brown's review paper in *Animal Cognition* entitled "Fish intelligence, Sentience and Ethics."

"Although scientists cannot provide a definitive answer on the level of consciousness for any non-human vertebrate, the extensive evidence of fish behavioral and cognitive sophistication and pain

perception suggests that best practice would be to lend fish the same level of protection as any other vertebrate."

It seems that fish have feelings too

So what about invertebrates? Around the same time, *The Washington Post* published an article by Tamar Stelling, who wrote about Robert Elwood, who worked with crabs and shrimp for three decades at Queen's University in Belfast. He looked at how their need to escape pain competed with other desires, and found that behavior went far beyond reflex. Robin Cook, an evolutionary neurobiologist at the University of Texas Health & Science Center in Houston, found similarly with cephalopods.

On the other hand, Hans Smid, who studies the brains and learning behaviors of parasitic wasps at Wageningen University in the Netherlands, is "absolutely convinced that insects do not feel pain."

Underwater photographers will want to get the best view possible of any critter, and local dive guides will do their best to facilitate that. If we encourage them to manipulate critters into a better position for the benefit of our cameras, that's our responsibility. The fact that they, themselves, appreciate the wonders of life underwater when it is quite likely their fathers were making a living by destroying it by fishing with explosives or risking their health by diving and plundering the reef with primitive hookah gear, is a distinct improvement.

That said, these dive guides need to act with the best interests of the environment forefront in their minds. They need to be the full-time stewards of the reef, rather than manhandling marine life in order

Reader Report Power

When an *Undercurrent* subscriber filed a report of his trip aboard *MV Adelaar* in Komodo, not everything was perfect and cited several problems. *Undercurrent* has since had a message from the operator saying that the problem with the hot water supplies has been addressed, both tenders have improved ladders and there is now a large dedicated camera rinse tank fitted. In addition, there are now two desks fitted appropriately for camera work with towels, electrical plugs and an overhead work light. There are now storage niches fitted below the outdoor dining table. We got results!

Subscribers depend on your solid unbiased travel reports, something not always forthcoming from conventional diving media, so we hope you'll take a few minutes to submit a report from your last trip. Not only

will you be helping others, your report will stimulate other subscribers to respond, enhancing our unique report base as a resource to help you plan your next trip.

Did you know you can also email others who have visited the places you are interested in? You can ask questions about obscure things like airport accommodations between flights, how good the dive operator's rental equipment was, whether the boat or lodge was noisy at night, and which travel agent was used to book their trip.

Complete your report and read everyone else's at <http://www.undercurrent.org/members/UCnow/RRdirect.php>

for it to give them and their children a continuing livelihood.

Local dive guides in developing countries rely on the tips they get to improve their lives. The tourist dollar proves very powerful. One dive guide told me that he was saving such tips in order to buy his mother a proper bathroom with a flush toilet. He will obviously do his best to please.

Maybe it gives perspective to the perceived plight of the whip coral shrimp. Is the manipulation of a small creature, by herding into a better position for the camera, acceptable? While we are rightly concerned with the wellbeing of a single seahorse, where is the voice of protest for the millions of seahorses that are harvested for use as aphrodisiacs in traditional Asian medicine?

– John Bantin

Snorkels: Love 'em or Hate 'em?

mixed feelings about snorkels for scuba

Not many people know that it was the Italians who invented the snorkel and that it was the Dutch Navy that was the first to fit them to its submarines. However, the German Navy famously used 'schnorchels' fitted to its wolf-pack submarines

“One problem has been the transition of snorkels from a simple device extending one’s windpipe to rest the head in water into nuclear-cooling-tower monstrosities with more drag and that flop around”

during WWII. These enabled the U-Boat crews and engines to breathe while just below the surface, out of sight of any intended targets, so playing an effective role in the Battle of the Atlantic.

For us divers and snorkelers, a snorkel has an optimum length of about 12 inches and a diameter of about 1 inch. If the tube is any longer, the user will inhale expired carbon dioxide, leading to breathlessness. Any fatter and surface water will splash easily into the tube.

