

undercurrent

The Private, Exclusive Guide for Serious Divers

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Andromeda, Red Sea, Sudan

Americans, you're missing out on fantastic diving

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Dear Fellow Diver:

I'm always looking for the unique, so when I learned that my two buddies and I were the first Americans to make a Sudan trip aboard the Andromeda, I was pleased indeed. Of course, our being first is due largely to Americans' irrational avoidance of the Middle East. In April, just a couple of months after the uprising in Egypt, this luxurious liveaboard was filled with divers from Sudan, Poland, Switzerland, Belgium, Hungary, France, Italy, Russia and Germany. They were embassy personnel stationed in Middle Eastern countries, teachers, lawyers, nurses, doctors, scientists, psychologists and bankers. Ages ranged from 24-year-old twins who had been diving 13 years to 70-year-olds. English was the language of choice, and we 26 became a convivial group. Lively conversations usually centered on mutual interests in food, skiing and the political situation in the Middle East. One older German diver felt so at home that after dives, he changed out of his Speedos on the dive deck. Flashing was the norm as this not-so-shy guy loosely handled his towel.

Five vessels ply the northern and southern Sudan routes, but scores travel Egypt's Red Sea waters. The 130-foot Andromeda is more luxurious than any liveaboard I've taken, and at a great price: \$1,442 for eight days and seven nights. She has cabins for 26 divers and 11 crewmembers. Three teak decks provided sun protection and lots of space to veg out alone or be social. Oriental carpets were scattered along the decks. I often slept under the stars on curved, cushioned benches built into the side of the sundeck. The Egyptian part owner



Andromeda



(the other owners are Hungarian) has created a spacious Shisha room (think elegant Arabian café) to enjoy flavored tobacco in a water pipe while listening to Arabic music and sipping coffee. He allows passengers to use this stunning area with its oriental carpets, low-slung cushioned couches and colorful leather pillows.

I arrived at midnight, thanks to a late flight. I was bone tired after a few hours sleep in two days of traveling but as directed, I set up my dive gear, was issued a Sea Marshal (diver search-and-locate security system) for my buddy team, then crashed, only to take my checkout dive several hours later. I added a kilo more weight than usual because of the higher salinity.

Pristine reefs of vivid soft and hard coral graced the 10 sites we dived, several of them more than once. I was awestruck to see no broken coral or other evidence of poor divers. I tried to identify butterflyfish I had never seen, such as the Oman, orangehead, Red Sea chevron, masked and Red Sea melon. The masked puffer

got my attention, as did the Red Sea bannerfish, Arabian cleaner wrasse and the blue-spotted ribbontail ray I often saw on the sand beneath table coral. Arabian, royal and emperor angelfish added even more color. The first three dives (out of four per day) ranged from 80 to 140 feet. Following the divemaster's lead, I patiently hung at 140 feet, watching distinct shadows of large sharks and hammerheads in the blue -- lots of them! On day three, as I gradually ascended to 88 feet on Abington Reef, an inquisitive scalloped hammerhead peeled off from his trajectory three feet away from me. I was trying to watch but my dive buddy was pointing wildly behind me. I looked up just as a hammerhead swam over my head. I frequently saw large schools of barracuda, as well as giant trevally, grouper, jacks, humphead wrasse, bumphead parrotfish and tuna. On each dive, a few reef sharks cruised by. Triggerfish abounded, particularly red tooth, clown, orange-lined and the Titan, of which I steered very clear (read why in a story later on in this issue).

Deep diving found me in deco on most of our 60-minute dives, but that caused no problem because a gradual ascent would simply put me back into a safe no-deco territory. On the northern Sudan site of Angarosh, my two buddies and I were on watch at 140 feet when one started an apparent controlled descent. Watching as she sank lower, I decided to stay close enough to make a dash if she continued descending. At 175 feet, she began to ascend. Whew! We ascended together and headed toward the reef, but I did not see my other buddy. I learned later that she had headed toward shallower depths, but went in the opposite direction, surfaced alone and was picked up by the Zodiac. As we all know, a buddy team of three presents potential problems. When I questioned her, she said she had wanted to go deep but neglected to tell her buddies. Hmmm.

