

undercurrent

The Private, Exclusive Guide for Serious Divers

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MV Sea Hunter, Cocos and Malpelo Islands

bad weather, strong currents and low viz make sharks harder to spot

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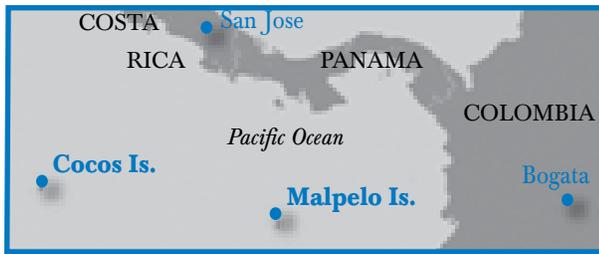
Dear Fellow Diver:

My trip started badly, with cloudy skies, rain showers and an unnecessary hassle over the release form. After years of taking divers out to see sharks at these two islands, you'd think the Sea Hunter Group would know by now how to gracefully get their customers to sign their lives away. But when I was picked up at my San Jose hotel for the ride to Puntarenas on the coast, I was presented with the form, of course after the trip was fully paid for and not refundable. Not wanting to be the one to hold things up, I just signed it. But my fellow divers included three lawyers -- Carl, Donna and Bill -- who objected to the release and the timing of its presentation. They were willing to release the boat operator from liability for the inherent risks of diving, but resented the terms about "releasing and indemnifying for gross negligence" because they believed that invited carelessness by the crew and excused Sea Hunter from dereliction of responsibility. As we all waited in the hotel lobby, the lawyers altered their forms, scratching out some clauses. When they were told that was unacceptable, they signed a clean form but added a statement that it was being signed under protest. Only then did the three-hour drive past coffee plantations to Puntarenas get under way; the tension eased as a local member of the Bri Bri tribe came along as tour guide and gave a great lecture about Costa Rica's history and diversity.

While the waters around Cocos and Malpelo Islands are ideal for shark-viewing in good conditions, I came in July, smack-dab in the middle of Central America's rainy season. After a monotonous 42-hour boat ride to the bare rock outcropping of Malpelo,



The Sea Hunter Lowering a Dive Skiff



with clouds quickly rushing in, things were literally looking gloomy.

The Malpelo dive briefing was all about deep diving, raging currents, strong surges, the necessity for staying in a group, keeping the divemaster in sight, and the importance of surfacing together. Each diver was issued a safety kit with an extra-long orange sausage, flashlight, whistle and an electronic tracking

device in case he was swept away in surface current. Good precautions, but with a storm threatening outside, I felt uneasy. I wasn't even disappointed that there are no night dives at Malpelo, just three dives a day at 8 a.m., 11 a.m. and 2:30 p.m. My checkout dive was in waters with the visibility of pea soup. My first morning dive at Virginia's Altar was worse, accompanied by pouring rain and dark waters. After peering through gloomy waters and seeing nothing but murk, I can say the best part of that dive was coming back to hot croissants and fresh fruit.

However, I finally did get a taste of ideal Malpelo diving. At Fridge, a cleaning station for almaco jacks and hammerheads, I was instructed to descend quickly, hit the bottom and "hide," meaning get behind a rock and sit, and the sharks would come to me. And they did -- dozens of silkies and hammerheads, jostling each other for position at the center of their enormous schools. I sat at 60 feet for 50 minutes, and the show never stopped, but heavy surge made it hard to keep from being pushed into the needles of large black urchins nestled in the rocks. Also, limited visibility affected photo and video contrast. In between the shark schools were bumphead parrotfish, yellow and brown trumpetfish, numerous green morays, and an abundance of small gray and brown sea fans. Water temperatures at both Malpelo and Cocos averaged 80 degrees, with several thermoclines around 74 degrees.

Wonder if the lawyers made it onto the boat? It was touch and go at first. The tension was as thick as the rainclouds when we got to the dock. Divers and bags were loaded on a small barge to take us to Sea Hunter, anchored farther out. The boat's rep called Carl, Donna and Bill aside and told them their "under protest" statements wouldn't be accepted. Discussion ensued for 30 minutes, with the rep on the phone to company owner Yosy Naaman, who was already on Sea Hunter. The reply: No one would get on board until the matter was resolved. It was more of a macho standoff than a logical discussion, until finally the boat rep said the lawyers could write their statements on a plain piece of paper. The lawyers did so, and we finally headed to the boat. Of the 18 divers, one was from Israel, another from England, a third from Scotland, the rest were Americans. Release-form fiasco aside, an attentive crew of nine went out of their way to meet divers' needs, particularly Colombian divemasters Edwar and Wilson. Edwar, doubling as videographer, was quiet and methodical. Wilson was talkative bordering on annoying, but he was consistently pointing out marine life in the murk and always monitoring us divers.

Malpelo is 270 miles off the coast of Colombia, so the nearly two full days of motoring there were filled with plenty of naps. Probably would have been a nicer ride if the sun was out but when there's nothing to look at but gray, boredom can set in pretty quickly. The Sea Hunter is a stable, steel-hulled, 115-foot motor vessel. I suited up easily on the wide dive deck. Tables were spacious enough to fiddle with my cameras, with conveniently placed air hoses and adequate storage space for photo

Nemo Air Computer O-Ring Recall

The Italian dive gear manufacturer Mares announced a product recall in August for the O-rings on its Nemo Air dive computer's Quick Connector hoses, due to "quality issues." The O-ring can fail, causing a leak in the connector hose and a slow but continuous loss of air.

Mares has created a new O-ring of a different material and hardness to retrofit on the Nemo Air computer hose. Divers must take their computer and hoses in to a Mares dealer for a replacement O-ring. Look up the one nearest you at www.mares.com, or call customer service at Head USA, Mares' owner, at 1-800- 874-3236 and give them your computer's serial number.

gear. Up top was a broad, partially shaded sundeck with lots of lounges and chairs. When I did have a chance to relax there between dives, the frequent smoke from some passengers and crew members assaulted my nostrils. The roomy salon has been newly updated with fresh upholstery and carpet, and it offered an always-filled candy bowl and cookie containers, board games and videos, flat-screen TV, and a mini-fridge with soft drinks and beer. There was a paucity of information at orientation, so I didn't know until trip's end that laundry, Nitrox, beer and even my canned vodka tonic drink were free.

My forward cabin was comfortable and clean, with paneled walls and a porthole. It was too cold because forward cabins shared the A/C system and the temperature was set by democratic vote, which I lost. There was adequate storage space, and the bathroom had sufficient towels. For the nine diving days of the 14-day trip, cabins were cleaned daily; towels were changed only every two days or when requested.

Once divers unpacked and set up gear, our tanks were moved to two skiffs, where they remained for the trip, as did our masks and fins. I always dove with the same group of nine, eight of whom used Nitrox and were equally experienced. Scott, the only diver using air, sucked it up quickly and was always the first back up. Skiffs, manned by drivers Pepe and Reyner, carry 10 divers and are in good condition with sturdy ladders and shade cover but space is tight. Fortunately, rides to dive sites are less than 10 minutes. Pepe, who has been with Sea Hunter for more than 10 years, is a gem -- smiling, friendly and attentive to everyone, especially one grey-haired lady diver, whom he always called Mama (she loved it), taking her tank before she climbed out of the water.

