

undercurrent

The Private, Exclusive Guide for Serious Divers

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Jim Abernethy, Scuba Adventures, Florida

not what I bargained for

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www.undercurrent.org

Editorial Office:
Ben Davison, Publisher and Editor
3020 Bridgeway, Suite 102
Sausalito, CA 94965
EditorBenD@undercurrent.org

Dear Fellow Diver,

While I live in the neighborhood, I've never dived in Palm Beach County. Having heard glowing reviews of Jim Abernethy's operation there while on a liveaboard halfway across the world in Indonesia, I had to give it a go. So, I headed to Riviera Beach on Saturday evening in August and stayed at a funky but accommodating Super 8 motel. After breakfast at 6:45am, I headed to the dive shop.

The friendly office staff signed me up and I headed to the 42-foot boat for two morning dives with a full load of divers and clearly a professional staff. The reefs were outstanding for Florida. Best I've seen in terms of health, density and diversity of corals, sponges and sea life. A good-sized Goliath Grouper posed graciously above an outcropping, there were numerous lobsters, a spotted eel, giant green morays, many trunkfish and cowfish, French and gray angels galore. There was current, pretty stiff at times, but nothing untenable.

Drift diving is the norm in South Florida. Usually each diver is required to hold onto or clip in a reel attached to a surface marker ball throughout the dive, while the divemaster remains on the boat, watching bubbles. The Abernethy boat sends two divemasters into the water, each with up to 10 divers, and only the dive master pulls a marker float. This is a boon for the photographer, of course, not being dragged along by the current. We were instructed during our boat briefing not to swim to the boat after a dive; the deeply tanned, blond, dreadlocked Captain Sean would "park the boat in our laps," which he surely did.

The boat was comfortable with a big rear open space that made gearing up and plodding to the stern easy. The dive platform was wide and deep with the best exit ladder I've seen: maybe eight steps placed only inches apart, at a steep rake and wrapped tightly with rough hewn rope. Made exiting a breeze. The dives were leisurely, with no pressure to exit other than the lack of it in your tank. My only issue was that my Air2 alternate had started free flowing and we



couldn't fix it on the boat, so I was relegated to orally inflating my BC, not much of an inconvenience except for not being able to fully inflate my back-inflate BC on the surface.

After our two dives, we returned to shore, had lunch and I got ready for the afternoon run. There were 8 of us on board, along with the captain and three crew members. Our first dive of the afternoon was excellent, on yet another lush reef, teeming with life. Viz was deteriorating and the current was coming up but there was lots of fun stuff to see.

We'd been running behind all day, what with a boatload of seasoned divers who could easily go an hour-plus at 60 feet or deeper. By the time we hit the water for the fourth dive, it was after 6:00pm. For our fourth "dive" we hovered a few feet below the surface as the crew released more than a score of baby sea turtles brought in by a conservation group. The sight of sunbeams streaming down through the gaps of floating seaweed while the little amphibians paddled up for gulps of air was breathtaking. Then, we zoomed down through very poor viz and were immediately swept away by a ripping current, maybe three knots. We were flying sideways in the murk at 80 feet. I didn't want my last dive to be the deepest and didn't want to use all my air and no deco time, so I hovered a bit above the group. After a minute or two, the dive master leading the group made a hard right, partially back into the current. I tried to follow, finning for all I was worth, but was going nowhere. In just seconds, the group disappeared into the gloom. After more struggling, I gave up and let myself drift with the current. I didn't want to get too far away from the group so I decided to do the Boy Scout thing and surface. On my gently-paced ascent, I heard the boat motors a few times and felt secure that I'd be spotted.

After a probably unnecessary safety stop, I surfaced and did a 360, spotting the boat about a quarter a mile away. I inflated my fat, 8-foot yellow safety sausage and pointed skyward. I waved it around. The boat turned a bit but made no progress toward me. I then blipped my ear-piercing Dive Alert. No reaction. Again. Nothing. So I laid into the thing, letting it blast for a full 45 seconds. The boat turned, and then started moving away from me. I blasted the Dive Alert again, waving my sausage with some concern now. The boat continued moving away. Maybe they're picking up someone else who surfaced? But the boat never turned back. After 15 minutes, it was just a tiny toy bobbing on the horizon. Fifteen minutes later, it was gone. And then I noticed that I'd somehow lost my mask.

A little bubble of panic welled up, but was quickly popped by my determination to consider my situation and plan accordingly. I was maybe a mile and a half from shore. The water was 85 degrees and I was wearing my 5 mil, merino wool-lined Pinnacle wetsuit with tropical hood, warm as toast. I had 2000 psi in my tank and a vest that I could fill enough to keep me somewhat buoyant. I thought about having to swim for it. After an hour afloat, the only vessels I'd seen were a Boston Whaler (close enough, I thought, to see my sausage) and a mini ocean liner party boat, neither of which spotted me. I ditched my weights. I don't know why I didn't just remove the lead shot pouches from the weight pouch liners, but I dumped the whole shebang, as if to prove to myself how determined I was to survive. I tried to swim, but the tank was too cumbersome and negative with its load of compressed air. So I removed my BC, carefully worked it around and unbuckled the tank, and let it slip away. Now I was able to swim more easily, which I did for maybe five minutes at a time before surveying my progress and again hoisting the safety sausage, after huffing and puffing to reinflate it fully. But I didn't appear to be making any progress toward the shore and had traveled an alarming distance north, parallel to the beach. The waves, thankfully small, were pointing at a 60 degree angle away from the perpendicular to the shoreline, toward open water beyond the outcropping to the north of me.

A Coast Guard boat suddenly ripped by out of nowhere, its engines at full throttle. I waved my arms madly and yelled "HEYYYY!" repeatedly. But, the boat sped out to

An Important Change for Our Print Subscribers

Dear Fellow Subscriber:

I published the first issue of *Undercurrent* in August 1975. It was after my girlfriend and I had flown to Jamaica for a dive trip because we had read a glowing story in *SkinDiver Magazine*. But the “dive hotel” was empty of divers. Meals arrived an hour after we ordered them. The reef was uninteresting and it was barren of fish. Only afterwards did I realize the story was driven by advertisements: buy a full-page advertisement and *SkinDiver* will write kindly of you. I decided divers needed the truth. Thankfully, *SkinDiver* let me use its mailing list (publisher Paul Tzimoulis, trapped in the Skin Diver business model, was happy to help us). My first story was titled Red Stripe and Reggae Beat the Diving.

Since then, the *Undercurrent* formula hasn't changed much. We added an online presence more than a decade ago. While print subscribers have been able to get their issue online as well, many subscribers only get each *Undercurrent* issue online. They print out the issue or read it online, and store them for future reference. The format is the same as the printed issue – and online subscribers never worry about the USPS ripping pages, delivering the issue late . . . or not at all.

And now, we're going to ask that all *Undercurrent* subscribers accept their issues online. If you're of my generation, you may balk at reading any publication online, but you'll be able to print it out and read it at your leisure, while storing it on your computer for future reference.

As you're well aware, the periodical print industry has changed dramatically. The very changes that affect newspapers and magazines affect *Undercurrent*. Paper prices have increased; we print on recycled paper and, oddly, it costs more than original paper. Postage has increased. Printing and mailing *Undercurrent* runs more \$6000 a month, a cost we must reduce and eventually eliminate.

Still, you don't see any advertising in the pages of *Undercurrent*. We live off subscriber income. But our subscription rates have remained virtually the same since 1991. And now, with fewer new divers entering the sport, and more aging divers hanging up their fins, there's a lot less dive travel. Our subscription base is slipping as well.

All this has led to my decision to offer *Undercurrent* only as an online publication. *Undercurrent* is a nonprofit organization, so we're not talking about squeezed profits. We're talking about having income to meet expenses. We're talking about having the income to continue pub-

lishing the factual, no-holds-barred information you have come to appreciate.

You get the unvarnished truth because subscription income allows me to write that truth. In my years of publishing, I can honestly say I have never taken as much as a single free dive or free meal from anyone in the dive industry. Except from Bret Gilliam, who has bought me three meals and not allowed me to reciprocate. But those came 20 years after I reviewed his St. Croix dive operation; he didn't know who had reviewed his operation until I introduced myself. Besides, I'm not sure anyone with a black AMEX card needs reciprocation.

What this means practically is that if we have your email address, you will receive an email in early January saying your January issue is ready. “Click here to read it, download or print your issue.” It will look just like this issue, but you'll have to punch your own holes unless you print it out on punched paper.

For anyone for whom we don't have an email address, we ask that you go to www.undercurrent.org, click on Log In, and register your email address. Your cooperation will help keep *Undercurrent* alive and kicking.

We know that some subscribers, believe it or not, don't use computers. If you're one, we will mail you an issue for a few more months, but we do hope you can provide us an email address. For everyone else, we will deliver our issue online.

Of course, the 2010 Travelin Diver's Chapbook will still be mailed to you in December, as long as your subscription is current. It's at the printer now and, as usual, it's chock-full of solid information, the good and the bad, money saving tips, guides to seek out, guides to avoid . . . all the great information you have come to depend upon.

In the meantime, thanks for your understanding and support. We exist only because of loyal divers like you.

PS: I did think about pitching this change as “*Undercurrent* is Going Green,” but that's what every publication that goes online says. Besides, it's not the primary reason for the change and I want to be truthful. Regardless, a lot of people will read it on their computer, so paper will be conserved.