Dive sites consist of a plateau, from which we dropped into the blue. The surrounding shallow coral reefs provided ideal spots for safety stops. Tanks (12-liter aluminum and 15-liter steel) were filled in place on the dive deck; nitrox was available but most of us used air because of the deep diving. Two eight-diver Zodiacs with 40-hp engines took us to sites within minutes. Water temperatures at depth were a steady 80 degrees, with air temperatures around 85. A light wind blew on most days. Andromeda's season in Sudan is short, from mid-February to mid-June, because temperatures quickly elevate to 140 degrees in the shade, and well into the 90s in the water.

All divers were experienced, a requirement due to the deep diving and strong currents that could change in a breath. We were asked to dive in buddy teams, but that was not enforced. I am accustomed to diving solo but when currents were strong, I stayed close to the others, and we did the safety stop and ascent together. On a few dives, the current was so swift that we had to super-sonic the descent or be swept away. Divers occasionally got swept so far, they chose to be picked up in the blue by the sharp-eyed boat divers. No buddy team member surfaced looking for his partner, as we had made the agreement not to ahead of time.

Another "rule" was for buddies to surface with their group of eight and get into the Zodiacs as quickly as possible. That was not an easy task, as handholds on the Zodiacs were limited, so we had to wait for others to hand up weights and BCs. On one dive, six of us were on board waiting for two others, who were floating and chatting. As we drifted close to a reef that came within inches of the surface, the boatman implored them to move quickly, but they ignored his imperatives. When he firmly slapped the rubber and said, "Please come here so I can help you," they shrugged and slowly came to the dinghy. The crew was ever polite, even a few weeks earlier to a group of rowdy Russians who objected to the no-diving-after-drinking rule and pissed on the divemaster's towel.

Captain Youssef had firm control of his vessel and crew. After our last day of diving, he oversaw the final mooring, then leaped fully clothed into the water. It was the first time I had seen him laugh and be spontaneous. He swam and played on the mooring ropes, finally beckoning crew members to join him. One day I stopped by the kitchen looking for a snack and he was there scooping up a mixture with a piece of flatbread. He offered me some. Ambrosia! The ingredients -- soft-cooked eggs and yogurt -- belie the flavor. Seeing me scarf it down, Chef Mustafa offered to make it for me for breakfast. Of the 11 crew members, eight were Egyptian and three Sudanese. Remon and Kisha, the two divemasters, stayed with the groups assigned to them. They gave dive briefings in the lounge on a large LCD screen, (the day's schedule was posted on a large board).

The dive deck is fine for 26 divers, especially because they are sent in two waves, with only half gearing up at a time. There are hand-held showers on the exit deck and a head on the dive deck. However, there is inadequate space for working on cameras (one must vie with the kitchen crew in the dining area), and no compressed air hose. There are small eight- by six-inch stacked cubbies with 220-volt sockets. The rinse tank for cameras was only suitable for small ones with no strobes.

Cabin space was adequate, with a choice of narrow twin (small for anyone broad of beam) or double beds, and a "matrimonial" suite. My main-deck double had two large windows. Bathroom sink and toilets were new, but a pipe leaked in my bathroom so the damp floor had a bit of mold. I took a whiff of the other bathrooms but none had the problem mine did.

Chef Mustafa served a variety of tasty dishes with a Middle Eastern flare. Yogurt with peppermint accompanied every meal. He served an egg dish at breakfast, such as a frittata or crispy fried egg in a thin pancake batter, with cheeses, tomatoes and flatbread. Salads abounded at lunch and the 9 p.m. dinners, which were held after the night dives. Flavorful potato and rice dishes, roast chicken, beef or fresh fish, and a soup filled out the dinner menu. One favorite was a baked potato filled with spicy minced meat. Snacks between the second and third dives included cakes, yogurt and sliced watermelon. Soft drinks, powdered juices, coffee and a variety of teas were available. Egyptian beer cost a couple of euro. One could purchase hard liquor by the bottle. One diver shelled out 40 euro for a bottle of mediocre gin.