Some manufacturers, hoping to take the needed skill out of using such a device, fit splash guards at the top end and drain valves at the bottom. The advantage of a drain valve is that the snorkeler doesn't need to waste energy putting his head above the surface to clear any water. A relaxed snorkeler

can spend hours looking down at what goes on below.

Some manufacturers, rather like seeking to invent a 'better mousetrap,' have come up with snorkel designs that use two tubes, one for inhalation and one for exhalation (Kapitol Reef Luxury Snorkel), or with valves at the top end to keep the snorkel 'dry' (Scubapro Spectra), and nearly every year at the DEMA, a hopeful designer comes up with another idea to improve on the basic design. Most sink without trace.

Experienced divers have all sorts of opinions about the value of snorkels, so we asked our readers in our monthly email for your views. We said, “PADI insists its trainees have a snorkel attached to their masks. It's useful if you need to make a long surface swim before or after diving. Other divers say it's better to swim on your back in such circumstances, with your BC inflated.”

We were inundated with opinions. They seem to be divided into three camps: those who wore a snorkel attached to their mask, those who carried a snorkel, and those who did neither.

Des Paroz (Darwin, Australia) was quick to point out, that the PADI Instructor Manual states a requirement that each diver has a snorkel, “but does not require it to be constantly attached to a student's mask.”

That may be so, but a straw poll at any dive site will reveal a large percentage of scuba divers wearing their snorkels attached to their masks, so indi-

cating a great many divers (and their instructors) misunderstand the ruling — or prefer otherwise.

Veteran *Undercurrent* reader and retired diving instructor David Hass (Stow, OH) wrote that he thought the PADI requirement should go the way of dive tables and other anachronisms. He said, “One problem has been the transition of snorkels from a simple device extending one’s windpipe to rest the head in water into nuclear-cooling-tower monstrosities with more drag and that flop around so that breathing through some, whether easy snorkeling to free diving with dolphins or other fast encounter situations, is almost impossible.”

And these snorkels clipped to a mask strap can make removing a mask and repositioning it underwater complicated. In a current, the tube can vibrate and cause an irritating, yet perpetual, ingress of water into the mask. Within the confined spaces of a wreck, they can get caught up.

Many experienced divers dispense with the snorkel altogether. Many make surface swims on their backs with their BCs or wings fully inflated. However, this introduces a significant hazard — you cannot see what is going on in front of you or below you, and that could mean big problems. You need to know that the engines are stopped and the propellers are not turning. It is not unheard of for a diver to be drawn on to the rotating props of a boat that was reversing, with fatal consequences.

Mike Davis, editor of *Diving and Hyperbaric Medicine*, was positively in favor of a snorkel when he told us, “I have dived for 53 years with a snorkel attached to my mask when on open-circuit scuba and would never under any circumstances not do so. In my long diving career, I have needed quick access to it on a few occasions, but far more importantly, I save gas on the pre-dive surface swim, while at the same time getting to see what wonderful sights might be beneath me! At the end of a dive, I use it either swimming back to shore or to the dive boat, and I have no risk of getting my airway swamped by an unexpected wave that I could not see because I was swimming facing away from where I was headed!

“If I am diving from a ‘live’ boat, it also ensures that I can keep the boat in view all the time and take evasive action if the skipper proves to be a dickhead and to ensure that the prop has stopped — while conserving the remaining air in my cylinder in case of an unexpected emergency.”

Complex snorkel designs intended purely for snorkeling can lead to entanglement with kelp or discarded fishing line. Wreck divers find a mask-

mounted snorkel positively awkward when in confined spaces.

The mouthpiece — is it a snorkel or a regulator?

One cause for concern was pointed out by Rich Erickson (Marietta GA). He always kept his snorkel attached to his mask until “I was using my snorkel on the surface. After everyone had entered the water and the signal to descend was given, I exhaled sharply and fully to sink with my minimal weights. At about 10-15 feet underwater, I could not hold my breath any longer and took a deep breath, only to discover that salt water was entering my lungs! I still had the snorkel in my mouth!