So, thanks again for your support. If you have never logged into our website, www.undercurrent.org, please do so now. Just go to the website, click the Log In banner, and follow the instructions.

– Ben Davison, Founder, Publisher, Editor

sea for what I figured was a rendezvous with the dive boat. My camera rig was severely impeding my progress, tugging at my BC and weighing me down. The waves were higher now, occasionally lapping into my maw since I couldn't fully inflate the BC. I decided to ditch the whole camera rig, strobe and all. I was in full survival mode now, so had no regrets as I let it drop from my hand.

By 7:30 or so, dusk was making its debut and I was contemplating a night of drifting in the black. The buildings on shore were almost past me now as I headed toward an unpopulated stretch south of Juno Beach. The BC still tugged at me as I tried swimming and I was getting fatigued fighting the current trying to take a tack toward shore. Of course, I wasn't going to let go of that, since I might finally succumb to exhaustion and have to drift with the BC keeping me just barely afloat.

As the last washes of light faded from the sky, I swam, raised the sausage, swam, raised the sausage, swam. Then I heard a motor behind me and saw the delicious sight of the dive boat bearing down with the Coast Guard vessel close behind. I made some crack about "Well, that sure beats swimming all night!" and nonchalantly climbed aboard. It had been two hours and fifteen minutes since I surfaced. I apologized to the other divers for putting them through what must surely have been a terrifying experience. Captain Sean begged my forgiveness in the most earnest way. All were obviously relieved and some almost teary-eyed in their joy to see me OK. I sucked down about 4 bottles of water and ate a quarter of a pineapple and a banana and didn't really feel too bad.

The crew explained that, after observing my obvious diving skills, they had not become concerned at my absence until an hour and 10 minutes after I had hit the water. Then they immediately called the Coast Guard and alerted all other boats in the vicinity, some of which were preparing to head out from their docks to join the search. Ultimately, after a few circuits around the area where the other divers had surfaced, they set afloat a weighted buoy and watched its progress in the current. That prescribed their search direction and that's how they eventually found me, three miles downcurrent from the dive site.

I drove home that night and enjoyed the intense appreciation of the simplest activities, all the while contemplating how it would have felt to have been still bobbing in the blackness. I slept hard for 9 hours and called Jim Abernathy the next day. He had, of course, heard the crew's version of events. I said that, while I thought the operation was generally professional, there was some negligence in not scanning the horizon for bubbles/divers as I felt any crew should. I also felt that the divemaster should have aborted the dive or at least surfaced himself when and if he noticed me missing from the group. I told Jim that I had no desire to pursue a lawsuit but wondered if he thought it was fair for me to ask for compensation for the loss of my camera rig. I said I'd look for the least expensive possible replacements on eBay, even downgrading to a D70 from my D100.

But he wasn't buying. He was pleasant, not at all defensive, but stood his

A Smart Way to Beat Airline Carry-on Restrictions

Instead of figuring out how you're going to fit all your stuff into the two height- and length-appropriate carry-ons you're allotted for a flight, I've got two words for you: travel vest. I was at the airport recently when I saw a man walking toward me wearing one, its multiple pockets bulging with stuff. He had used them most efficiently, storing some magazines, a book, cell phone, iPod, DVD case, camera and even some snacks. It was astonishing how much he had. The gear he was carrying on him would have filled up a carry-on attaché case but he wisely placed his more important gear in a briefcase that served as his official carry-on.



We found good travel vests for sale online at Orvis, TravelSmith and the National Geographic store. Consider one for your next dive trip to get around the luggage weight and carry-on restrictions, and use your imagination about what you can put in there. Do like that expert vest-wearer did, and stock it up with the in-flight essentials, leaving more space in your carry-on for the dive gear.

-Ben Davison

Palm Beach Diving

While our drifting diver only got four dives in with Jim Abernethy before he started bobbing on his own, other *Undercurrent* readers have sung Abernethy's praises and found the diving about as good as it gets in Florida – many say better than the Caribbean. Mort Rolleston (Washington, DC) says, "The Gulf Stream comes up to the beach in Palm Beach, bringing with it clearer water, healthy reefs, lots of Caribbean reef fish, and big pelagics such as manta rays, sharks (including whale sharks, hammerheads, lemons, spinners, and bulls), sailfish, and turtles (including huge loggerheads and leatherbacks). Drift diving attracts more advanced divers to Abernethy, known for the tiger shark-diving liveboard trips to the Bahamas. The conditions were perfect in May; the fish life was, well, fishy; the coral was healthy; and we did see sharks, a huge loggerhead turtle, large rays, a goliath grouper, and a hawksbill turtle. The diving is generally up to the standards of many of the best sites in the

Caribbean we've been to (and probably better than most for experiencing pelagics).

Ron and Dawn Steedman (Cape Coral, FL) say "Abernethy's operation is topnotch. In May, the current was ripping, though the seas were calm. A school of dolphins was there as we entered the water. There were many varieties of angels, parrots, and filefish, puffers, cowfish, spotted, goldentail, and green morays. On the second dive, our guide with the float ball missed the reef, and it was a sand desert dive at 80 feet. Our captain announced that he didn't like that kind of dive either so there were passes made out in each of our names for a return complimentary two-tank dive. The second day, the seas were even flatter, and the current had died way off. Both dives were outstanding – scorpionfish, grunts, high hats, spotted drums, conies, butterflies. I saw a huge boulder on the bottom, which turned out to be one of the largest loggerheads I have ever seen." www.scuba-adventures.com

ground, telling me there's no way in this economy he can afford to pay for my camera gear and claiming that I should have taken better measures to prevent the incident. Namely, to drop to the bottom to get out of the worst of the current and be able to stay with the group. He told me three others had surfaced early and been picked up, but, because they'd stayed close to the divemaster, were easy to spot. Then he told me what a number of the divers had said when I first got back on the boat after my rescue—a fact that stunned me in its simplicity and my stupidity in not having thought of it: namely that the camera strobe is the brightest, most easily spotted and hard-to-miss signal one could possibly use to attract attention. Sunday night after my rescue, one of the divemasters told me they headed to shore at one point during the search when they saw someone on the beach firing off a camera flash and thought I might have made it all the way in.

Abernethy told me he'd alert everyone in the area to be on the lookout for the camera, with a reward waiting for the finder. He felt confident someone would come across it. He also said he'd mount a search party when there are no paying customers.

Amazingly, my camera rig was found a few weeks ago. Captain Ray Davis, retired owner of the dive boat Narcosis in Palm Beach County, was poking around for lobsters and spotted my rig nestled in the sand in a grassy area. Ray had heard about my incident through the grapevine. He called the Abernethy office, having found my name inside the housing. They called me with Ray's contact info. The good captain proceeded to thoroughly clean and restore my housing, since it had been on the sea floor for close to a month. "There were already things growin' on it," said Ray. He also reported "a bit of moisture on the inside, but probably just from condensation." Remarkably, everything fired up perfectly, the batteries still carrying a substantial charge. I picked up the rig and offered a modest reward. He pointed out on his electronic charts that I'd drifted well over a mile by the time I dropped the housing. My ditched tank (actually belonging to the Abernethy operation) washed up in Daytona Beach, some 200 miles north. The dive op that found it was astounded to see the markings indicating its origin. I imagine I would have had a nice long float ahead of me, had I not been found, though how it got there I don't know. I'm pretty certain I dropped a negative-ly buoyant tank. Maybe it was from another floater. And it happens.

I was told by both divers and crew that divers in Palm Beach County end up adrift every couple of years, thanks to the strong currents. They say they're always found within two or three hours. Maybe so, but I was freaked out, afraid of the consequences. Yet, now I know better steps I could have taken to avoid the crisis. In speak-

ing with dive professionals here in South Florida, I've heard repeatedly that the boat crew should always be alert to the fact that divers may surface at any time for a number of reasons: illness, cramps, equipment malfunctions, snags, etc. Thus, they should be actively scanning the surface. I should have been spotted, in my opinion, especially with my 8-ft-long sausage and Dive Alert, my camera strobe notwithstanding. Furthermore, I think it's inexcusable that the divemaster chose not to surface when I was no longer with the group.

All in all, I'm happy to contemplate future dives, even in Palm Beach. Getting "back on the horse" is not a daunting thought. The extra safety precautions I've learned will add to my confidence. And, as for Palm Beach County diving, I would like to revisit some of the excellent sites I dived and discover new ones. I do believe, though, I'll be diving on Capt. Ray's old Narcosis, rather than Abernathy's Deep Obsession. You can call it superstition...

-- P.V.

National Geographic Explorer

real pirates use nets

Dear Fellow Diver,

Mozambique. French Comoros. The Seychelles. Exotic destinations all, featuring exotic cultures, gorgeous beaches, and lovely people. But not diving. Not anymore.

In two weeks cruising on the Lindblad/National Geographic Explorer in May and June, we covered 2000 miles of ocean between Dar-es-Salaam and Victoria, capital of the Seychelles. And in all that time, in a part of the world where the diving should be wonderful if not outright pristine, I had one proper, good dive. Not that it was wholly disastrous: it's just that after shelling out sixteen grand (you read that right--\$16,000) for a single room, one would hope to see more large fish (not counting rays) than three sharks and a single bumphead parrotfish. As far as any fish longer than a meter, those four were it.

This is a sizable vessel (passenger capacity: 140) re-commissioned in 2008 for what has come to be called adventure cruising. Though exceptionally well looked-after, diving is not its primary purpose. Indeed, there were rarely more than ten divers on any dive. With two divemasters always in attendance, dives were both relaxing and enjoyable. If only there had been more to see.