Of the 10 Malpelo dives, most were the same -- waiting on barnacle-covered rocks for sharks to show themselves in poor visibility, currents and surge. The boat only does Malpelo six times a year between March and August, and I suppose I should count myself lucky that I came when I did - - crew told me that 2009 may be the last year Sea Hunter dives here, as fees for entering Malpelo National Park have become prohibitively expensive. The best dive was one where I didn't see any sharks. At Monster Face, named for the eye-and-nose-like caves in the rock above water, a thick school of pelican barracuda surrounded me, while hundreds of yellow goatfish swam with yellow-and blue-striped snappers in amazing 80-foot visibility and 80-degree water. The sheer joy of seeing marine life in clearer water made my peculiar breakfast of tuna sandwiches and scrambled eggs delicious.

The buffet-style meals prepared by chef Luis and his assistant Pablo were good but not gourmet. Fresh fruit was at every meal. Lunch and dinner featured creative salads and crisp vegetables, and the entrée was fish, beef, pasta or chicken, with soy products for vegetarians. Desserts were mini candy bars for lunch, and mousse, cake or ice cream at dinner. Yosy alone had wine with dinner most nights, but no one told us that wine by the bottle could be purchased; they only pulled out the wine for the farewell dinner. The Swiss-made coffee machine expertly turned out espresso, cappuccino or regular coffee with steamed milk. Steward Javier was especially helpful. When I returned to the boat in heavy rain, he met me with hot chocolate, an empanada and a smile.

It was another 40 hours of motoring to Cocos, 300 miles west of Costa Rica, covered with lush foliage and waterfalls cascading off its sides. Cocos gets 21 feet of rain a year so I knew not to expect much sun. It did come out for my first two dives but my mood darkened again when I experienced 15-foot visibility, surge and only a few sharks. A hefty sea turtle as long as a scuba tank kept me interested. Every

Sea Hunter, Cocos & Malpelo Is.

Diving (<i>experienced</i>)	★★★★★
Diving (<i>beginners</i>)	★
Snorkeling (<i>ditto</i>)	★
Accommodations	★★★★
Food	★★★
Service and Attitude	★★★★★
Money's Worth	★★★★

★ = poor ★★★★★ = excellent
World Scale

heavy downpour created new waterfalls, all carrying mud into the ocean, evident in the brown wake created by the skiff on the way to the closest dive sites. The visibility never lifted.

The surge did subside, however, so I got lucky at Piedra Sucia, or Dirty Rock, a deep dive with the best viewing at 110 feet. I saw six-foot hammerheads, a few big Galapagos sharks, even an elusive silver-tip. At Alcyone, I descended to 98 feet on a line, then swam against heavy current and settled on a ledge to

Is It Worth Protesting a Dive Release You Don't Like?

Check the first paragraph of this story about diving the *Sea Hunter*, and you'll see our writer's description of three lawyers who had problems with the dive release but went on the trip after writing a statement that they were signing it under protest. So we wondered, is there any value to doing that? We asked *Undercurrent* contributor Lawrence Schnabel, a member of the California State Bar, counsel to the Los Angeles-based law firm Lewis Brisbois Bisgaard & Smith and a certified divemaster, what you should do if you were in these people's fins. Here's his take:

First, I obtained the current *Sea Hunter* release. It indeed releases various entities from gross as well as ordinary negligence. It does not contain a choice of laws or forum clause. This is important because if a diver were to sue *Sea Hunter* entities in the U.S., it is less likely the court would use Costa Rican law, or rule the suit needed to be filed for convenience purposes in Costa Rica. (Note: read more about these clauses in Schnabel's story "Divers, Sign Your Life Away" in our August 2008 issue). If a suit is brought in the U.S., however, keep in mind the court must be able to assert "personal jurisdiction" over the person or entity sued, which can be a problem for a person bringing suit where the person or entity sued is located outside the U.S..

Is there any value to writing a protest? In my opinion, there is little, if any, legal value to this, under general principles of contract law. By signing the release and then going on the dive trip, a court or jury would probably find that the diver accepted the contract. His "protest" would be viewed as a "grumbling acceptance" of the contract, or his going on the trip would be considered acceptance of the contract by conduct. I see the contract here as the diver's agreement to pay, sign the release and obey the boat rules while aboard. The dive operator, in turn, agrees to supply transport, diving, food and accommodations. Once the diver has completed his trip, he'd have a difficult time trying to cancel (rescind) the contract and seek his money back. This is because his acceptance of the benefits by completing the trip would be seen as affirming the contract rather than rescinding it.

So what options do you have if confronted with an unpalatable release? You can almost always view a copy of the release before leaving home. It should be on the operator's

Web site, or they should send you it on request (I called *Sea Hunter*'s 1-800 number and its Florida office e-mailed it to me the same day, no questions asked). The first option is to sign it. If the indigestible term is void by law (as is a release of gross negligence in almost every U.S. state), then you can sue the operator post-trip if you've been injured by the operator's gross negligence. Keep in mind a dive release's purpose is not to release liability for "inherent risks," although a release's wording will often mention that term. A dive operator needs no release for it since by definition an inherent risk is one innate to diving and can't be minimized by the operator's due care. So the operator, absent a few peculiar situations, isn't liable for injuries caused by such risks because they occur without negligence on the operator's part. A recreational release is intended to release the operator from simple negligence (versus gross negligence or willful/wanton misconduct), and this is what most states' laws allow the dive release to accomplish.

Your second option is to seek a modification to the release. This would require the operator to agree to strike the objectionable clause. Both the diver and the operator should initial it so there is less chance of a later conflict over who agreed to what. But the operator will usually refuse to do this, feeling any release form that is printed must be valid and enforceable.

The third option is to refuse to sign the release, go home and then -- after the operator refuses to refund his money -- sue the operator under a claim of conversion or restitution. The legal argument would be that no contract ever arose because to accept the contract, the diver would have had to have signed the release. This is a risky option because it forces you to either hire an attorney (whose hourly fee will soon cost more than you can ever expect to recover) or sue in Small Claims court, with the headache of trying to serve the complaint on an out-of-state or country operator, establishing the court's jurisdiction over the operator, then trying to collect on any judgment you're lucky enough to obtain.

So unless you can get the release modified, with assent by the operator, the wisest course is to sign, dive and know that if you are injured, at least most U.S. state courts won't enforce a gross negligence provision or other invalid clause.

The Sailfish of Isla Mujeres

One unique underwater event that doesn't get much publicity is the winter schooling of sailfish off Cancun. John Kontnik (Lakewood, CO) and his wife dived there in February and reports:

It was the real deal but one of the roughest trips we have done. There are lots of sailfish but getting into the water with them is the trick. We spent seven days on a 33-foot boat in big seas with 10- to 12-foot waves, looking for the schooling sailfish. You leave the dock at 6 a.m. and return about 4 p.m.; a long day on a small boat. No bathroom - all your business is done off the back of the boat. Poor food - I hope I never see a ham and cheese sandwich on white bread again, as we had them for breakfast and lunch. There is a great deal of competition between the two snorkel boats and the 50-plus fishing boats in the same waters. We are all looking for the same thing - flocks of birds near the surface.