Sport Divers Discover 4th Century Treasures

The Aswan dam has changed the nature of the Nile Delta, and far less sediment now gets deposited into the Mediterranean. Each time there is a storm, the existing sediment, including that along the coast of Israel, gets moved, often revealing archaeological finds.

During April, by pure chance, two Israeli sport divers discovered a 1,600-year-old shipwreck off the coast near Caesarea, leading to a salvage operation that has uncovered one of the largest caches of valuable artifacts ever found. Among the treasures were a bronze lamp, a figurine of the moon goddess, Luna, a lamp in the image of the head of an African slave, a bronze faucet in the form of a wild boar and two lumps weighing around 45 pounds composed of thousands of coins that had retained the shape of the pottery vessel in which they had been transported. Some coins bear the image of the Roman emperor, Constantine, who ruled the Western Roman Empire during the 4th Century AD.

One diver, Ofer Raanan, said, “It took us a couple of seconds to understand what was going on,” when recounting the moment the pair realized they had discovered something special. They left the first sculpture on the seabed when they found it, but then found a second, at which point they realized it was something special and brought both to the surface. They then searched the area and discovered more artifacts. “It was amazing. I dive here every other weekend, and I never found anything like that, ever,” he said.

I could have drowned if I did not have the training to instinctively do the right thing and not panic.”

This basic error is often featured as a scenario in PADI instructor exams. The diver playing the part of the trainee diver is instructed to swim down from the surface with a snorkel in the mouth, and the candidate instructor has to be alert enough to spot it and take appropriate measures, so it’s not considered to be that unusual. This raises the question, should mouthpieces for snorkels be designed to be instantly recognizable as different from that of regulators?

A solution is to carry a snorkel elsewhere on the body and deploy it only should you need to. TUSA is one of several manufacturers that make a folding snorkel that will tuck into a pocket, or you can slip a simple one through

a knife strap on the calf.

Mary ‘Mel’ McCombie (New Haven CT), a repeat contributor to *Undercurrent*, went further. “My wetsuits all have snorkel holders sewn in on the left thigh so I can carry a snorkel and grab it if needed, but it stays out of the way otherwise.”

Allen Vogel (Manasquan NJ) probably summed it up well. “Free diving/ spearfishing, I love them. Wreck diving or shooting video, they just get in the way. PADI may require [a snorkel] for basic skills, but if you surveyed wreck divers, probably very few use them.”

What’s the right thing to do? Keep it simple and deployed only when you need it. Keep those complex luxury snorkels just for snorkeling, not when you’re sporting a tank.

“I have dived for 53 years with a snorkel attached to my mask when on open-circuit scuba and would never under any circumstances not do so.”

Flotsam & Jetsam

Presumption and Error. In an item entitled ‘Most Dangerous Inland America Dive Sites?’ we were misled by contemporary news reports into presuming Shane Thompson, the diver who lost his life, might not have been using a cave line. This is not true. The team partner was actually able to reach Mr. Thompson but it was too late for rescue. We are sorry for any distress this incorrect information might have caused.

A Breathtaking Achievement. New Zealand free-diver, William Trubridge, has done it again — twice! On Saturday, April 30, during the Vertical Blue competition at Dean’s Blue Hole in the Bahamas, he plunged on a single breath to 400 feet deep, a new world record in the free-immersion category. Breath-hold divers pull themselves down a weighted line without the aid of fins to clip off a marker tag at the greatest depth they achieve. Observers were said to be ‘awe-struck’ by his display of human endurance. But that wasn’t good enough for him! The following Monday, he extended that record depth by achieving a depth of 407 feet while hold-

ing his breath for 4 minutes and 34 seconds. American free-diver, Nicholas Mevoli, died during a record attempt at the Vertical Blue competition in 2013.