Diving conditions ranged from 35' viz at Ibo Island, Mozambique, to 80' in the

Thumbs Up

We were heading back to Punta Arenas on the *Undersea Hunter*, 24 hours out of Cocos when the captain spotted a large turtle on the surface. I saw it as well, and thought there was something not quite right but, since we were traveling fairly fast and dusk was settling in, I blamed my eyesight.

All of a sudden, the engines slow and the captain maneuvers his 90-foot boat in a huge circle and backtracks until we find the turtle. A crew member dives overboard, brings this heavy turtle back to the boat and

another crew member lies on his belly, hangs overboard and hoists the turtle on board. These guys are strong! Keeping the turtle still, crew members remove a dense ball of fishing line and plastic entangled around the two flippers on the right side. Then we ease the turtle back into the ocean and head home.

A long trip, crew eager to return to their families, a boat traveling quickly, dusk falling -- who would have blamed them for continuing on? Our dive group was really touched by their attention to nature, including one diver who had tears in his eyes.

Bernadette Latin, July 2009.

southern and central Seychelles. Except where I encountered an occasional chilling thermocline, water was a delightful 80-84°F. Currents ranged from non-existent to a moderate two knots off the northern tip of Madagascar. The Ibo Island (Mozambique) area was virtually fished out, though the coral was in decent shape. The "famous" S-pass dive at Mayotte in the French Comoros, led by a local dive guide, offered maximum 40' viz and nothing to see but small reef fish. Pick your dive guides carefully: this one led the entire dive against the current.

A shallow (30') drift dive off Cap d'Umber at the northernmost tip of Madagascar revealed few fish, but a unique underwater topography. Envision diving a submerged airport runway. Interrupted only by intermittent small coral bommies, the sunken surface was absolutely flat and resembled poured concrete. Again, no big fish save for a quartet of large remoras circling hopefully under our zodiac.

In the southern Seychelles, rarely visited by tourists, the Farquahar and Alphonse groups exhibited severe damage from recent cyclones, with entire reefs reduced to coral rubble. At Alphonse Island a flight of fifteen eagle rays out in the blue hinted at what once was and might be again.

St. Francois Island's reef offered the best dive of the trip. Turtles, morays, different species of trevally, some bonito, a huge school of batfish, exquisite gorgonians, two sizable tawny sharks, a huge sting-ray, a friendly eagle ray that hung with the divers, lots of small groupers, swarms of reef fish, and to top it off, two huge potato cod, each one a good six feet long and weighing in at two to three hundred pounds. I can't imagine how they managed to survive the rampant illegal fishing in the area.

This was the kind of dive I had looked forward to throughout the trip. But it was the only one of its kind in the entire two weeks. I was told by the ship's Seychellois specialist that the diving would be much better at Aldabra, with its famous lagoon drift dive. But at the last minute the ship's officers and management decided to skip that World Heritage site due to pirate activity in the area. Good thing, too. The day we were supposed to be there was the same day the local liveaboard the Indian Ocean Explorer was hijacked by Somali pirates.

I saw some healthy coral recovering from bleaching, interesting salps and other invertebrates, and perhaps surprisingly, a fair number of rays (eagle, sting, bat, manta). But commercial fishing boats don't target rays-yet. In the main harbor of Victoria, in the Seychelles, were three enormous longliners: two from the EU, one from Taiwan. Each flaunted miles of black fishnet. Each was capable of catching more fish in one outing than every out-of-work fisherman in Somalia combined. And these were the legal boats.

The NG Explorer's spacious cabins feature flat screen TVs, full-sized showers, daily maid service, in-room internet connection, direct dial telephones, and bathrobes. Breakfast and lunch are served buffet style. Dinner is informal dress and brought by waiters. Food ranges from good to excellent. Some cabins have balconies. Stern suites are big but the best cabins are amidships where it is quieter and calmer. Fancy gift shop. One of the best features of the ship is its extensive top-deck library. The crew, from the captain on down, exudes camaraderie.

Diving and landing are done via a fleet of 13 zodiacs. The dive ladder is provided on the zodiacs. Dive deck is at the waterline. From the ship you step into and out of zodiacs. BC and regs stay on the same tank throughout the trip. Dive team rinses them, you handle your suit and small stuff. Bring your own computer. Ample room on board for

Lindblad/National Geographic Explorer

www.explorer.com

Diving (<i>experienced</i>)	★★
Diving (<i>beginners</i>)	★★
Accommodations (<i>live-aboard scale</i>)	★★★★★
Food	★★★★

★ = poor ★★★★★ = excellent

Pacific Scale

photo gear. There is a gym-sized locker room available to store whatever you like. Tech expert Dennis can repair many problems.

It's hard to find better divemasters than American Lisa (she did her open-water certification in Antarctica) and Scotsman Kelvin (something like twenty-five divemaster specialties). Dives employed one divemaster in front and one behind. Most dives were slow drifts. Despite each site being virtually new and some, like northern Madagascar, perhaps never dived before, only common-sense constraints were imposed (stay in sight of one another, keep an eye on the divemasters for signals, keep above 100'). Most dives ran 50-60 minutes.

Late booking discounts of up to 25% are sometimes available—see www.expeditions.com. Dives also cost extra, about \$80/ea. NG Explorer trips are for those who wish to visit exotic locales in cruise-ship comfort with diving available as an additional activity—though the opportunity to occasionally dive extremely remote and even undived sites can be a special experience. But if it's primarily good diving that you seek, this has become a part of the world to skip—at least until international warships start impounding illegal fishing boats and not just a handful of poor pirates.

Off the Beaten Path

dive destinations worthy of your consideration

Despite a tough economy, plenty of *Undercurrent* subscribers are not forsaking dive trips to the Caribbean, Pacific and other dive destinations. While a few wrote us about dive operators that need to do some work on their service, most said it was money well spent.

Bequia Dive Adventures, St. Vincent, & The Grenadines. Not many readers visit the tiny, charming and picturesque island of Bequia, but Kristin Farrag (Dundee, IL), who made her fifth visit in May, said it's good Caribbean diving. I dived it years ago and though it's not St. Vincent I still liked it. About Bequia Dive Adventures, Kristin says, "Ron and Laury are professional, safety-minded, respectful to the underwater environment and its creatures, and they are really good at finding little things like frogfish and seahorses. Bequia diving is almost all drift diving, but it's a nice, slow drift. Bequia is difficult to get to - we've been stranded in several places trying to get to & from it - but I think it's so worth it." (www.bequiadiveadventures.com)

Wananavu Beach Resort, Fiji. In our June issue, we reported that Kai Viti Divers had closed as the resort's on-site dive shop and was replaced by Ra Divers. Gene Huff (San Ramon, CA) visited the same week Ra officially replaced Kai Viti and says the shop did a good job for his group of 10. "Ra was getting a new boat the week we left, so those going now will get a luxury we didn't have on their old boats that looked well past their prime. Divemaster Bob and guides Jimmy, Nitesh and Solo all did a great job, managing the group in currents and letting us do our own thing on bommie dives. There was a mix of skill levels in our group and they managed to keep everyone happy and safe, with only one 'eventful' dive

when the currents were ripping a lot faster than anyone expected. Shore diving is available at no charge, and several times either Ra or the resort motored us out a ways and let us do a one-way back in." Norman Ross (Abilene, TX) visited in September and says about Ra's new boat, "There were nine divers and two dive masters, and it was not crowded. The front part of the boat is enclosed, which is nice for the long ride out to Bligh Waters. The two dives I took in Bligh Waters were very good, with a number of fish and great coral. However, the other sites did not have nearly as many fish. When you end up taking pictures of just coral, that's a sure sign fish life is lacking. I love the people and the resort, but it's not worth a return visit."

Moody's Namena Resort, Fiji. On its own private island, Moody's is a wonderful little resort with some of Fiji's best diving. Mona Cousens (Santa Barbara, CA) who went in July, say, "However, you need to get there first, which isn't so heavenly. The crossing over from Savusavu on Vanua Levu took one hour and twenty minutes in an open-sided speed boat through medium-sized waves, wind and rain. I was lucky though -- the guests on an earlier flight got the bigger dive boat for the crossing, which took two and a half hours in rough seas. But on arrival, you forget all that when greeted by owner Tom Moody. The island is 110 acres, with the resort occupying only 10 and the remaining acres just as it was. This means lots of kayaking, hiking trails through wild terrain, and a nice beach with hammocks and lounge chairs. My bure was spectacular, perched on the side of a cliff hanging over the ocean. What a view. A king-sized bed with mosquito netting and adorned with fresh flowers changed daily.