Once you spot the birds, everyone rushes to the site. If you get there late, you're out of luck. Because the snorkelers are getting in the water, you can only hope the bait ball is slow-moving. If it isn't, you can't get in the water. You can go days without getting wet. However, if you get lucky with a calm day and not much competition, it's spectacular. We had one such day. We jumped in the water and when the bubbles settled, there had to be 20 sailfish herding a small bait ball. The sardines approach you looking for shelter and the sailfish follow. I found myself 18 inches from the sailfish but they didn't seem to be upset by my presence at all. This went on for 30-plus minutes, then for several more times that day.

Other encounters on other days would last from less than a minute to several minutes. Most action was on or near the surface, because the sailfish herded the bait fish there, so tanks weren't really necessary; we snorkeled and free dived. There seemed to be a protocol between the fishing boats and snorkel boats: 10 to 15 minutes, then get out of the way.

We were fortunate to have had that one special day. Other people we met had made the commitment of four weeks-plus on the boat because of the random nature of the encounters. Both of us came home with bangs and bruises from the rough seas but you play, you pay. Go with full knowledge that you may strike out but if you hit a home run, it's out of the ballpark.

Amos Nachoum arranges trips (www.biganimals.com) but we thought the whopping \$7,900 per person for nine days too expensive, so we did it for half as much. We stayed at Hotel Playa la Media Luna (a little outdated but convenient to the dock and downtown), which cost around \$1,100, double occupancy, for eight nights. Four of us chartered the boat for \$10,950, or \$3,550 each. We used Keen M Sports Fishing for the boat (www.islamujeressportfishing.com); only a couple of boats do the sailfish snorkel thing. We rented a golf cart for \$65 a day to carry gear. Yes, it was pricey, but I was able to put together a 15-minute video with some great stills my wife shot. When we watch it, we still get chills.

P.S.: Isla Mujeres itself is fun and funky. We were lucky to be there during their Carnival, and lots was going on in town. Not that we stayed out late: I was so tired that the bed looked good at 9:30.

watch action at one of Cocos' well-known cleaning stations. But the yellow barberfish had closed shop for the day, so few hammerheads were swimming in for a cleaning. Visibility was no more than 25 feet. My computer was registering caution so I ascended early, but not before I observed seven five-foot white-tips in a reunion on the bottom, unfazed by my camera just a foot away from their heads. The short dive made me wonder why the two morning dives are scheduled so close together; time was usually tight between dives. It made more sense to dive at 7 a.m. and switch breakfast to 8:30 to extend the surface interval. At least a night dive was added at Cocos, starting at 6 p.m.

Shark viewing aside, there was plenty to see during shallower afternoon dives. At Lobster Rock, I saw something new -- a bed of hundreds of imperial urchins lined in formation, hugging each other on the sand. The water was murky but it was filled with white tips, marble rays, lobsters, a school of Jordan snappers and a ball of oddball, big-eyed fish with black blotches just behind the gills of their greenish-grey bodies. Wilson said they were new visitors to Cocos and called them Pacific puffers, although they didn't look like any puffer I'd seen. I looked in the fish ID books but couldn't spot them. Silverado and Manuelita Coral Garden had good sightings too, like a 17-foot manta, a slithering tiger snake eel, an orange frogfish the size of a dinner plate and a rosy-lipped batfish, a curious creature endemic to Cocos, flitting along the sand with pouty, bright red lips.

Seeing all that in less rain is why I enjoyed the Cocos half of my trip much more. The only unpleasant aspect of the afternoon dives was trying to stay away from Scott, the solo air diver aboard who flailed around, struggled with buoyancy and was

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2. Send your report in an e-mail or as an attachment to us at ReaderRpt@undercurrent.org. Don't forget to put your name on the report.

3. Report your trip on the form on the opposite page (it is double-sided so you can fill out two trips) and mail it to: Undercurrent, 3020 Bridgeway, Suite 102, Sausalito, CA, 94965; or fax it to us at (415) 289-0137.

oblivious to the fact that he was bumping into divers. Unfortunately, he never passed up a dive. Another diver, who was celebrating her 25th dive, also had lots of problems. Sea Hunter's Web site says nothing about how much experience a diver should have to go on this trip, but those two are perfect examples of why there should be. With changing weather and strong currents, Malpelo and Cocos diving is challenging, to say the least, and I can't stress enough that it's not for inexperienced divers. Because most dives are deep, between 80 and 120 feet, you should get Nitrox certification to extend dive time. Despite horror stories I'd heard about rough ocean crossings, the three long hauls turned out to be smooth and easy. And at least above water, we all got along; Carl, Donna and Bill were clinking wine glasses with Yosy at the final dinner. Even lawyers can let bygones be bygones when they come face-to-face with real sharks.

-- S.M.

P.S.: Our writer didn't experience unusual weather; according to Reader Reports from other divers who've been to Cocos and Malpelo, rain and currents are the norm. "Don't plan on getting a suntan," says Tom Lopatin (Lake Hopatcong, NJ) who was on the Sea Hunter last November). But he did have shark sightings. "Great hammerhead action, and the white-tip night dive at Manuelita was spectacular. Sleeping white-tips and mobula rays scattered about on nearly every dive." Brent Barnes (Edmond, OK), who dived Cocos from the Okeanos Aggressor last August, said the stronger the currents, the more pelagics he saw. "When there was a nice current at Manuelita, we would see small groups of eagle rays, mantas or groups of hammerheads. If there was no current, we would see much less. Silverado is a cleaning station for large silver-tip sharks but if they're not there, the dive is boring. We spent 57 minutes at Silverado with no sharks, literally passing the time by playing tic-tac-toe in the sand. Only after a few divers surfaced did two silver-tips show up and spend 15 minutes swimming closely between us. It appears you never know what to expect at Cocos Island." Nearly everyone warned about the island crossings. "If you're prone to seasickness, bring the correct medication," says Lopatin. "The seas can 'rock and roll' pretty good."



Diver's Compass: No question, this trip is expensive; I paid \$6,740, which included Malpelo and Cocos park fees, and a San Jose hotel at each end of the trip . . . Consider waiting until the last minute to get a good deal; a month before my trip, four places still not booked were offered at a \$2,000 discount, so some of my fellow divers got a bargain . . . I sprang for business class on Continental to San Jose via Houston, which cost \$902 and permitted an extra 20 pounds per bag with no checked baggage fees . . . Once aboard, ask what is free and what costs extra, as they don't men-

tion it at orientation; oddly, the boat charges an extra \$15 a day for diving with steel tanks but not for aluminum 80s . . . Text-messaging at sea was available at \$3.50 a minute; the excellent trip video cost \$85 . . . Bring diving gloves, as they are essential, and Nitrox divers need to bring their certifications . . . Sea Hunter Web site: www.underseahunter.com

Travel Report Form



Fill out online at www.undercurrent.org/members/UCnow/ma_rdrprt.php

DIVER INFORMATION

Your name _____ Telephone (_____) _____
 Address _____ City _____ State _____ Zip _____
 E-mail address _____ May we publish your e-mail address? yes no
 How many dives have you logged? _____ Where else have you been diving? _____

TRIP INFORMATION

Name of resort or liveboard _____ Name of dive operation _____
 Location (e.g., island, country) _____ Date of visit (month/year) _____ / _____

Circle one or more of the following that best describes the overall water conditions during your trip.

calm and flat choppy surge strong currents no currents

Water temperature was ____° to ____° F. Wetsuit yes no _____ mm Water visibility was ____ to ____ ft.