The world-class dive on the 500-foot-long Umbria was scheduled for the last day. She lies on her side on Wingate Reef, 20 miles from Port Sudan. As a troop and cargo carrier that was loaded with bombs and weapons to supply Italy's war efforts in East Africa, she was shadowed by the British and ordered to anchor near Port Sudan. After the captain heard that Italy had

Andromeda, Red Sea, Sudan

Diving (<i>experienced</i>)	★★★★★
Diving (<i>beginner -- not recommended</i>)	★
Snorkelling (<i>not recommended</i>)	★
Accommodations	★★★★1/2
Food	★★★★1/2
Service and Attitude	★★★★★
Money's Worth	★★★★★

★ = poor ★★★★★ = excellent

World Scale

Dive Instructor Walks Away Free from Dead Diver Case

In the kind of case you will never see in an American court, an Australian dive instructor charged with manslaughter walked free in May after a magistrate threw the case out of court. Yuri Bonning, 43, was potentially facing a life sentence over the death of 20-year-old Chinese student Xia Dai who drowned after disappearing during a dive off Southern Queensland's Wave Break Island in April 2009. Magistrate Michael Hogan ruled that police had not established a case against Bonning.

Bonning's attorney had argued to have the charge struck because she was the first dive instructor in Australia to be charged with manslaughter over a diving death before a coronial inquest had been held. He asserted that Dai disappeared

from a group of four divers when Bonning momentarily turned her attention to a diver who was apparently using too much air. When she turned back, Dai was gone.

Prosecutors argued it was not a momentary lapse but an inappropriate method of supervision that led to Dai's death, given the imperfect conditions on the day she drowned. The judge disagreed, saying the evidence did not support allegations of criminal negligence. He also stated that legislation placed the onus on the employer, not the employee, to ensure diving client safety. Now, Queensland Dive Company, Bonning's former employer, will face the court this month on charges of breaching that law.

entered WWII, he scuttled his vessel rather than have it confiscated. (Pioneer diver Hans Hass's written accounts about his dives there are riveting). The bombs' stability was questioned for years; consequently, the public has only been allowed to dive it for the past 15 years. At its deepest, the Umbria sits at 118 feet. My average dives were 45 feet for 80 minutes. Corals adorn her shell. A large barracuda hung like an ornament. Easy penetration in groups of six began inside a room full of wine bottles. We followed the divemaster between steel girders, keeping well off the silted floors. I had to keep close or lose sight of my dive light's reflections on the diver's fins in front of me as the divemaster led us around sharp corners or steeply up or down into holds. Thousands of bombs and detonators had me in awe, as did the huge aircraft tires, thick wire cable, sealed jars and sacks of food, Fiats, giant engines and kitchenware. Wine bottles, all with their corks disintegrated, were in several areas. Much can be seen by entering rooms through a wide entrance from the outside. While everyone aboard was invited to penetrate, a third of the divers chose not to.

As an afternoon break, several of us opted for a short ride to Sanganeb Lighthouse, a base for marine science research. Getting to the top of the jetty was tricky, as it involved rock-climbing a vertical 10-foot wall. That, plus the 167 narrow steps to the top of the lighthouse, made for goodly expenditure of energy. But the view from the top was worth it. Several Sudanese live in the lighthouse and maintain it.

We then visited Conshelf II, 25 miles northeast of Port Sudan. Seeing where Cousteau blasted his way into the lagoon at Sha'ab Rumi in the early 60s didn't endear me to him, but then it was all for scientific research . . . right? The site itself was carpeted with coral and many fish species. Stark white flower coral in clumps the size of teacups rhythmically opened and closed as they fed. White anemone swayed gently as the anemonefish darted about. Colorful coral adhered to Cousteau's abandoned structures. We took turns going inside the domed underwater garage for his "flying saucer" sledge set on three struts. There was space to surface and look around, but breathing the most likely poisonous air was not recommended. I found the droning sound inside the metal dome intriguing . . . ghosts from the past? Rusted shark observation cages were at 90 feet.