Each bure contains his-and-her bathrooms with a shower in between. To reach the dockside dive shop, you must walk down the 110 steps from the hillside resort. You suit up and go, as your gear is already on board. During my week, the six divers were split into two groups with two dive guides. Sites are varied; there are walls with beautiful fans and soft corals, and on the pinnacle dives, you can spiral around a bommie with myriad sea life, then swim to another one close enough to enjoy both on one dive. The reef breaks at Kansas and Fish Patch featured sharks, Napoleon wrasse, huge dogtooth tuna, a grouper which weighed about 200 pounds, schools of jacks and barracuda and so many fish species I am at a loss to name them all. There are two dives offered daily, and do not try to alter this schedule. It is not flexible. You are welcome to snorkel off the dock in the afternoon but do not ask for an extra tank! Yes, Tom and Joan Moody, who've owned the resort for 27 years, are set in their ways. It's like if you have guests in your home, you like them to follow certain rules as well. Otherwise, you are in for a treat." (www.moodysnamenafiji.com)

Kosrae Village Ecolodge, Micronesia. "If you dream of sleeping in a thatched-roof hut with woven-mat walls next to the beach, this is the place for you," says Jeanne Sleeper (Laguna Beach, CA.) who visited small, out-of-the-way Kosrae in August. "In a world where 'resort' usually means luxury, at Kosrae it means purposeful simplicity and sustainability. Fly to Hawaii, then take an island-hopping Air Micronesia flight, and get off at the third stop. The staff picks you up in their personal car for a 30-minute drive on the one road that follows the coast. The resort sits where the rainforest meets the beach. Its dining hut serves three meals a day and luckily the food is varied, good and fairly priced, as there are few other places to eat on Kosrae. Their dive boats, flattop pontoons with no camera area, tie up at two different harbors to shorten the boat run time to the dive sites. You leave the resort at 9 a.m. by car to the harbor. Ben, Jerry and Gordon do all the work, including setting up your dive gear after you show them once how you like it. Water temps are 80-plus degrees, and my trip's visibility ranged from 60 to 150 feet. But what will knock your fins off is the coral - acres of huge, healthy, hard corals, so many kinds in perfect condition. The fish

range from Napoleon wrasse to small fire dartfish. Schools of big barracuda and snapper cruise the wall, which starts at 80 feet. The anemones and their clownfish are varied. I saw butterflies, wrasses, damsels, puffers, unicorns, sweetlips, hawkfish, parrotfish, anthias, turtles, eagle rays, giant clams and one shark in the distance. Not much soft coral or many nudibranchs or eels. The locals spear fish so targeted species are wary. Dive, kayak, hike the rainforest, eat, sleep - that's it. Clear water, pristine coral, an accom-

Why the Dive Industry Is Dying: "It's the Media's Fault"

Australian dive operators in North Queensland say the recurring headline "dive death" is partly to blame for killing off the Australian diving industry. Although tourism is flagging generally, operators are adamant no sector has the odds stacked against it like the diving trade, which has declined 30 percent in the past year. Already hurting from the economic downturn and rising fuel costs, worldwide publicity surrounding high-profile fatalities has continued to punish Queensland's dive industry.

The release of the film *Open Water*, loosely based on the disappearance of divers Thomas and Eileen Lonergan off Port Douglas in 1998, temporarily reopened wounds six years ago. Since then, the death of honeymooner Tina Watson, left to drown by her husband Gabe Watson in 2004, attracted international headlines, as did Gabe's court case earlier this year. Then last May, Richard Neely and Alison Dalton made world news after they became separated from their Great Barrier Reef dive charter. The couple was plucked from waters north of Airlie Beach 19 hours after being reported missing.

Dive tour veteran Monique Matthews of the liveaboard *Undersea Explorer*, one of two private charter operations to fold in the past nine months, said perpetual sensational media coverage has had a "devastating effect" on small industry players. "As it does on so many things, the media sensationalizes these things to the point of no return... for us anyway."

The *Undersea Explorer* folded under the weight of increasing overhead expenses. Bad press was the straw that broke the camel's back, Ms. Matthews said. "We can't fight the huge media machine. The Lonergans disappeared more than a decade ago and people still talk about it." In October 2008, *Nimrod Explorer*, the second Cairns-based liveaboard catamaran, was sold by its U.S. parent Explorer Ventures to a nondiving group.

The dive industry is also incensed at coverage of people who die of medical conditions while diving, which can leave businesses struggling to convince tourists that scuba diving and snorkeling are safe. Queensland Dive Tourism Association general manager Col McKenzie said one problem was the media was too quick to brand fatal incidents "dive deaths" regardless of the circumstances. "Australia will give you world-quality diving which is very, very safe, but we can't guarantee you won't suffer a heart attack."

- by Marissa Calligeros, *The Brisbane Times*

modating dive operation with few divers. To unplug from daily life, this is a perfect spot. I can't recall when I've had the luxury of being only one of two divers on a boat and a crew whose primary goal was to be sure I had a perfect day." (www.kosraevillage.com)

Serifos Scuba Divers, Greece. Greece has little for divers on its barren fishless bottoms and diving is carefully controlled to protect whatever antiquities remain. Still, reports Bob Lambertson (Athens, Greece), there is one unique dive off the island of Serifos, a 2.5-hour ferry ride from the mainland port of Piraeus. "It offers the one really world-class dive I've done in Greece. It's all about bluefin tuna. An unknown number of these big fish, some more than six feet long, are present 10 months of the year and come up to divers for an extra snack. I had

10 of them milling around me for 20 minutes. This is in a no-take zone respected by the fishermen and the richest area for marine life I've seen in Greece, where no-take zones are precious few." (www.serifosscubadivers.gr)

Browning Pass Hideaway, British Columbia. "This is rugged, rustic, drysuit diving country but you come here for the amazing macro and large fish life among incredible walls and pinnacles," says Paul Vitkus (Reno, NV), who dived Browning Pass in September. "Attractions include wolf eels, giant pacific octopus, large lings, red Irish lords, and rockfish, not to mention the well-camouflaged little sculpins, including the odd-appearing grunt sculpin. The Hideaway is reached by getting to Vancouver Island's northern end at little Port Hardy. Owner/captain John deBoeck meets you at a predetermined time at Ivey's,

Stopping the Problem: Do Ear Plugs Work Underwater?

The question of divers using vented ear plugs to ease equalization and keep water out of their ears is often raised on divers' online message boards. These soft polymer plugs form a tight seal and have a very small hole, or vent, running through them to allow for equalization of the ear. Many responders indicate that the plugs reduce the frequency of external ear canal infections and ease clearing of the ears.

Doc's Proplugs (www.proplugs.com) is the primary purveyor of vented ear plugs. It claims that when fitted properly, the plugs reduce "ear squeeze caused by inability to equalize between the outer and middle ear," and help "prevent outer ear and inner ear infection, vertigo and thermal reaction." Its Web site includes a list of undated and unverifiable testimonials.

Only minimal medical research has been conducted on these ear plugs. A self-published, undated piece by the Sardinian Institute of Underwater and Hyperbaric Medicine evaluated two professional divers with histories of perforated eardrums "who in the summer made constantly 3 dives per day." After observing one diver for 17 months and the other for three months, no problems with inflammation of the middle ear were noted. Another study found that in patients involved in various watersports, the use of earplugs substantially reduced surfer's ear/exostosis (benign bony growth in the external ear canal caused by exposure to cold, wet and windy conditions).

If a vented ear plug did lessen the flow of water into the external auditory canal, the expectation is that outer ear infections (swimmer's ear) would be reduced. As

for preventing inner ear infections, this isn't believable. Water does not enter the middle ear space from the outer ear unless the eardrum is ruptured. And someone with a perforated eardrum should not be diving anyway. Decreased water flow also would be expected to reduce temperature-related abnormalities, such as vertigo and surfer's ear.

The claim of easing equalization is difficult to support, as there is no reasonable mechanism to explain how this might occur. Doc's Proplugs' Web site states, "Due to surface tension, the vented plug also reduces abrupt pressure changes from reaching the sensitive eardrum which contributes to easier equalization." I find this assertion neither comprehensible nor compelling.

I was unable to find any published reports of harm to the ear from such plugs. Provided the vent in the plug remains unobstructed, these devices appear to pose little or no danger to the ear. However, if a vent should become clogged, especially upon descent, equalization could become impeded and the eardrum damaged. Using such plugs to protect a ruptured eardrum may give a diver a false sense of security. He runs the risk of losing the device during a dive, allowing water to enter the middle ear space and resulting in pain, disorienting vertigo and possible infection.

The bottom line? If you're experiencing external ear infections or worried about surfer's ear, vented plugs may be worth the small investment. However, divers with middle-ear congestion or infection are unlikely to benefit from these plugs, and they should refrain from diving until seen by an ear, nose and throat specialist. For those with continuing difficulty in equalizing, experiment with various clearing techniques before resorting to these vented ear plugs stoppers.

— Doc Vikingo

a local watering hole with good food, after which you transfer your gear to one of his dive boats, then cruise for 90 minutes. The Hideaway is an eclectic assemblage of cabins sitting on top of a large raft of cedar logs tethered in Clam Clove. Not your traditional dive resort! Accommodations are basic but acceptable. Food is simple but ample and varied; nobody goes hungry. You need to bring your own alcohol. No TV, telephone or cell phone service and no power other than what the generator can provide. It's the diving and topside scenery like bald eagles, orcas, dolphins that keep me coming back. On this trip, I had the late evening opportunity of orcas surfacing all around me in the Queen Charlotte Straits. Large tidal exchanges mean there are periods you may have to wait for suitable currents but typically you get three or four daily dives. Briefing at the site and you dive sans guide, thus you dive your own plan and are picked up by a 'live' boat when you surface. While this is diving for the experienced, beginners will do well. All you need is a drysuit and appreciation for diving in a remote, rustic, simple setting."