Could you dive your own profile? yes no What restrictions were enforced while diving? (depth limits, etc.) _____

Select the words that best describe what you encountered on your trip.

Sharks: none 1 or 2 schools **Turtles:** none 1 or 2 more than 2
Mantas: none 1 or 2 squadrons **Dolphins:** none 1 or 2 schools

Rate the following by circling a number. (*Five is best and one is worst.*)

Corals.....	1	2	3	4	5	Diving for experienced	1	2	3	4	5
Tropical fish.....	1	2	3	4	5	Condition of accommodations ..	1	2	3	4	5
Large fish.....	1	2	3	4	5	Level of service.....	1	2	3	4	5
Pelagics	1	2	3	4	5	Quality of the food.....	1	2	3	4	5
Small critters.....	1	2	3	4	5	Dive operations	1	2	3	4	5
Eco-friendliness/enforcement ...	1	2	3	4	5	Shore diving	1	2	3	4	5
Overall diving for beginners.....	1	2	3	4	5						

COMMENTS Please tell us the good, the bad, and what you wish you had known before you left home.

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Anatomy of a Dive Lawsuit

the family of a dead diver sues the Aggressor Fleet

Most readers may find an analysis of a lawsuit about as enjoyable as a root canal. But this case will prove interesting to divers because it involves issues that directly affect how experienced divers will be allowed to enjoy some of the most exciting and challenging sites without being relegated to a policy of supervised status that would virtually halt the exploration of places like Cocos Island, the Galapagos, Palau, the Solomon Islands, Papua New Guinea, and most of Indonesia. What do these places all have in common? Strong currents and live-boards that let divers dive independently without supervision or in confined groups led by divemasters.

It's a complicated case that I worked on for more than four years as an expert witness and litigation consultant before it finally got into court for trial in April 2009. The accident summary in this first of a two-part article sets the stage for the lawsuit that followed. (The names of the plaintiffs have been changed; all other details are exactly accounted for.) Here are undisputed objective facts, followed by excerpts from my opinion as the lead maritime and diving expert for the defense.

Leadup to the Fateful Dive

On May 16, 2003, nine sport divers took part in a dive at Dos Amigos Pequeno, a pinnacle arising from deep water off the west end of Cocos Island, approximately 400 miles offshore from Costa Rica. Cocos Island is a designated National Park and World Heritage Site. As such, it enjoys certain marine and terrestrial conservation restrictions and protections. The area is famous for its profusion of sharks, rays, whales, turtles and schooling fish. It is one of the best diving locations in the world and attracts approximately 1,200 sport divers annually who come to dive aboard one of four primary diving vessels.

These divers were participating in a paid trip aboard the *Okeanos Aggressor*, a 120-foot, 130-ton diving vessel of Costa Rican flag and registry. The vessel accommodates up to 18 divers plus its crew. The vessel was operated by Aventuras Maritimas Okeanos (AMO), a franchisee of Aggressor Fleet Franchising Inc. Aggressor Fleet Ltd. was a company handling reservations for Aggressor Fleet Franchising Inc., and also marketed and advertised all the franchised vessels/destinations worldwide.

At the outset of the trip, Randy Wright, an AMO divemaster and instructor, conducted a thorough dive briefing about the dive activities and procedures, including instructions that all divers would be required to adhere to the diving buddy system. Prior to the Dos Amigos Pequeno dive, Wright previewed what to expect, including strong currents, marine life to be seen and their behavior, water entries and exits, personal safety equipment, etc. All guests attended the briefing. The divers then boarded a dive launch, commonly know as a "panga."

A subsequent re-cap briefing was covered at the site prior to commencing the dive. The dive was not a supervised or guided dive, due to current activity and variances of entry times by the diver buddy teams. Divers were briefed to observe the procedures for independent buddy dives and to surface upon reaching a minimum air supply but not to exceed 55 minutes in run time.

The nine divers entered the water from the panga. Jim Smith, age 56, and other divers preceded Wright into the water and descended with no apparent difficulty or problems. Wright entered the water just before John Brown, age 56, and his dive buddy, daughter Jane Brown. He saw neither diver on the dive.

During the dive, Smith became separated from his buddy. Jane Brown entered the water just before her father, John Brown, but never made contact with him at all. She continued her dive despite losing contact with her father, and later surfaced with other divers without incident after a 35-minute bottom time. All seven divers and Wright were picked up by the panga driver. None have any specific remembrances of Brown or Smith. No one saw any signs from them indicating distress or problems. And no one saw them again.

Brown and Smith did not surface with the rest of the group. Wright and the panga driver initiated a search for approximately an hour within a two-mile radius of the site, but found no sign of the missing divers. The panga then returned to the *Okeanos Aggressor* and a wider search was initiated from that vessel after contacting the Costa Rican Coast Guard. Subsequently, the U. S. Coast Guard also joined the search, which spanned several days and included additional surface vessels and aircraft. The divers were never found. Brown and Smith most likely never surfaced from the dive, and were later declared dead.

What Could Have Happened?

The circumstances that precipitated the disappearance of Brown and Smith are unknown and thus subject to conjecture and speculation. However, the various issues brought forward in the plaintiffs' complaint (and the opinions of their experts) failed to focus on the most probable causes of the two men's disappearance, and the circumstances that most likely led to their deaths.

Both men were qualified, experienced divers with hundreds of dives in various sites around the world. Both men had experience in current dives and with live boating procedures, wherein a dive boat is not anchored or moored to a fixed position. They were aware Cocos Island had the potential to present challenging conditions of waves, currents, rain and stormy weather conditions. Both were aware of the potential

for marine life threats, including attack by predator sharks in large numbers.

They were also aware that Cocos Island was a substantial distance from the mainland and beyond any reasonable expectation of timely Costa Rican or other national search and rescue teams. Both men were aware they could choose to not participate in any dives that they felt were beyond their level of expertise or comfort. Full and adequate briefings were performed by the *Okeanos* staff before each dive and the two men participated in those briefings. Both were aware of the vessel's policy that all divers follow the buddy system and return to the surface if separated. Finally, both men understood that their diving activities required them to exercise independent skills and problem solving because the dive activities were not directly supervised or led.

The dive on which they disappeared was conducted at Dos Amigos Pequeno. Previously that morning, they had dived the adjacent site of Dos Amigos Grande, less than a hundred yards away and featuring nearly identical conditions. All divers that day were equipped with open-circuit scuba systems and 80 cu-ft. aluminum cylinders. Each wore a BCD that provided up to 60 pounds of lift. For the depths of the planned dive, the scuba system would have provided life support not exceeding one hour.