While the diving in Sudan is worth every minute and penny of travel, it's a difficult journey. I missed my 10 a.m. Turkish Airlines connection in Istanbul, so had to wait for the midnight flight to Cairo. There is only one flight every week from Cairo to Port Sudan, every Saturday evening. Luckily, I planned to arrive in Cairo the day before. Seats on Sudan Airways were assigned, but that meant nothing, as there was a pushing and shoving rush. Italians were aggressive and engaged in jostling matches with Muslims in flowing robes. One German couple tried belligerently to oust the Sudanese from their seats to no avail. But the planes are comfortable, with tasty, complete meals served during the two-hour flights. Upon arrival, we waited, jammed together

beside the carousel, for our luggage to go through X-ray. If a bag arrived on the carousel with a huge chalk 'X' marked on it, security noted who picked up the bag and ushered them to a Customs hand-check. They look for bottles of liquor and "prurient" materials. A note of warning: Go to the bathroom before checking in for the return flight to Cairo. No water in the airport toilets -- use your imagination.

Upon returning to Port Sudan, the beginning of rih al-Khamsin, the 50 days of North Africa's sandstorms, was upon us, creating a hazy mist. Sand infiltrated my every pore. My black dive bag, packed and on the deck, turned gray. I took an optional tour to Suakin, the old medieval port about 30 miles south of Port Sudan. Along both sides of the road, Bedouin encamped in mostly open shanties. Wind whipped sand and the nomads' white long robes billowed. Suakin is largely in rubble, although there is an attempt at restoration where a minaret proudly stands. Blocks of coral were a primary building material, held together with wooden beams and mortar. An old sword salesman was persistent but had no takers. A white-robed and turbaned Sudanese urged on his donkey pulling a cart of branches toward his home across the bridge to the mainland.

Planning this trip was a pain. You must have a Yellow Fever inoculation and four facing empty pages in your passport for visas, and you cannot have an Israel entry stamp. Obtaining information from the five liveboards in Sudanese waters was time-consuming, so I eventually turned to the dive travel agency Reef & Rainforest, which had never booked this trip before either, to negotiate details. Terrorism in Sudan and the unsettled revolts in the Middle East and North Africa held us hostage about whether or not the trip was a go. Throughout Egypt, dive operators cancelled trips, travel agencies were recommending postponing, and a U.S. State Department travel warning was in effect. We held off making final payment until three weeks before the trip. Andromeda's representative met me at the Cairo airport with my visa and escorted me through Customs to the hotel. Escorts at Sudan's airport were equally helpful. It is a lot extra to pay, but worth it when traveling to Third World countries where Americans are not on the most-favored-people list. But overall, this dive trip was well worth it. And off-gassing for three days in Istanbul wasn't shabby either.

-- C.P.

The Mask-under-the-Chin Syndrome

Encouraging beginner scuba divers (and any scuba divers) to drag their masks under their chins when they surface is patently dangerous. In that mode, surfaced divers cannot use their snorkels or their regulators very comfortably for their swim to shore or the boat. One need only try this to have the point proven.

I've been chartering around Cape Ann, MA on weekends and holidays for 32 years. We have to pull these misguided people with their masks around their necks to the side of the boat and "rescue" and "scold" them. They surface from a dive, drag the mask down to clutter under the chin, and snort and cough their way back. They say, "My instructor told me to." Invariably, that instructor is from PADI. Really bad business.

Surfacing divers must keep their masks on their faces while using either their snorkels or their second stages to maneuver to their destinations. My campaign, using our monthly newsletters to New England dive shops, may be bearing fruit. In March, at the Beneath the Sea show in New York, I had to travel nearly the entire sideshow of exhibitor

booths before coming across one poster that depicted scuba divers with their masks wrapped at their necks. It was at the SSI booth, and the eager novitiates manning the space were chattering away and handing out information sheets. When I got the attention of one of the people working the booth, I advised her that the hapless divers portrayed on the back-drop couldn't make use of the snorkels attached to their masks -- and those people in the picture had to have removed their regulator second-stages from their mouths to have dragged their masks to lodge under their chins. What I got in return was the "thousand-yard stare" common among beginner divers who've been taught a wrong thing to do and have then been set upon the rest of us to evangelize the dangerous drivel.