Turks & Caicos Explorer II: We reviewed one of the better Caribbean liveaboards in August 2006 and asked our reviewer to report again to see if the trip is still up to snuff, given the hurricanes that have hit the area. He writes; the *Explorer II* has a check-in time of 3 p.m., I booked a flight to arrive after the time, so we were able to take a taxi van directly to Caicos Marina where the Explorer II was docked. There's a risk because if you're delayed a day the boat could leave without you; however there are little airports throughout these islands, so it

wouldn't be difficult to hook up with it. While the capacity is 20 guests, only three other divers joined my group of eight. The crew of five was headed by the experienced and personable veteran captain Jean Francois Chabot. The legendary Stan Simmons, who has been with the Explorer fleet for more than 20 years, whips up delicious, hearty meals while outfitted in his colorful shirts and a huge smile. His cuisine is too hot and spicy for me, but he toned it down for me, keeping it fully flavored without the hotness (and honored other requests as well). Lunches might be spaghetti with sausage and tuna pasta. For dinner a BBQ on the sundeck of steak, chicken skewers and corn on the cob, topped off with barbecued bananas with ice cream for dessert. We began with a day and a half at Provo's Northwest Point. At first check, the reef damage from Ike and Hanna seemed minimal. Some barrel sponges lay on the bottom in the 40-foot shallows. A few coral heads had been toppled, but the sand that had been transported from the shallows to the coral reefs and algae seemed a bit more prevalent – but only to someone like me who had been here before and was looking for it. On most dives, reef sharks made close passes by the divers. Turtles appeared on half the dives. The usual crew of marine life included queen, gray, rock beauty and French angelfish; large puffers; goliath, tiger and Nassau groupers; ocean and queen triggerfish, durgons; garden eels; and green and spotted morays. One green moray awaiting us on French Cay was more than seven feet long. Three slender coronetfish swimming together ranged from 18 inches to three feet. Lionfish were on every dive on Provo and West Caicos, and a couple of dives in French Cay. Dive rules were safety-oriented but minimal: Buddy

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dive unless you're solo certified, 130 foot maximum on air and 110 foot max on Nitrox, back to the boat with 500 PSI. If you need a buddy, you can always accompany a crew member, because there was always at least one in the water on all dives. After Northwest Point, we spent three days at West Caicos, then the final day and a half was at French Cay before motoring back to the Marina. The standard day was breakfast at 7:30, followed by dives at 8:30 a.m., 2:30 p.m. and 4:30 p.m., with snacks like chocolate cake and mozzarella sticks after each one and dinner at 6 p.m. Visibility was disappointing throughout my May trip, only averaging 60 feet, and waters were murky. Before our arrival there had been three weeks of storms, with lots of strong wind and rain, resulting in lots of sediment in the water. On many dives at West Caicos, the wind and currents were moving so that the *Explorer II* was floating parallel to the reef. That meant I had to use a compass to find the reef, and again to find the boat. Water temp stuck at 78 degrees, making 3mm wetsuits and hoods comfortable. Our group's ages ranged from 50 to 84 years, so there were lots of old knees that appreciated the good dive leaders. If the Explorer crew keeps up its excellent service and hurricanes give the Turks & Caicos some much-

needed respite, expect to have nothing but a fine week of Caribbean diving. Main deck cabins are \$2095, the two VIP cabins on the upper decks are \$2295, and two lower deck cabins are \$1895. Wine, beer and liquor were included in the trip price, but there are surcharges for nitrox, fuel, hotel tax. www.explorerverventures.com

Nekton Rorqual, Puerto Rico and St. Croix. People give thumbs-ups to the crew and service, but isn't it time they cleaned it up? We get many reader reports about how the ship is due for a facelift. "It is a worthy boat but it's old and showing its age," says Doug Dellisanti (Huron, OH), who was aboard in September. "The carpet is in dire need of replacement and the curtains have never fitted correctly. Many of the lower cabin doors cannot shut fully." Subscriber Randy Saffell says, "It's a nine-year-old boat that seems much older. We had to dock the last day and dive under Frederiksted Pier again to fill the freshwater tanks due to a leaking pipe. Our cabin door would not shut despite all our efforts, so we just left it ajar. The rooms only come with one electrical outlet. My wife and I have large camera systems so we brought our own power strips to have enough outlets to charge batteries."

Anatomy of a Diving Lawsuit: Part II

why the Aggressor prevailed in court

This continues the saga of the prolonged lawsuit resulting from the disappearance of two divers from the Okeanos Aggressor at Cocos Island in May of 2003.

Bret Gilliam, who wrote the piece, was retained by the defendants, essentially the Aggressor fleet, as an expert witness. For 35 years he has held a 500-ton USCG Master's License. He has logged more than 18,000 dives and a thousand at Cocos Island, including 43 dives at the site of the tragedy, Dos Amigos Pequenos site; he dived there just the week after the disappearance in more extreme conditions. He served as NAUI board chairman and founded TDI and SDI training agencies. He has been hired as an expert witness in more than 225 cases. Here is the second part of his story.

* * * * *

I was retained in March of 2005 by the defense as an expert witness to offer opinions as a diving industry professional and licensed maritime master. I would also provide limited expert opinions about medical aspects including the effects of hypothermia and the likely period of survival to persons drifting at sea in water temperatures of 82 degrees F. and in the existing sea conditions. By hiring

one person who could qualify in multiple areas of expertise, it simplified the defense and could possibly lead to a judge's ruling that the plaintiffs had to proceed with only one expert as well. Since there are few people with actual professional credentials and field experience in multiple roles, it proved to be a shrewd move for the defense.

The families (plaintiffs) of the two divers who disappeared filed wrongful death claims in Louisiana against various defendants including the Okeanos Aggressor, Aggressor Fleet, Aggressor Fleet Franchising, AMO (the Costa Rican company owning the vessel), and the dive-master Randy Wright who was aboard the dive launch that took the divers to the site that morning, May 16, 2003. The plaintiffs alleged a litany of actions or failures by the vessel staff that contributed to, or caused, the deaths of the two men, Smith and Jones (the names have been changed for this article).

The complaint affixed blame for the small dive launch not having direct contact by VHF radio to the mother ship anchored in a protected bay about six miles away. It also alleged that the ocean conditions were too rough, the current too strong, that no descent lines were used, and

that the nine divers should have been required to dive together supervised by the divemaster. They argued that when divers surfaced at various times over the course of approximately 55 minutes -- but Smith and Jones did not -- that an improper search took place. They blamed all the defendants for the divers' disappearance and alleged that the vessel's search procedures did not find them, causing Smith and Jones to drift away to a lingering death.

The Lloyds of London insurers had placed a \$15 million reserve on the case as a possible payout.

Expert Witnesses: A tremendous amount of maneuvering by the lawyers on both sides occurred in the first phase as motions were filed trying to uphold waivers and releases signed by the deceased as the bases for case dismissal, motions as to venue and whether state or federal court would hear the case. Witnesses were deposed to provide their version of events. Reports from Costa Rican and U.S. Coast Guard search teams were submitted and

Smith and Jones were not diving together. Each entered the water with his assigned buddy and each immediately became separated from his buddy. They were never seen again by any person on the dive, including their buddies.

oceanographic "hind-casting" established actual conditions at the time of the dive. A variety of diving industry standards, procedures, training methodology and practice were introduced into evidence. It was nearly six years from the accident to trial, which finally began on April 6, 2009. Hurricanes forced trial postponements twice.

Eventually light began to emerge from the clouds of obscuring posturing. Expert witnesses are usually the most experienced professionals that the jury or judge will hear from. Based on their professional credentials and licenses, expertise, and experience in similar situations, it's their job to objectively evaluate the facts, allegations, witness statements, and conditions, and conclude whether fault can be assigned to any party. A credible expert witness with the ability to face a jury and explain his opinions under cross-examination by a hostile opposing lawyer is tossed into an "intellectual gladiator" pit of confrontation.

Walt "Butch" Hendrick was hired by the plaintiffs as their expert witness. He was offered as an expert in diving, liveaboard operations, ocean search and rescue, maritime procedures, and general diving safety in places like Cocos Island, located nearly 400 miles offshore of the mainland of Costa Rica. In his written opinion and subsequent live deposition, Hendrick agreed with all the plain-

tiffs' allegations of fault and laid the blame for the men's deaths squarely on all the defendants. However, problems arose almost immediately for the plaintiffs at Hendrick's deposition.

Hendrick revealed that his captain's license, which had expired 40 years ago, was restricted to only six or fewer passengers in the protected waters of Vieques Sound off Puerto Rico. He also could not answer questions about navigation, safety regulations, rules of the road, etc. He had never been a professional crew member on any liveaboard diving vessel, had never seen the 120-ft., 130-ton, *Okeanos Aggressor*, had never been to Costa Rica, and never dived at Cocos Island. He had never conducted an actual ocean search for a lost diver at sea. His primary career was in public safety team training for bodies lost in cars that went off roads and piers, people who drowned at the beach, or other "close to shore" searches for dead bodies, not live persons who might be adrift and employing signaling devices to make their location known.

The site of the accident, Dos Amigos Pequenos, was a small pinnacle of rock that extended about 70 feet above the ocean surface and was swept by a 2-4 knot current. All dives were conducted from a small launch that dropped divers in buddy teams over the steep front slope. Hendrick argued that the launch should have anchored, deployed both descent lines and "tag lines" for the whole group to hang on to before descending together with the divemaster. As any professional boat operator should have known, this was impossible due to the current and the steep-sided pinnacle that offered no place to anchor, and that a drifting boat cannot be towing divers on a "tag line" around in a two-knot current.