There is no credible evidence that either man ever surfaced from the dive. Two pieces of equipment were located in the subsequent search: an empty scuba tank and a safety sausage.

If the men surfaced, whether independently or together, it would have been within a window of not more than 60 minutes from the time of initial descent. Throughout that timeframe, the panga driver was helping other divers into and out of the water, and observing the ocean surface for divers. It is beyond credible belief that either man could have surfaced and failed to be detected by the panga driver, the other divers, or divemaster Wright. The men were equipped with safety sausages visible up to one mile. Both men had either a low-pressure sonic signaling device or a whistle, effective at up to one mile.

Only a handful of probable scenarios can be presented based on the known facts and the predictable behavior of the divers if they surfaced:

- If the divers had aborted the dive early due to comfort issues, equipment considerations, or failure to reach the bottom ledges because of current, it is overwhelmingly likely that they would have been seen by the panga driver or other occupants of the launch. Other divers did surface soon after beginning the dive, and were seen and swiftly recovered. Both men had effective signaling devices to make their locations known. As no one saw them surface within the first 55 minutes, it is highly unlikely that they did so.

- If the divers had no difficulty on the dive and felt no imperative to ascend following separation from their buddies,

Police to Patrol Grand Cayman's Stingray City

Kudos to the Caymans for putting a full-time law enforcement officer in this popular tourist spot. Officer Ivan Montieth with the Department of Environment is anchored daily in a patrol boat at Stingray City to ensure the well-being of the nearly 170 stingrays inhabiting the waters. His job is to make sure that boat operators and tourists don't lift rays out of the water, boat operators are licensed, and their boats don't anchor in the shallows.

The Department tightened its marine conservation regulations after a study published in *Biological Conservation* showed that tourism was having a detrimental impact on the stingrays. Christina Semeniuk from Simon Fraser University in British Columbia found that too much feeding of squid and the proliferation of so many boats and tourists in the water every day could be harmful to the stingrays' health because of potential injuries and parasite transmission. Other research found that boat collisions and cuts from propellers and anchor chains are the biggest type of injury to the rays -- research showed that of all Cayman stingrays examined, 30 percent from non-tourist sites had been injured, while 85 percent at the Sandbar had suffered boat-related injuries. Tim Austin, deputy director of the Department of Environment, said his team is working on demarcating the area more clearly with dedicated buoys.

Among new regulations, boats can't anchor in water shallower than three feet, no one can lift stingrays out of the water or wear any kind of footwear in the water. Unlicensed tourist boats are prohibited from entering the area. It is forbidden to feed the stingrays anything other than ballyhoo and squid, and each boat is only allowed to carry one pound of food for them. The rules also stipulate that a maximum of 1,500 visitors and 20 boats are allowed at Stingray City at any one time, and boats are only allowed to stay there for one hour maximum.

they would have been forced to surface within the 60-minute window of life support afforded by the capacity of their tanks. They would likely have surfaced within the immediate vicinity of the pinnacle and been seen. However, they were not seen by the remaining seven guests and two crew, which reinforces the conclusion that neither diver ever successfully completed the dive and surfaced.

Several facts support this conclusion. Divers adrift on the surface have every motivation to make themselves visible and detectable, and will aggressively employ all methods to attract attention. Despite safety sausages, sonic devices and whistles, no one heard or saw them, even though they would have surfaced within sight and sound ranges. It is inconceivable that either

diver would intentionally jettison his tank or safety sausage. The empty tank had approximately six to eight pounds of positive buoyancy and was a contrasting color to the ocean, making detection from a search vessel or aircraft more likely. The same logic applies to the safety sausage. Further, both men were equipped with large-capacity BCDs capable of floating them indefinitely. It is beyond credible belief that any diver would deliberately abandon his BCD. Regardless, the plaintiffs and their experts opined that the two men came to the surface and were simply not found by the liveaboard crew nor by the Costa Rican Coast Guard or the U. S. Coast Guard.

The subsequent exhaustive searches included an unprecedented effort by the USCG that included surface ships, aircraft, helicopters, high-speed search inflatable boats, searches of the island itself, sophisticated computer-modeling to predict current drift patterns, deployed current monitors, and over four days of intensive search pattern grids spanning more than 1,200 square miles of area. With all these resources engaged, their bodies would have undoubtedly been found eventually floating in their equipment. Again, this did not happen.

This leads to the inevitable and only logical conclusion: that both men did not surface at all due to some event that occurred underwater. The scenarios can include a medical or health event that incapacitated them such as heart attack, air embolism, sudden drowning due to impact with the pinnacle, or equipment failure that introduced water into the breathing system. It is also possible that a marine life attack could have occurred. This site is known to be populated by several shark species known to attack man such as silky, Galapagos, bull, tiger and oceanic whitetip.

Opinions and Conclusions

The plaintiffs' expert witness offered a series of opinions that the various defendants are somehow at fault for the deaths of Brown and Smith. He also claimed that Wright was not properly taught to serve as a dive leader at Cocos Island, despite his three-month training curriculum at Hall's Diving Institute, an approved Florida vocational school for professional diving training. The training Wright received there would have qualified him to act as an instructor, divemaster or guide in any subsequent venue, and Hall's had trained hundreds of instructors who were placed in professional positions on liveaboards worldwide. (Wright also worked for two years aboard the *Cayman Aggressor* and for eight months prior to the accident aboard the *Okeanos Aggressor*.) The plaintiffs' witness also claimed that all divers should have been required to dive as one supervised group, including using "down lines" from the drifting panga, despite a two-knot current that was rapidly pushing the dive launch toward the pinnacle and afforded no possibility to anchor at the site.

The defense argued that the plaintiff's expert witness was not qualified as either an expert in marine procedures or professional diving in international expedition operations. He had never been to Cocos, never held a license

to operate such a vessel, and never been involved in an ocean search for missing divers. His opinions reflecting his lack of expertise drew him to incorrect assumptions and conclusions.

Neither Aggressor Fleet Franchising Inc. nor Aggressor Fleet Ltd. had direct involvement in the operation of the *Okeanos Aggressor*, but they did provide a proper Operations Manual, supplemented by periodic inspections and other training. If during those inspections any deficiencies were noted, they were communicated to the vessel's owners, and Aggressor Fleet Franchising Inc. and Aggressor Fleet Ltd. had every reasonable expectation that they would be remedied. The handful of recommendations and requirements on the list had no bearing on either the way the diving operation was conducted or the subsequent search. Aggressor Fleet

What? On a Liveaboard With No Passport?

While visiting Triton Bay in Papua, Indonesia, on Grand Komodo Tours' *TemuKira* in April, subscribers Chrisanda Button and Rickie Stern (Elkins, AR) were surprised to see a police boat appear and order the liveaboard to motor back to the village of Kaimana. "We cooled our heels in the harbor for 24 hours while officials quibbled about the boat's documents and the guests' visas. On our way out of Triton Bay, we were again held overnight in Kaimana while officials decided whether to deport two guests with social visas. Grand Komodo handled the problem as well as possible but we lost almost two days of diving."