Only one booth out of several hundred had scuba so poorly represented in its decorations. As I said, our campaign might be working.

Fred Calhoun has been a certified scuba instructor since 1958, and has taught more than 1,000 Navy scuba divers, owned a dive store, written nine dive books and currently runs a charter boat. He has produced the Boston Scuba Show since 1967.



Divers Compass: My Turkish Airlines from JFK to Cairo via Istanbul cost \$1,140 . . . My eight nights on the Andromeda cost \$1,442 . . . I also bought a package that consisted of Sudan and Egypt visas, the passport registration fee in Sudan, airport departure taxes, tourism fees, the cost for a Sudan agent meeting me at the airport, two nights at a Cairo hotel, round-trip flight from Cairo to Port Sudan, and ground transportation for \$1,159 . . . Somalia pirates often cruise the Gulf of Aden, at the Red Sea's southern end, but have not attacked boats in the Red Sea . . . There are travel warnings for the border between northern and southern Sudan, as the south plans to become an independent state this month, but Port Sudan is far from that region; still, check the U.S. State Department website (<http://travel.state.gov>) for updates . . . I recommend booking this trip through Cliff at Reef & Rainforest (www.reefrainforest.com) . . . For planning a relaxing stay in Istanbul before going home, contact Ufuk Gokdeniz at Matiana Travel (www.Matiana.com) . . . Andromeda's website: <http://cassiopeiasafari.com>

Puerto Morelos, Yucatan, Mexico

decent reefs, great cenotes

Imagine sipping mezcal on your large rooftop patio, immersed in a Jacuzzi and watching palms wave, birds dive and white foam break on the reef just offshore. It's not the Travel Channel, it's a suite at La Ceiba del Mar, just north of Puerto Morelos. It's a quiet fishing village on the hotel-and-condo-covered Riviera Maya. Or is it? According to locals, few of them fish anymore; most use their boats to take tourists fishing, snorkeling, and diving, but. It is a small town with a lot of charm, just a 20-minute cab ride from the Cancun airport. Tourism has transformed real estate values, not that there's anything wrong with that.

After 25 years of diving Cozumel, staying on the mainland offered a chance to dive its very different reefs and cenotes. I chose to dive with Dive In Puerto Morelos, run by affable U.S. expat Brett Nielsen. The shop, two blocks from the town pier, is unprepossessing; small but big on service. After arriving with gear, I didn't wash or carry it until the end of the trip. Nielsen is an experienced instructor, and when I arrived, he was finishing an openwater course with a young man. While I was there in May, wind blew, waves were high, and visibility was low -- no problem for a diver with some experience, but problematic for students. The famed cenote dives are even more problematic for the novice diver because they are largely in the dark with light peeping in at the edge of caverns.

The area became a national park about 10 years ago. My first dive was on a WWII-era minesweeper sold to the Mexican Navy and cleaned up to make a penetrable dive, however, some doorways were tight. Though this wreck had several names more or less agreed upon, few dive sites do. Evidently, with a few exceptions, each shop names its sites, and the marine park has given up trying to foster agreement. Like the more spectacular SS Yongala in Australia, this wreck is sunk on sand at 90 feet, with nothing else around it, and thus is a major fish attractor (or as I like to think, the only bar in a dry county). As we slipped down the mooring line, clouds of bigeye scad and anchovies appeared, with piscivores like barracuda and permits darting in and out. Two cubera snappers swam from sight, while mellower black groupers hung around, unafraid of divers. The wreck's interior was home to schools of smaller snappers, with other fishes making their way around, including a hefty lionfish (yes, they are here). In two dives on this site, I saw a large green turtle on one dive and a mating pair on the next.

Patch reefs, some with small swim-throughs, predominate. Be prepared for some impressive surge, particularly if the wind is blowing. On Puente (named for its natural bridge), as well as its neighbors, I was astonished by the aggregations of grunts,

hundreds and hundreds of French, smallmouth, striped, blue-striped, white, Caesars, and porkfish. Though different species, each featured yellow somewhere on their bodies, and they looked like yellow clouds of gently milling fish with no aversion to divers.