The Disappearance: The divemaster had provided a thorough briefing as to site conditions including expected waves and current, and the area to descend to at 75-100 feet to establish position to observe the schooling hammerheads that came into the cleaning stations there. The divers were to observe the buddy system since they would be dropped in pairs and no supervision was possible since the divemaster would be assisting divers into their gear throughout the entry process and probably be one of the last to enter the water. The divers were also advised to abort the dive if separated from their buddy and return to the surface. They were also told to abort the dive if any circumstance made them uncomfortable with conditions. The launch remained on station the entire time and would immediately pick them up.

The dive began about 11 a.m. and one diver did abort and was retrieved within minutes. Smith and Jones were not diving together. Each entered the water with his assigned buddy and each immediately became separated from his buddy. Neither surfaced as instructed and they were never seen again by any person on the dive, including their buddies. All other divers completed the dive

without incident, drifted to the lee side of the pinnacle, and were picked up before noon.

When Smith and Jones did not surface, an immediate search was initiated in the area of the pinnacle and down current. Both divers were equipped with BCDs, whistles or low-pressure sonic alerts, high-visibility safety sausages, and flashlights. The search was conducted according to established search protocols for over an hour and then the launch returned to the mother ship to refuel and enlist their assistance.

A nearly 2100-foot mountain was between the dive site

Had the plaintiffs won their case, the verdict may have eliminated the diving practices that exist in Cocos Island, the Galapagos, Palau, Fiji, the Solomon Islands, Indonesia, PNG... just about anywhere that currents exist and boats can't anchor to deploy divers.

and the ship's anchorage, so radio transmissions were blocked since VHF signals are "line of sight." Once in radio range again, the launch called ahead to activate the *Okeanos Aggressor's* emergency plan and the *Aggressor* got under way immediately. The second launch also joined the search and the three vessels looked for the missing divers until nearly 2:00 a.m., 14 hours after the last diver surfaced. At that point, they were ordered back to the primary anchorage by the Costa Rican Coast Guard and the search was taken over by the U. S. Coast Guard with aircraft, surface ships, small craft, helicopters, and computer-generated current drift predictions from experts. The search continued more than three days and covered more than 1200 square miles. The only trace of the men found was a safety sausage and a single scuba tank not attached to a BCD. Smith reportedly had more than 500 logged dives while Jones had more than 200 dives including in areas with strong currents such as Palau, Cozumel, and the Red Sea. By any measure, they both were well-experienced divers who were briefed on the *Aggressor's* buddy system policy that they would be diving independently, and both were well equipped with all necessary safety tools.

My Testimony: I had different opinions from Hendrick about the allegations of fault. It was beyond credible belief that two men could have surfaced from the site and not been found with the safety equipment they had at their disposal. I explained that experienced divers are routinely allowed to dive independently, and in fact, expect to be allowed to do so. Further, I cited the USCG's

own analysis of the ocean and current conditions that day that reflected a 1.8-knot current and Sea State 3, only 3-4-foot waves. This was about as good as it gets at Cocos and certainly within the skill capabilities of the two divers. The prevailing current would have tended to carry the men to the southwest corner of Cocos Island. Even if they did nothing but drift, they would have ended up within a hundred yards of the protected beach and could have simply gone ashore where they would have been found.

The more likely scenario (as explained in the first part of this article) is that some unknown event took place underwater and that neither ever surfaced, making it impossible to affix any blame to the *Aggressor's* crew or search-and-rescue efforts. This was further supported by the extraordinary and unprecedented search efforts by the USCG.

The fact that a safety sausage and unattached tank were found only reinforced my theory that these items became detached underwater since no diver would abandon his primary life support and rescue equipment deliberately.

Following Hendrick's deposition, the judge disqualified Hendrick as a maritime expert and restricted his opinions to a minimum of search procedures with which he had experience and let the jury decide if they were applicable to this site.

Before the trial began, the Smith plaintiffs made a confidential settlement and withdrew from the case. That left only the Jones plaintiffs and the two-week trial began on April 6 in New Orleans Federal Court. All divers on the launch on the day the two divers disappeared testified that the crew did provide full briefings and found no fault with the conduct of the divemaster or subsequent search effort.

I testified for nearly seven hours on the last day of the trial. At times, there were some heated exchanges between opposing counsel and me, but the jury of non-divers seemed to understand my explanations of how diving actually was conducted at Cocos. The next day closing arguments were made. I was the last witness they heard... sort of like batting last in the bottom of the final inning of the baseball game with the game on the line.

The next day, after deliberations that went until almost midnight, the jury came back with a complete "no fault, no monetary award" defense verdict. It was a complete victory after more than four years of grueling work and acrimonious exchanges between both sides.

The Bottom Line: This case had tremendous potential to affect how resorts and liveboards allow divers to conduct themselves. Had the plaintiffs won their case, the verdict would have been pointed to as a possible precedent in which all divers, regardless of experience, would

be relegated to the lowest common denominator theory that all dives will be conducted in accordance with the weakest and least experienced member of the dive team setting the bar for everyone.

It may have eliminated the practice of independent buddy teams (and forget about solo diving completely), diving in currents, in rough water, or from launches without deployed descent lines. In short, it would have essentially discontinued the diving practices that exist in Cocos Island, the Galapagos, Palau, Fiji, the Solomon Islands, Indonesia, PNG... just about anywhere that currents exist and boats can't anchor to deploy divers.

No one will ever know for certain what happened to the two divers who tragically disappeared in May of 2003. But diving is not a "safe" sport. It has hazards and divers are warned about the litany of things that can quickly turn against them including running out of air, decompression sickness, up and down current drafts, dangerous marine life, personal physical hazards as diver's age, or

simply panicking due to stress, holding your breath and suffering an embolism.

Whatever did happen, although tragic and distressing, their disappearance was not the fault of the dive operation. A jury came to that conclusion based on common sense and an independent deliberative process based on the evidence presented and their perception of the credibility of the experts' testimony. The verdict supports the continued practice of letting experienced divers pursue exciting diving independently, using their own best judgment as to their skills and ability to participate.

For every diver, that's a personal call. It's your decision. Make an informed choice: be properly equipped, never overstate your experience, and abort a dive that you are not comfortable with. After all, it's your butt on the line and nobody can make that decision except you. Choose wisely.

– Bret Gilliam

Why Nitrox Costs So Much

and why you never get it free

We frequently get complaints from readers about the high price of Nitrox. A typical one comes from Vicki Caldwell (Sacramento, CA), who dived in April with Osprey Divers at Grand Turk and wasn't impressed with the prices or the tank mixes. "We didn't feel like we got our money's worth because none of the tanks were ever full, and Oasis charges a whopping \$13 for Nitrox." Co-owner Dale Barker was a good sport, agreeing to drop the price to \$11 for Caldwell's group even before they arrived, and then not charging them for their first day's dives when the Nitrox mix was only 29 percent.

While those figures can add \$100 or more to a week's diving, you can count yourself lucky, Vicky. You'd pay \$14 at Aqua Dives in Belize's Ambergris Caye and \$15 at Grand Cayman's Red Sail Sports. According to John Flanders, owner of the Academy of Scuba in Phoenix and co-owner of Geofish Dive Center in Mexico's Playa Del Carmen, Oasis' Nitrox fees are in the middle of the range charged by Caribbean dive resorts. "The average Caribbean tank costs \$12 to \$15. Compressed air is only \$5 a tank on average, so at least half of what you're paying for is the oxygen, not to mention the costs of shipping it, the man-hours for blending it and the mixing equipment. While some resorts offer "free Nitrox," nothing is free: Nitrox increases an operator's cost so it will be made up elsewhere.

Dive operations produce Nitrox in one of three ways:

partial blending, continuous blending and Nitrox membrane. Partial-pressure blending is the cheapest technique. A dive shop purchases oxygen separately, then adds a specific amount to an empty, clean scuba tank and tops it off with compressed air. Most dive operations, aiming at a 32- to 36-percent mix, blend gas in a large tank and pump it into individual scuba tanks. It's labor intensive because it takes time to hook up the bottle, get a precise oxygen reading, then top it off with the compressor. Then the tank must typically sit for 24 hours so gas particles can mix properly.

In continuous blending, air and oxygen mix in a high-pressure compressor. The mixture flows through an oxygen analyzer to get the desired oxygen percentage and is pumped into a single scuba tank or a larger storage bank. Big resorts with a steady stream of divers, like Bonaire's Buddy Dive and Captain Don's, use this method. It saves time, is less dangerous than partial blending, and blends a large volume of Nitrox with more accuracy. But it's also pricier. Also, it's not a great option for liveaboards doing multi-day trips in remote places, as they have limited space to store so many cylinders of oxygen for five dives per day.

Many liveaboards use the Nitrox membrane, which produces blends of up to 40% oxygen by removing nitrogen particles from the air instead of adding oxygen to it. Low-pressure air flows into a filter that removes hydrocar-

bons and other contaminants. Then it passes into a membrane canister, where oxygen, more transferable than nitrogen, filters through thousands of hairlike fibers. To get the proper gas ratio, one just adjusts a needle valve to “dial out” the nitrogen. The de-nitrogenated gas is then transferred to a standard compressor for storage in nitrox banks or filled straight into divers’ tanks. “You can run the system all day, and the cost of making it is relatively cheap as it just uses electricity,” says Bob Olson, president of equipment maker Nitrox Technologies. “But the membrane has the highest initial cost. You’re talking at least \$15,000 for a good compressor, and its lifespan averages just five years.”

Wayne Hasson, president of the Aggressor Fleet, says his boats use both continuous blending and Nitrox membranes. It cost \$20,000 for the membrane filter, another \$30,000 for the low-pressure compressors that pump gas into tanks. Then there are upkeep and maintenance costs. “It’s certainly not cheap. That’s why Nitrox is twice the cost of air.”