What happened? Were corrupt officials trying to extract money from dive operators? Grand Komodo Tours owner Reno Kirtya told us it really was a visa-related issue. "Two passengers didn't have their passports with them on the boat; this was without our knowledge. They said their travel agent in Bali kept their passports to renew their visas. They had already overstayed their visit and were at risk of being deported." The officials let the *TemuKira* continue its itinerary but required the boat check back in with them before returning to Sorong to make sure the matter was resolved. Luckily, Grand Komodo got the agent to fax the divers' passports to Kaimana.

While dive operators should ensure that all passengers have the proper documents, divers must take the responsibility to travel with valid passports and visas. In Indonesia, your passport must be valid for at least six months when you enter the country. Many countries have similar requirements. Kirtya says Americans can apply for visas on arrival at airports in Jakarta, Bali and Manado. Understand what you need before you leave home then follow the rules to save yourself and everyone else a whole bunch of hassle and dive time. And never leave your passport with someone else while you're tripping around.

Franchising Inc. had many successful and professional franchises operating in most of the world's top diving locations for more than 20 years.

In my filed opinion, neither Aggressor Fleet Franchising Inc., Aggressor Fleet Ltd., Randy Wright, the vessel captain nor crew did anything wrong, and they met all applicable standards of care. My opinion concluded that, while regrettable, the deaths of Brown and Smith couldn't be attributed to the actions or inactions of these defendants. The above synopsis lays out the primary facts and opinions that I provided as part of the discovery process that preceded the trial.

The survivors of the two missing men filed a multimillion-dollar claim against the various defendants named above.

Despite the accident having occurred in Costa Rica, the trial venue was established as New Orleans since the Aggressor Fleet was headquartered in Louisiana, and the plaintiffs wanted a jury trial in the U.S. The ground was now laid for an epic diving legal drama.

In the next issue of *Undercurrent*, I will detail the trial events, issues of liability contested, and the outcome. Stay tuned.

Bret Gilliam was the founder of TDI/SDI training agencies, Chairman of NAUI, CEO of UWATEC, and publisher of Scuba Times, Deep Tech and Fathoms magazines. He also operated Virgin Diver, one of the first Caribbean liveaboards, and ran Ocean Quest International, a 500-foot cruise ship dedicated to divers. He sold the last of his diving companies in 2005 and currently lives in Maine.

Servicing Your Regulator

Not long ago, one of our readers told me he had paid nearly \$100 to have both stages of his regulator and his octopus serviced to keep up the warranty. Another subscriber, Jeff Reed (Naperville, IL) tells us he was shocked when the price for servicing two sets for the annual warranty checkup was \$130. "The manufacturer covers the cost of the parts but if they didn't, I would just buy inexpensive regulators more frequently and toss them."

It seems that what Reed paid, \$65 per regulator and octopus, is about average. Even if parts are covered by warranty, labor is most of the bill. Online retailer LeisurePro charges \$49.95 for labor. OnlineScuba.com, based in Las Vegas, charges between \$60 to \$100, plus parts. (Customers who buy gear from its website get the first year's service free, including labor.) Harbor Dive Shop in Sausalito, CA, charges \$15 for inspections and minor adjustments, \$35 to overhaul the first stage, \$20 to overhaul the second stage, plus parts. Scuba Works in Jupiter, FL, charges \$30 to inspect a first-stage, \$25 for the second stage. AirTech in Raleigh, NC, services regulators for consumers mailing equipment directly (it guarantees a 14-day service turnaround). The charge is \$30 per stage, and parts are retail price.

If you have a more sophisticated -- and expensive -- regulator, it requires more parts, adding to the cost. "Parts for the first and second stage of a Sherwood regulator are \$12 total," says Brett Holmes, a repair technician for LeisurePro. "Compare that to a ScubaPro or Apeks regulator, where you're looking at \$15 to \$20 per stage. Toss in an octopus at \$15 to \$20, and it adds up." So you could easily be looking at a \$100-plus bill.

Some dive shops take it too far, which Bret Gilliam, former Uwatec CEO and frequent *Undercurrent* contributor, told us from recent experience. "I use an Atomic Aquatics titanium regulator that I return directly to Atomic for servicing every three to five years. When I took it to the local dealer and told

how to avoid those high costs

them to do a regular service and replace the diaphragm cover, the bill was over \$300. This regulator is \$1,200 retail, so the service was 25 percent of the total price I paid. My jaw nearly dropped to the floor, but that didn't prompt the staff to explain the cost. They did tell me they were giving me a discount because I was an industry pro, but God knows what they charge a regular diver. When I called Atomic, they said it was unconscionable, and the price should have been closer to \$100."

Watch out for the dive shop that gives you a bad time if you bought your regulator elsewhere. Jason Caldwell (Norfolk, VA) bought his Mares regulator online at Joe Diver America, after verifying it was an authorized dealer. At the one-year anniversary, his wife took it to his local dive shop, Divers Unlimited, for the checkup. "She was told the parts would be covered and I would just be charged for labor. When I went to pick up my equipment, I was charged \$42 for parts. The reply was essentially: 'You didn't purchase it here, and online stores aren't authorized dealers.'" The store owner agreed to check with Mares and would refund Caldwell's money if he was told Joe Diver America was an authorized dealer. Two weeks later, Caldwell got a voice mail that Divers Unlimited wouldn't give him a refund because he hadn't bought from them. "This happened after I've done all my advanced training with them, and my wife is taking her openwater certification there."

Follow That Warranty

OnlineScuba's general manager Bill Gornet says many divers don't follow their warranty's annual-servicing policy, so they're stunned when they have to pay for parts. "Sometimes they're not doing proper maintenance so the mouthpieces have dry rot, hoses must be replaced. Then they're looking at \$60 in parts."

"ScubaPro says if you miss one year of servicing, you won't get free parts ever again," adds Gornet. "Manufacturers

Thumbs Down: Dive Ops Demanding a Profit on Every Dive

You'd never expect to fly to Aspen, only to be told to come back tomorrow because the chairlifts weren't operating or because there weren't enough customers. Or be told the same thing at a golf course or a movie theatre. Nope, no savvy business operator believes he must cover his costs every day and if the next day doesn't look good, just close down - - even if he has pre-paying customers.

Not so in diving. Not enough divers today? "I don't care if you've spent the last 24 hours flying in from Jersey, the boat ain't going anywhere. Take a hike instead." So, this month our Thumbs Down award is for all those operations who kiss off the traveling diver, as Kohala Divers on the Big Island did in May.

Michael Drumstas (South Grafton, MA), who had dived with them before and had a great time, writes: "I e-mailed the shop and made reservations for a Monday and Wednesday for my wife and me. Owner Rebekah Kauffman said that she penciled us in, we should give a call at our convenience to secure the reservation, and there was a 24-hour cancellation policy. So I assumed those two days were assured when I called. We dove on Monday, and had 50-minute limitations on our dives. Then on Tuesday at 2 p.m., I received a call from Rebekah that our Wednesday dives were probably not going to happen as we were the only divers, but if we wanted to 'secure' that dive, we could pay for a third spot! Nowhere or at anytime was there a mention of a three-diver minimum for the boat to go out. It turned out we were the only divers scheduled on the other days we were interested in diving. I called to voice my displeasure about having secured dive days cancelled without even a 24-hour notice, and that we would not risk this happening to our other dive days. Rebekah called me within minutes and was adamant

about the boat not being able to go out with just two divers without the third spot being paid for. All the while she kept asking, 'Are we all right with you?' In the end, we did not go out with Kohala on Wednesday, and we spent our other six dive days with Mauna Lani Divers."