Underhangs and holes in the patch reefs yielded large crabs, some spotted spiny lobsters, and eels, both spotted and green. Perhaps the most unusual fish behavior I witnessed was a school of hefty yellow jacks hunting a spotted moray at the site Parco Uno. Clearly cooperating and flashing hunting colors of reticulated yellow, the jacks chased the eel from hole to hole, striking ferociously when they could. Evidently, cooperation doesn't always work -- the eel survived -- but it was fascinating to watch.

The skiff was a typical boat for the area, with a small, hard-top sunroof and benches with no padding. When the weather kicked up with rain and high seas, entering the skiff after diving was hard, even though the captain took all gear from me before I climbed the wooden ladder. My shins took a beating. Entries were backrolls, and, owing to surface currents, one submerged immediately. Both the captain and divemaster Carlos Arias, a laid-back former San Diegan, were helpful, loaded the gear and set it up the way I liked it. On one dive with low visibility, my buddy suffered a sinus squeeze, stopped descending at 25 feet, and disappeared from sight. Carlos snapped into action. He immediately went to the surface, alerted the captain, then descended and swam quickly to my buddy's entry point. Thankfully, all was well -- my buddy stayed in the same spot, the sinus cleared, and we finished the dive with some great sightings, including another large green turtle.

The essentially square profiles of the area beg for enriched air, but no shop in Puerto Morelos offers it. I surfaced with at least 1,000 psi on all the dives. If I dove nitrox rather than air, the deco limits would have allowed longer dives. The local culture seems to keep intervals short, which also cuts down possible no-decompression time; though I asked and received a few more minutes on the surface, no single dive lasted more than one hour. Given the rough seas, it was fine to return to dry land, but I think most divers would prefer the option of longer dives.

However, my day of cenote diving was truly unique. All dive guides who lead cenote tours are tech divers, and Francisco, a worldly and intelligent Spaniard, was devoted to DIR diving, but not obnoxious about it. As he drove to the Chak Mool cenote, his knowledge of and enthusiasm for cenote diving shone. The entire Yucatan was originally a coral reef that arose from the seas thousands of years ago (yesterday, geologically). It is riddled with freshwater caves and caverns, flowing with crystalline rivers; cenotes nearer the shore feature haloclines of warmer seawater sitting below 30 feet. Each of the popular cenotes features guidelines through the caverns, and signs warning divers where not to go.

Francisco briefed us on signals and sights, carried gear down carved rock stairs to the cenote entrance, and the first dive began.

Puerto Morelos, Mexico

Diving (<i>experienced</i>)	★★★★½
Diving (<i>beginners - if it's calm</i>)	★★
Diving (<i>cenotes</i>)	★★★★½
Accommodations	★★★★½
Food	★★½
Service and Attitude	★★★★
Money's Worth	★★★★½

★ = poor ★★★★★ = excellent
Caribbean Scale



La Ceiba del Mar, Puerto Morelos

The Only Way to Get Close to Beluga Whales: Dive Naked

Braving sub-zero temperatures, a female freediver threw caution -- and her clothes -- to the wind to get near two beluga whales in a scientific experiment. Marine biologists believe belugas do not like to be touched by artificial materials, such as wetsuits, so skilled freediver Natalia Avseenko was persuaded to strip naked and take the plunge in Russia's northwest corner of the White Sea, where water temperatures hit minus 1.5 degrees Celsius, or 29 degrees Fahrenheit.

The average human could die if left in sub-zero temperature seawater for just five minutes, but Avseenko, 36, used yoga and meditation techniques to hold her breath and stay underwater for 10 minutes, 40 seconds. And yes, the belugas let her get close enough to touch. You can see NSFW photos at www.dailymail.co.uk/news/article-2004042/Naked-female-scientist-tries-tame-beluga-whales-arctic.html#ixzz1QhQhxMqg

Warning: The freshwater is crystal clear but chilly, a constant 76 degrees. Bring a hooded vest, a good wetsuit and a light. But the cold water was worth the diving. The caverns were filled with stalactites (fewer stalagmites), and views through the rock windows, holes and entries featured brilliant blue and green refracted light, sometimes with trees silhouetted beyond.