Another major cost is shipping oxygen from the producer – it’s not manufactured everywhere. “All our boats are in remote areas, so the cost of getting oxygen to them is expensive,” says Hasson. For the *Fiji Aggressor*, oxygen is produced in Suva, a three-hour overland trip. For the Costa Rica-based *Okeanos Aggressor*, the closest supplier is in San Jose, three hours away. While the Nitrox membrane can produce enough gas for all guests on board, it’s still labor intensive, Hasson says. “It takes lots of hours to run the compressor and fill the tanks.”

Dive resorts in bigger places like Grand Cayman have an easier time getting oxygen, as it’s needed for bigger customers like hospitals and the utility company, but DiveTech manager Nancy Easterbrook says shipping costs

add up. “Grand Cayman does bring in shipments from the U.S. every week, but tack on to the U.S. price shipping to the Florida port, shipping on the ship to Cayman, duty, insurance, local transport, etc. To get to Cayman Brac, the gas needs to have one more shipping charge also. Our landed cost per cubic foot is almost triple the cost Florida dive shops pay.”

Easterbrook says that for DiveTech to produce an 80-cu-ft tank of 32-percent Nitrox, it needs about 16 cu-ft of oxygen, which costs with shipping, etc., \$7.84. DiveTech charges \$10 a tank (discounted during slow times) on Cayman, one of the lower prices.

Easterbrook adds that DiveTech is the only Cayman dive shop using liquid oxygen, as she has the volume to justify it (they fill 100 Nitrox tanks a day). “It’s less expensive per cubic foot than using the gas storage banks but we’ve had to make capital investments to do this. We also have the labor cost of producing our own Nitrox from liquid. Nitrox costs us almost double what air does to produce a tank but we keep a low margin on it to encourage its use and maintain our place in a competitive market.”

Hasson says the *Aggressor’s* charge of \$100 a week for unlimited Nitrox is a deal. “If you do 25 dives, \$100 is cheap, compared to buying 25 tanks at \$5 to \$8 – that adds 25 to 100 percent extra to your total bill.”

Still, if you’re a vacation diver, Nitrox may just be unnecessary expense. At most diving resorts where time and depth are religiously controlled, air will do just fine. While Nitrox builds in a safety margin, especially for older divers, if you’re making just two guided dives a day, following your computer and making safety stops, Nitrox is most likely an expensive luxury.

–Vanessa Richardson

Why Divers Fail to Disclose Medical Conditions

there’s not much trust in the system

Not long ago, we asked our subscribers via email if they were truthful on their medical forms when they go diving. A preponderance of the respondents said no, many emphatically. What struck us was the range of conditions divers refused to disclose and how they justify their secrecy. In many cases, the reasons seem quite valid, as you shall see.

I can think of another sport where each time a participant goes out with a paid operator, he is required to list his medical history and disclose his medications. And where a check in the wrong box will disqualify you – at least until you track down a physician who will approve

your participation. One can take vigorous hikes with a travel group, go mountain biking or do some serious kayaking without having to tell the trip organizer your medical history. Accidents off in the wilderness can mean distant rescue and trip disruption for all participants, just as it might in diving. Maybe it’s because diving is conducted underwater that it merits such close scrutiny by operators – and insurers.

What became clear in reading our respondents’ comments was that not only did many of the divers believe their medical information and their willingness to participate based on their medical history was their own busi-

ness, they also didn't want to be knocked out of the box because of arbitrary decisions made by schoolboy dive-masters halfway around the world, with no way to appeal. After all, every medical condition has enormous shades of gray. A bout of depression ten years ago doesn't seem to have much impact on whether you should go diving today. But because you have no clue what the divemaster will say or do, it's best to stay mum, so our readers say.

Particularly our aging readers. The people who spend money for serious dive travel are the 50-plus crowd, and as they age they manage their changing bodies with drugs to lower blood pressure and cholesterol, and to keep away the hot flashes. But to many dive operators, such drugs are a sign these folks shouldn't go near the water. For example, B.D. from Shelby Township, MI (I'll just use initials here to keep divers anonymous to dive operators) says, "My wife has used a mild and common medication to control her high blood pressure for many years. On a dive trip to Cozumel, she filled out Aqua Safari's waiver and was told she couldn't dive because she was under medication. We were shocked as this had never happened before. We walked down the street to Dive Paradise and filled out their medical history checking the 'NO' box next to 'Are you taking any medications?' We went on to dive our normal three dives per day, plus a few night dives that week."

A.A. from Campbell, CA, says, "The last time I filled out a form, I listed Lipitor as a medication and it was a huge hassle. On this Caribbean island, I had to find a doctor, have a \$150 medical exam and bring it back to the dive shop. I have no heart or any physical problems, just lowering cholesterol levels, but once you mark the sheet, the problems begin. I will never mark the medication section again."

P.G. from Haiku, HI, was at Club Med Turks and Caicos several years ago and disclosed she took estrogen hormone replacement therapy. "I was not able to dive till I was cleared by their doctor. The girl I was diving with was on thyroid medication and had a letter of clearance to dive from her Canadian doctor but they refused to allow her to dive at all because it was not a French doctor. So I disclose nothing that I don't have to. When it comes to the medical questions I lie."

But one has to concede that there are cases where an operator requires an exam and that might not be such a bad idea, especially if you're up there in age. N.M. from Palo Alto, CA, was getting a Nitrox certificate and was given the medical history form. "One line was 'Do you take any prescription medications?' I am 81 years old so of course I do. I had to receive an MD's release, which involved seeing a cardiologist and a pulmonary specialist, and getting an exercise EKG, a CT scan and a lung capacity test. Having passed all that, I am not sure what I will reply for the next dive operation." But, at age 81 it prob-

ably wasn't a bad idea to get all this checked out.

And consider the case of XX from Collinsville, IL, who is age 62, 5'9" and 285 pounds, and taking diabetic and blood pressure medications. "It takes 14 pounds of lead, (sans wetsuit) to get me down. After three days of two-tank dives and a night dive, I'm tired. But after 20 years of diving I feel I have a better idea of what I can do and can't do. I'm not a cowboy, I don't push any limits, but I can glide around with my camera watching the fish go by." Since so many diving deaths involve obese divers under stress with heart ailments, let's hope he gets his regular cardio exams.

When telling the truth is a problem

If you are honest about your medical history, the only way a dive shop may let you dive is if you get approval from a local doctor. Not as easy as it sounds, as many doctors are booked up in advance and don't have the free time to see you right away. It can be worse in overseas dive destinations and who knows what kind of doc you'll end up with. Furthermore, it could shave days off your dive schedule while you seek out and wait for an appointment.

"In Jamaica, I was required to have a physician authorize me to dive when I reported that I had back surgery in 1995," says M.W. from Williamsport, PA. "This requirement was placed on any person who acknowledged any medical condition. A nurse told me it would take several days to find a physician who would see me, obviously at my own expense. And local doctors are reluctant to sign off on waivers because they perceive it as an assumption of liability. Luckily, I was able to phone my home physician and get authorization faxed to me."

P.P. from Bethpage, NY, gives a good reason why you shouldn't trust what a dive operation's reservations staff says, and you should get the facts straight from the operator who will be giving you the waiver, especially for a trip in another country. "I am a type 1 diabetic and I wear an insulin pump. I had booked a liveaboard in Australia, sending an e-mail that I was diabetic, and got a response back that if my doctor released me, they were fine with it. A couple of months prior to the trip, I figured I'd better double-check with the boat. I was told I would have to be approved by an Australian doctor. I e-mailed the South Pacific Underwater Medicine Society with my medical history and diving history, explaining how often I checked my blood sugar when diving. No one replied back, just one board member who simply said, 'Cancel your trip.' So unless Australia changes its mind about diabetic divers, I will never get to experience the Great Barrier Reef."

Come prepared

Savvy dive travelers may not always care to volunteer information, nonetheless they come prepared with notes from their doctors.

H.S. from Whitefield, NH, says, "I had heart surgery in 1999 to repair a leaking mitral valve, which has been functioning normally since then, and I have annual checkups. Still, I am frequently questioned about whether I am fit to dive by dive ops with no medical background. I now carry a note from my cardiologist, a diver too, stating that I am fit to dive and my past surgery poses no problems."

D.C. from Boston says she gets a signed PADI medical form from her doctor during annual checkups and keeps a couple of the signed copies in her dive log in the event that she is challenged.

O.H. from Great Falls, VA, says, "I'm 63 and in excellent health, according to my doctor. But if I put Lipitor on the medical form, the dive shop thinks 'heart condition' and wants to either deny me or restrict my diving. In one situation when the dive operator wasn't going to let me dive, I had to get my doctor on the phone, which wasn't easy. Now I carry a letter from my doctor that lists all the meds I take and that

If I disclosed my cancer and the meds I take, I doubt any dive operation would allow me to suit-up.

all the meds I take and that

none are contraindicative for diving. It also states when my most recent physical was and nothing was found that poses a risk to my diving."

When you're not prepared.....

As B.K. from San Diego, CA, got older, her blood pressure became higher than normal. "My doctor, an avid diver, put me on a medication that returned it to normal and assured me I was fit for diving. A few years ago, I checked a box on the dive form indicating my high blood pressure medication and assured the dive operation my blood pressure was fine. I was banned from diving until I tracked down a local doctor, whom I paid to write a note saying I was OK. Now I check forms saying I take no medication and have never had any health problems. I believe I am responsible for my own health and safety."