We called Kaufman to get Kohala's side of the story, and here's her reply. "Every dive operation I know has a minimum required to make a trip, and most of our guests think three as a minimum is very reasonable to cover our hardworking crew and boat costs. When we are in the slow seasons, we do our best to accommodate divers but if for some reason we don't have the required minimum, we call scheduled divers early in the day and give them other options. One option is buying the third space (they are certainly not pressured to do this), but many divers have been ecstatic to get a private dive boat at their disposal for such a low cost."

In our book, a 2 p.m. call the day before is too late to assume you'll have divers happy to pay for a ghost diver in order to go out. Most divers on vacation would be out enjoying the day and probably get back at dinnertime. Koala Divers could also reduce the disappointment factor by mentioning a three-diver minimum on its Web site. We checked the site in mid-July and nowhere was a diver minimum listed, although the 24-hour cancellation policy for guests to honor was mentioned twice. Apparently, that policy does not apply to the staff. So, my fellow divers, be aware if you reserve a space and only get "penciled in." Looks like that really means "we'll erase your name if we can't make a profit that day." Kohala may have saved a day's worth of gas, but when they sent these pre-paid return guests packing, they lost 12 more paid slots down the road - - and that's just this year.

let things slide in the past, so money was spilling out the back door. Now they're following their guarantee rather than letting it slip by the wayside."

To keep up with the warranty, most manufacturers don't require an overhaul annually, just an inspection and replacement of worn parts. Harbor Dive manager Jack Kuhn asks customers up front whether they want an inspection, adjustment or overhaul. "My philosophy is don't fix things that aren't broken." But read your warranty, then specify the type of service you want, otherwise a greedy shop might do a full overhaul.

If you've got a problem - - your regulator is free flowing, honking or acting just plain weird - - a technician will typically disassemble your regulator, clean it, replace the filter, O-rings and seats, then reassemble it. Rather than spending his time and your time and money diagnosing the problem, he simply fixes everything.

If your regulator isn't misbehaving but you want to get it checked out before a dive trip, just ask for an inspection or a "bench check." A trained technician can check the interstage pressure, cracking pressure (inhalation effort) and exhalation effort at the second stage, and flow rate through the regulator. If there is a problem, he can fix it; if not, you've saved money.

A good dive shop will also give you back the old parts he took out during servicing so that you can see the wear and tear on the parts - and confirm that the technician actually did something with your regulator. OnlineScuba returns parts in a plastic bag, plus a sheet stating what service they did and, after running the regulator through an air check, a graph showing how the regulator performed.

How Often Should You Service It?

If you're out of warranty, perhaps not as often as you think. Of course, manufacturers will say you should do it

annually, as that's their policy (although AquaLung now recommends every two years). Kay Wilson of Indigo Divers in Grand Cayman says once-a-year divers should follow through on the annual more than a frequent diver. "Rubber will 'dry out' and the plastics used in its construction will degrade more quickly than for a regulator in regular use."

Gilliam says "many regulators, particularly higher-end ones, don't need regular servicing because they're remarkably durable. What's more of an indicator is how many dives you've done with it and how much use you've gotten out of it. The one I've used for the past 13 years and for 2,900-plus dives had never had a problem between. If it has performed well and you've done a thorough job cleaning after use, there's no good reason why it shouldn't work at least three years in between servicing."

Fred Good, past owner of St. George's Lodge in Belize, has a simple formula to calculate the cost-effectiveness of annual servicing: "Divide the cost of the regulator by the cost of its annual maintenance (don't include the gauges, hose, etc. because these aren't included in that cost). Don't be surprised if

this comes out to a number less than seven, and in some cases as low as five if you purchased a cheap regulator. If the result is five, that means in five years, you will have spent enough to purchase a second regulator if you had never serviced the first one at all. So it might be smarter to throw away your regulator and buy a new one every five years."

To save money and trips to the dive shop, read the owners manual, says Al Pendergrass, senior technician at AirTech. "It lays out guidelines of your regulator's warranty, maintenance and care. That eliminates 99 percent of the questions we have to answer for you." (You should be able to find a copy on the manufacturer's Web site.)

Keep a file with all your gear purchase and servicing receipts, and warranty statements with the serial number so you can prove you merit free parts — or if for some reason you are improperly charged or refused service and need to contact the manufacturer for resolution or restitution.

-- Ben Davison

We Can't Stop The Lionfish Invasion

but having them for dinner might slow it down

This frilly finned marauder is making its way along the East Coast downward into the Caribbean, multiplying feverishly and eating everything in sight. It's aggressive, poisonous, and has no natural predators. It's been sighted as far north as Massachusetts and as far south as Belize. Scientists and government agencies are trying to figure out how to stop it, but no one has found a way. The best solution we have has been offered up by a dive shop owner and a seafood middleman: turn the lionfish into the next culinary trend.

Debby Boyce of Discovery Diving in Beaufort, NC, has been conducting monthly "Lionfish Roundups," taking paying divers out to collect the fish. Michael Dimin is the Florida-based owner of Sea to Table, a group that gets fishermen's eco-sustainable catches to high-end restaurants, and he ships the lionfish to chefs eager for new dishes to serve. "The best way to keep the population at bay is to create a fishery," Dimin says. "This would be a great source of income for fishermen, who would have a reason to harvest the fish, rather than just collect and kill them just to get them out of the water."

If this succeeds, it would be a new twist on sustainable fishing. While environmentalists are trying to stop fishermen and sushi restaurants from driving dwindling stocks of fish like the bluefin tuna to extinction, they're happy to get as many lionfish as possible onto people's plates. Otherwise, the rapidly spreading lionfish could be as lethal as overfishing and climate change to Caribbean reefs and marine life.

Why the Lionfish Is Fish *Non Grata*

According to the National Oceanic and Atmospheric Administration, the lionfish was first introduced to the Atlantic/Caribbean region in 1992, when Hurricane Andrew shattered a private aquarium, spilling six of them into Miami's Biscayne Bay. Floating sacs of eggs rode the currents north and south, spreading the fish from Massachusetts to Belize.

Like other invasive species, lionfish lack predators in their new environment, meaning they grow bigger than before — researchers have measured Caribbean lionfish of up to 18.5 inches, compared to a maximum of 14.5 in their natural environments of the eastern Pacific and Indian Oceans. They breed more often. Every time it spawns, a lionfish can produce 20,000 to 30,000 eggs, which have a relatively high survival rate. Since the first Atlantic sighting in 2000, the lionfish population is now in the millions. Lad Akins, director of special projects for the Reef Environmental Education Foundation (REEF), collected 20 lionfish during a one-week study in the Bahamas in February 2007. Nine months later at the same site, he collected 216.