Mermaid Harassment. It doesn’t matter if you’re a well-known conservationist and filmmaker, you can’t afford to make a clumsy pass or allude to cheap sex with a woman at the Asian Dive Expo (ADEX), the most important diving trade show in the Far East — even if she does often dress like a mermaid. What a boob! He later claimed he was tired and emotional or over-indulged at the after-show party, but he was the talk of the show, and Facebook is ripe with the tawdry story.

Diver Finds Gold Nugget: Sixty-year-old Vince Thurkettle, a professional gold prospector, suffered a rush of adrenaline when he struck lucky, stumbling across an egg-sized 23-carat nugget of gold while diving in only 15 feet of water off Anglesey in North Wales, UK. It’s the biggest nugget ever found in Britain, weighing around 3.4 oz. The gold would originally have come from gold miners aboard the ‘Royal Charter’ when she sank during a storm in 1859 on a voyage from Australia. In the UK, all such finds are the property of the government and

Thurkettle will be awarded a percentage of the value as a finder's fee.

Attenborough at Ninety Years Old. The one moment that stands out most for Sir David Attenborough during his brilliant career "was the first time I put on scuba gear and dived on a coral reef." Sir David loved "the unbelievable fact that you can move in three dimensions," he told Britain's *Daily Mail*. "That minute, when you suddenly move your weight, do that with your fin and know you're going to move off. Suddenly, there are all these extraordinary creatures — wonderful shrimps or shoals of triggerfish or the looming shape of a shark. It's an individual communion. That's really revelatory, and it's part of our world."

Rare Jaw Find. Savannah diver Bill Eberlein was diving in about 45 feet of water when he recently found a mastodon jaw embedded in the mud of the Intracoastal Waterway near Richmond Hill. Ex-schoolteacher Eberlein, now a professional diver, who searches in the muddy waters of coastal Georgia for prehistoric teeth from sharks that went extinct more than 2 million years ago said, "I was doing my normal dive when I found what I thought was a fossilized log, but when I felt the molars I knew I had found something very rare."

Another Wet Dream? The idea of getting oxygen from seawater to facilitate breathing underwater might have had a setback with recent months after the attempts to crowd fund the ill-fated Triton device failed, but that dream is still alive and well in Israel where 15 years ago Alan Bodner first mooted the idea of 'reaeration'. That plan ran up against the energy demands required, but his Like-A-Fish technology has been resurrected in the intended development concept of a small submarine accom-

modating a pilot and three passengers that it is claimed will be able to stay submerged for four or five hours at one time. Guiseppe Carusi of iNova, creator of the submarine-with-gills project, says that a small-scale prototype was exhibited at Expo Milano 2015 and he expects to have a full-size version some time in 2016. He is seeking financial support. Only the gullible should apply.

Palau versus the Poachers. With 250 islands spread over 177 square miles, it's a major effort for Palau to keep shark finners and fish poachers at bay with their single patrol boat. A hopeless task? Maybe not. Nearly 9000 miles away in West Virginia, Bjorn Bergman, a data analyst for a non-profit research organization called *SkyTruth*, uses satellite data to guide the patrol vessel to intercept pirate fishing boats. Palau continues to face incursions of up to one hundred pirate vessels annually. With insufficient jail space, Palau has to meet the cost of repatriating arrested fishermen. The cost of patrolling can also be high in other ways. Last year a Cessna pilot and two police officers were lost when their navigation equipment failed while out searching for the mothership of smaller pirate vessels that had been caught.

Go to Jail. Do not Collect \$64,000. Commercial diver Vincent Woolsgrove claimed he found three extremely rare 17th Century Dutch bronze cannons worth around \$64,000 in international waters before selling them to a Florida collector. However, it was later revealed he found them during 2007 on the 400-year-old wreck of the Royal Navy flagship HMS London in the Thames Estuary in Kent, UK. Had he reported them with the correct procedure, he would have been entitled to a substantial salvage award, but instead, he was jailed for two years and ordered to pay around \$50,000 prosecution costs.

undercurrent

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