Yes, there is that risk that when you check a box, you'll be barred from diving, as G.N. from Dallas worries about. "I don't tell the dive operators I'm on blood pressure medication because I fear they won't let me dive if I'm honest. On the other hand, I'm anxious about non-disclosure only because I worry that maybe I'm not really supposed to be diving even though my blood pressure is controlled by the medication."

But GN, why not have a conversation with your doctor and even with DAN doctors to get the scoop on your medication? By itself, medication for high blood pressure is not a disqualifier.

Divers with serious diseases should do their homework

Several divers with serious diseases told us quite candidly how they manage their disease and continue to dive, even though they still don't disclose to the dive operators. R.J. from Philadelphia says, "I have multiple sclerosis and must dive with EAN32 as a back gas and EAN80 in a stage to be used at 20 feet and up. Also, I must take longer deco stops, at least five minutes. Without these precautions, I am very likely to get neurological DCI. I am medically cleared for diving by the head of Dive Medicine at a university here and have written documentation but do not show it to the shops. Can you imagine their reaction if I told them all this?"

"I've had type 1 diabetes for 20 years and have been a diver for 19," says C.A. from Austin, TX. "I treat diving like a serious sport and make sure my sugars are in a good range before I dive. I am physically fit and exercise five times a week. I always bring glucose tablets in a dry bag and carry sealed glucose gel in my BCD pocket that can be administered in the water...and I've never had to use it. I was so happy when Divers Alert Network came out with new guidelines for diving with diabetes. I copied several pages and took them to my doctor. Although he was skeptical, he signed a waiver letter to let me dive. I still don't mention to the dive ops that I'm diabetic but I dive with a buddy who is aware of my situation." (DAN recommends that diabetic patients take blood glucose readings an hour, 30 minutes, and immediately prior to "splashing," or starting their dive. Dr. Michael Madsen, a fellow in undersea and hyperbaric medicine at the University of Pennsylvania, says that blood glucose should be kept "a bit above normal" at 150 mg/dL since the diver will be using more energy than normal. "When diving, we like to keep diabetics a little bit sweet," he said, adding that the dive should be cancelled if blood glucose tops 300 mg/dl. [ABC NEWS])

"I had a heart attack, over four stents, and I've had neck and lower back surgery and surgery on both shoulders," says B.S. from Danville, CA. "My cardiologist sees no problem with my diving as long as I can handle the exertion, so I exercise regularly at a gym. But if the prior medical conditions are mentioned, it only complicates things for the dive operator and its insurance. I don't tell them anything. They already have me sign a release that absolves them from any liability short of shooting me, so why do they need to know what medications I may be taking? I'm a grown man, I know the risks and I'm prepared to deal with them, I don't need babysitting and I especially don't need some silly dive shop rules to keep me from diving after I've already paid for it."

However, there are a few readers, while in the minority, who are honest and up front with dive shops about their conditions and are not penalized for it. "I tell them

about my multiple sclerosis, which is currently in remission and for which I have a neurologist's written okay to dive," says S.E. from Portland, OR. "My medication needs to be kept cool, so I need to use the operator's refrigerator for my syringes. This way, it's clear what all them drugs are for. If I do experience some decompression-related issues, the symptoms can overlap or mimic MS symptoms. This information could help the dive staff with diagnosis and treatment decisions. My experience: No problems with dive operators yet."

S.M. from Westford, MA, carries a note from his physician as well as the PADI medical form signed by his physician, which helps him in keeping honest – to a point". If I think about what I would do if I did not get permission to dive, the truth is I would then probably lie on the waiver. The problem with this, of course, is that I put myself and others diving with me at risk. I certainly should not do this but my passion for diving would probably prevail over common sense."

We all know how much we love to dive and how we will fight to not give it up. Here's one last comment from a diver who is fighting that fight.

"I have rare and incurable carcinoid cancer. My blood sugar, blood pressure, and even my breathing can change rapidly if I am not properly medicated. I am careful about my medication, so I have not even come close to expe-

riencing such problems underwater. If I disclosed my condition, and the meds I take, I doubt any dive operation would allow me to suit up. I rarely go below 60 feet, and stay away from super-strenuous dives, to lower the likelihood that I will overtax myself. In the course of my close to 300 dives (all while I have had cancer), I have been able to help other divers in trouble under water, and have coped with a few catastrophic gear failures of my own. I realize that I would not only be risking my own life if my illness impaired me while diving. This has not even come close to happening. I hope that I will have the sense (and the sense of self-preservation) to stop diving when my disease impairs my functioning on dry land. My wife is my dive buddy, and if I can't see it for myself, I trust in her to tell me when that day has come. In the meantime, I want the freedom to decide for myself, rather than be excluded by a medical mind set that is sometimes based on conjecture rather than fact; remember when asthma was an absolute bar on diving?"

Conclusion:

We're amazed to see how many divers dive with serious medical conditions. I'm not here to disapprove or condone, only to report. In the next issue, Doc Vikingo will give us the medical perspective and we hope to have an training agency perspective as well.

– Ben Davison

Caribbean Reefs

It's taken less than 40 years for disease and global warming to destroy most of the staghorn and elkhorn corals that provided sanctuary for reef fish and other creatures in the Caribbean. *New Scientist* reports that UK researcher Jenny Gill analyzed 40 years of data from 500 surveys of 200 Caribbean reefs. They discovered that in the late 1970s, white-band disease swept through the reefs, killing 90 per cent of the spectacular elkhorn and staghorn coral species. In 1998, many remaining tree-like corals were wiped out in a massive bleaching event, probably driven by global warming. Large, weedy corals took over, out-competing the remaining treelike corals.

Flat reefs now cover 75 percent of the Caribbean, compared with just 20 percent in the 1970s. "It's difficult to see how to reverse any of this," says Gill. The biggest problem, she says, is the sheer density of human population - stresses on the coral include pollution and tourism. By contrast, reefs remain almost pristine across the Indian Pacific, where human habitation is sparse.

Belize is doing something to protect its reefs. Researchers from the Wildlife Conservation Society at

Glover's Reef found that parrotfish are the most commonly caught fish and as a consequence, coral cover has declined in the area. At their urging, Belize passed new laws to protect the country's extensive coral reefs. One law will protect parrotfish and other grazers, such as doctor and surgeonfish. These herbivores keep algae growth in check, enabling corals to flourish. In the past, fisherman did not target the grazing fish; rather, they caught mainly snappers and groupers. It was only when these species declined that they turned to the next tier of the food web, and parrotfish began to disappear.

The second set of regulations will protect Nassau grouper, an endangered species. The rules set a minimum and maximum size limit for fishermen. The third regulation bans spearfishing within marine reserves; it's the main method by which locals catch groupers and has caused severe declines of these species. South Water Caye and Sapodilla Cayes marine reserves are now closed to fishing, and the Pelican Cayes—a hotspot for rare sponges and sea squirts—are also off-limits.

For more information about the efforts of WCS, visit www.wcsgloversreef.org.

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Letters to the Editor/
Submissions

Undercurrent
3020 Bridgeway, Suite 102
Sausalito, CA 94965
Fax 415-289-0137
EditorBenD@undercurrent.org

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E-mail: pete@undercurrent.org or write:

Undercurrent
3020 Bridgeway, Suite 102
Sausalito, CA 94965

Editorial Office
Ben Davison, Publisher and Editor
Vanessa Richardson, Senior Editor

E-mail:
EditorBenD@undercurrent.org

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Flotsam & Jetsam

Keep an Eye on Your Spearfishing Buddy. He may shoot you by accident, as one Australian diver experienced in September, when his friend's three-foot-long spear pierced his chest just centimeters from his heart. Brett Clarke and Jim Bigness were diving off Melbourne's Cape Schanck when Bigness mistakenly launched his stainless-steel spear in Clarke's direction, puncturing his left lung. Clarke, 39, didn't realize he had been shot until he saw the spear sticking out of his chest. He swam back to shore but when he got washed onto a rock shelf, the spear caught on the rocks and went in further. "I kept trying not to black out. I forced myself to stay awake, calm down and concentrate on my breathing." Firefighters cut off the shaft, then doctors removed the barb at the hospital. Clarke will keep diving with Bigness but says, "From now on, he's at one end of the beach and I'm at the other."

Warmer Waters Make Fish Crankier. Australian scientists say climate change is making fish become more aggressive and also vulnerable to predators. They studied damselfish from the Great Barrier Reef in their lab, subjecting them to changing

water temperatures. They found that if water temperature rose by as little as three degrees Celsius, the fish were up to six times more active, bold and aggressive. That meant they ate more, and they were also more likely to be eaten themselves.

You Europeans Save the Ocean, Let Us Yanks Destroy It: On October 4, a group of guys were fishing off Fort Lauderdale when they spotted a 10-foot-long, 750-pound shark feeding on a swordfish. As any American good ol' boy would do, they chased after and captured it, with one of the guys saying, "We might as well get this thing. Someone's dying today." They didn't fish for it, just grabbed it and killed it. "Our kids will be talking about that fish for who knows how long," one said. A couple of days later, a proud Dutch fisherman caught and then posed with a monster skate, but he missed out on breaking the UK record because he threw the 249-pound catch back. Three shipmates helped Hand Dykman haul in the ray, measuring six feet across, out of the Irish Sea. The charter skipper, Hamish Currie, said "You can't kill a fish like that - it's just wrong. This thing will fight another day."