The adaptable predator corners fish and crustaceans up to half its size with its billowy fins and sucks them down in one gulp. "The lionfish preys on fish more than half its body weight," Akins told the Associated Press. Research teams observed one lionfish eating 20 small fish in under 30 minutes. What's worse, they're eating reef-grazing fish that keep algae

at bay. Endemic fish species haven't evolved to recognize the newcomer as a predator, so they are sitting ducks. Researchers have been searching for a predator that will eat lionfish, but groupers, black sea bass and sharks have all made U-turns when it's handed to them. That leaves the job up to humans.

Lionfish Roundups

For Boyce, the idea for Lionfish Roundups started after she saw the devastation at Rock Pile, a popular North Carolina dive site. Multiple schools of purple reef fish, butterflyfish, surgeonfish and wrasse were wiped out by the lionfish, which now populate the site. The first roundup took place on June 1 and 2, with 16 divers doing a training session the night before the boat trip to learn how to spear the lionfish or catch it with a net, then clean and cook it. "Three old pro NOAA divers with us killed the lionfish on the first dive with pole spears, so most participants threw away their nets and speared them on the next dives," Boyce wrote in her trip report. During two days at Rock Pile, they collected 131 lionfish but did not come close to getting them all. The consensus was, "They tasted sort of like triggerfish or black sea bass, and yes, some said they tasted like chicken," said Boyce.

Dimin shipped a box to North Pond restaurant in Chicago and another was sent to New York restaurants Cookshop and Esca. "All three chefs found the story very appealing from a conservation standpoint," he said. "Chef Bruce Watson in Chicago said the fish sold very well after having his servers describe to diners where the lionfish came from, how it was harvested and why." They were also impressed with the delicate flesh and its sweet, clean flavor, somewhere between a grouper and a snapper. The chefs served the fish as fillets and in its entirety, as its plumage looks impressive on the plate. Based on the chefs' feedback, Dimin says he can sell all the lionfish Boyce can get.

Getting the word out about lionfish as dinner entrée is also happening in the Bahamas. While locals initially weren't keen on eating fish with poisonous spikes, the Department of Fisheries has been holding cooking presentations to show fishermen and food vendors how to handle, clean and cook lionfish (its poison becomes inert within an hour of death). Cafes in Nassau now have lionfish on their menu (see sidebar at right).

They're Not an Easy Catch

There's still one problem: Lionfish don't fall for the hook-and-line approach and they're hard to get into fish traps. "The only way to catch them is to literally dive with nets and spears, which is labor intensive and not the most effective way," says Boyce. While they swim close to shore in some places, lionfish also inhabit distant, deep-water reefs in an endless number of areas that divers don't visit. For example, they have been spotted in Little Cayman's marine park but most of the waters around the island are never dived by tourists. In North Carolina, lionfish are prolific 20 miles offshore.

As for the Lionfish Roundups, Boyce says they're not profitable. "We have tons of people willing to go out and shoot fish

but not as much luck getting people to pay to do it." The last roundup of the year is September 26-27. The \$350 fee includes an evening training seminar, two days of two-tank dives to wreck sites and ledges, hunting gear and a cookout at the end. Go to www.discoverydiving.com for details.

As a diver, it makes plenty of sense to support lionfish hunting. But the truth is we are not going to put a dent in the population. For example, the lionfish was first spotted in Belizean waters last December. Recognizing the threat to fisheries, the government paid a \$50 bounty for each lionfish people turned in. Eight months later, the government canceled the bounty because lionfish are now too widespread in Belizean waters. They are an enormous threat to Caribbean and Atlantic reef fish, and with no solution in site, both their numbers and range will continue to expand.

-- Vanessa Richardson

How Do You Take Your Lionfish?

I've never understood why so many dive magazines carry fish recipes. We're supposed to be writing about diving and besides, that grouper on your plate means there's one less on the reef to reproduce and create subjects for your camera on your next visit. Lionfish, however, are another thing, so I'm breaking my "no recipe rule" in the name of environmental protection.

Alexandra Lynch, owner of August Moon Café in Lyford Cay, has lionfish on her menu. She told the *Nassau Guardian* that lionfish can be cooked like any other fish -- grilled, seared, fried, steamed, or boiled. "However, its flavor is extremely delicate so it's best lightly cooked and not curried or stewed." Here are a couple of her favorite methods that you can try at your own lionfish cookout.

Fried, Bahamian Style: Prepare lionfish meat by lightly washing and patting dry. Prepare a Bahamian-style marinade of lime juice, sour orange juice, garlic, goat pepper, salt and pepper; marinate the lionfish as per your time allowance but for no more than 24 hours. Heat oil in a pan. Coat fish in flour and cornstarch mix. Fry fish until lightly golden. Serve with lime wedges and a favorite dip.

Seared Lionfish, Greek Style: Prepare lionfish fillet by lightly washing and patting dry. Prepare a marinade of garlic, lemon juice, olive oil, freshly ground pepper, kosher salt and oregano. Marinate as per your time allowance but no more than 24 hours. Heat a cast-iron pan to smoking hot (no additional oil is needed). Place fillet on hot pan. Sear until brown, flip and cook on the other side. Serve with lemon.



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Flotsam & Jetsam

Wind Dancer Going to Cocos. Bob and Gayle Bringas (Gaston, OR) were two of the first divers to find out that this Peter Hughes liveaboard is moving from its Grenada port on August 1 to Costa Rica for trips to Cocos Island. They were scheduled for a late November trip but got a letter from Peter Hughes vice-president Larry Speaker that they could either transfer to the *Sun Dancer II* in Belize, rebook the *Wind Dancer* in Cocos, or re-book a Grenada itinerary on whatever boat takes over in the next two years. The Bringas got a letter a week before the transfer date. That's short notice, but Speaker says the boat was scheduled for maintenance anyway until September 26, and he started telling booked guests once the change transfer was confirmed. "We have not launched any marketing or press releases ...once we have details finalized, we plan on a major media campaign." However, we do know that the 8- to 10-day trips will start in early 2010.

Bring Out The David Doubilet In You. Dive Photo Guide just launched a monthly photo contest series on its Web site to promote friendly competition and push amateur

photographers' skills. Entry is free for each contest, and themes/subjects are assigned six months ahead (September is eyes, November is wrecks, January is the color yellow). A good prize is given away each month (last month's was a \$450 focus light for camera and video), and a grand prize will be awarded at year's end. Details are at www.divephotoguide.com.

Rude Diver? Must Be an American. In Infil, Ontario, "rude and arrogant" divers have been put on notice by local officials to behave themselves. Big Pay Point councilman Dan Davidson says as many as 20 divers dominate the local docks and have been obnoxious to local residents. "There were some seniors in their 80s trying to dock their boat and the divers wouldn't let them through. They were told to go dock somewhere else. One fellow from another country (must be an American) told me he didn't have to follow our rules. We shouldn't have to put up with this arrogance." Davidson is also concerned about using town docks to dive because divers aren't putting up flags or buoys. "Six years ago, I saw a diver being struck by a boat, and her throat was cut. After seeing something like that, it stays with you."