It was the haloclines, where fresh water meets salt water, that fascinated me most. They appeared first as lines in the water, but once immersed in their warmer salt water and adding air to compensate for its density, I was pleasingly disoriented. The best analogy I could come up with is swimming through oily quartz, as if your mask were filthy. I relaxed and followed Francisco and enjoyed the spacey sensation. Ascending into the fresh water literally clarified everything. Despite the higher cost and the colder water, I wouldn't have missed the cenote dives for anything.

On the creature comfort scale, La Ceiba del Mar is good but has some problems: great beds, gorgeous pool, but electronics that often failed. Broken air conditioning and leaks in the roof meant I had to change rooms twice. There is a spa, and Joel, the therapist, is very good. The fitness center was respectably fitted out, and there was a yoga or Pilates class at 8 a.m. and 5 p.m. every day. People complain rightly about the food there -- the menu caters to western taste, and quality is not high -- but I discovered that if you ask the chef, he will make you real Mexican food, not the gussied-up bland stuff on the menu. I particularly enjoyed enchiladas with black mole andachiote-grilled shrimp. Avoid the option of all-inclusive food, because you owe it to yourself to eat in town as well as at the hotel. One civilized touch was a coffee service delivered every morning to the room at a specified time. Served with juice and baked sweet breads, it was enough for my pre-dive breakfast.

Food in Puerto Morelos is quite good and cheap. Cochinita pibil, slow-roasted pig with tamarind, is available on the streets in the mornings and is delicious. Ceviche at La Playita is fresh and abundant, and the local foods at Dona Triny's are tasty and cheap (dinner for two was \$18 with sodas, no beer). The walk from Puerto Morelos to the hotel is an easy 25 minutes on the beach, or five minutes and \$4 by taxi.

Because I am not a beach nut, the usual enticements of the Riviera Maya appeal little to me, but for a vacation with a side of diving, I would happily return. I saw a Mandarin Oriental hotel south of town, and have my eye on that for a future visit.

-- A.E.L.



Divers Compass: Dive In Puerto Morelos offers two-tank private dives for \$130 in the morning and \$100 in the afternoon; a six-tank, three-day ocean diving package (not private diving) is \$190, and a two-tank cenote dive trip is \$150, including lunch . . . All fees include the national park wrist tag . . . La Ceiba del Mar lists rooms from \$229 to \$504, though I paid \$225 through www.jetsetter.com for a master suite, and \$300 to upgrade to a penthouse for the whole stay, which comes with a \$300 spa credit . . . Dinner with drinks at the hotel cost around \$40 per person, while in town it's closer to \$15.

Websites: www.diveinpuertomorelos.com; www.ceibadelmar.com.

The Most Dangerous Fish

forget sharks, these are the teeth to be cautious around

It was November 2000 on a Palau liveaboard. The weather was not good, but *Undercurrent* reader Charles Edson (Washington, D.C) descended 60 feet to a sandy bottom. He was equalizing when, wham! Something hit his ear. “It felt like a smack from a rubber mallet. Behind me, I saw a fish dash into the rocks. I swam to my wife with my hand on my left ear. When I moved my hand away, a green cloud drifted from a wound. Her eyes got as big as saucers. She and the divemaster thought I had burst an eardrum and accompanied me to the surface. Later, I learned that the same fish had attacked two other divers. One had a chunk bitten out of his wetsuit, and the other nearly had her mask knocked off.”

Fortunately, one of Edson’s diving partners was an ER doctor. “He had sutures and some antibiotics, so he sewed up my ear lobe. The fish’s teeth had cut completely through my ear. In a day or two, my ear was bright red and had bloomed nearly twice its size, so the dive operation took me and my doctor friend to Koror. The hospital gave us enough drugs to keep me dosed with antibiotics during the rest of the dive trip, but I missed the last three days of diving. I was on IV drugs for a week-and-a-half as we were traveling in Bali before going on to Wakatobi. I resumed diving there, but bought a neoprene hood to protect my ear.”

Apparently Edson’s dive trip happened during breeding time for Titan triggerfish. While the chances of a shark attacking you while diving are very rare, the odds are better regarding the feisty Titan triggerfish. This seemingly harmless reef species packs a mean bite, and is more often the reason for divers and snorkelers sporting bruises and bites.

When we asked *Undercurrent* readers if they ever had any run-ins, we got plenty of replies.

While on a Raja Ampat dive, Dick Troop (Los Angeles, CA) was hovering over a reef 10 feet below and noticed a Titan lying flat on its side. “As I studied it, wondering if it was sick or dead, it popped upright, looked directly at my wife, Cindy, and accelerated at ram speed toward her. She looked up a second before the fish crashed into her mask, knocking her head back. Stunned itself, the Titan fluttered toward the bottom. While at first shocked, Cindy wasn’t hurt, and started to laugh. I swam towards her, trying to get her out of the fish’s cone of protection. When we got to the liveaboard, I looked up the fish in a book, which said that, when nesting, the Titan triggerfish is the most dangerous fish in the ocean.”

“It would swim rapidly, look for my blind side, dart in and attack.”

They Bite Fins, Cameras and, Yes, People

Scientifically known as *Balistoides Viridescens*, the Titan is the largest of the triggerfish species, and can grow to 30 inches in length. Native to the Indo-Pacific region, it can be found in the coral reefs of Australia, Fiji, Thailand, Indonesia, Philippines, the Maldives, even the Red Sea.

While only known to be aggressive and territorial during the reproduction season and when guarding its nest, the Titan triggerfish has an infamous reputation that can increase a diver’s anxiety. Their teeth easily leave fins in tatters, as Davis Pearson (St. Petersburg, FL) found out while diving in Sipadan. “I ran into a mated pair of Titans, the female building a rock nest to lay eggs in, and the male keeping watch. When I approached, the male swam around me at close quarters. While I tried to stay facing him by spinning around, he would swim rapidly, look for my blind side, dart in and attack. When I retreated to his ‘safe distance’, he would stop the attack. But he had bitten through my fin twice, leaving a hole that looked like someone had used a beer can ‘church key’ to open it.”

They even bite cameras, as Jim Virgil (Spring Branch, TX) found out while filming one in Palau. “He made a beeline to me and actually bit the camera lens. Scared the hell out of me” In the Red Sea, Ben Kendall (Wynnewood, PA) approached a Titan, hovering over its nest, with a Nikonos in his right hand and the strobe,

connected by a cable, in his left. “The fish charged at me, took the cable in its mouth and swam away with my camera and strobe. My wife came to my aid and retrieved the unit. It was unharmed, which is more than I can say for my ego.”

But other not-so-lucky divers have received bad bites. Donna Teach (Columbus, OH) remembers a dive at Yap to see mantas at cleaning stations, when a nesting Titan triggerfish went after her husband. “He had three encounters, often with the trigger chasing him yards beyond the nesting territory. At one point, the fish got at eye level and appeared to be going for his face. A mini boxing match began, with the Titan winning and taking a bite out of his forearm. This seemed to satisfy the fish, who finally left him alone.”

Karen Dunn (Massillon, OH) was muck diving in New Guinea, taking a photo of a blue ribbon eel when she was bitten on the thigh by a Titan. “It was quite painful; however, I had a dive skin on. The divemaster turned around when I yelled, and saw the Titan near a nest. The fish grabbed the divemaster’s fin and would not let it go. When we got back to the boat, my thigh had teeth imprints and there was a large bruise.”

Avoid the “Danger Zone”

Many of our readers’ triggerfish run-ins happened when they were in Palau. Curtis Kates (Los Angeles, CA) pinpoints Ulong Channel as a spot where divers are certain to find Titans. “After divers pass through the main part of the channel, one ends up in a sandy area where Titans make their nests in the sand. If a diver passes too close, the Titans will charge at full speed. On my last visit in May, several took a swipe at my fins. It’s a lot of fun on a safety stop to watch startled divers retreat from agitated, aggressive Titans.”

This may have been where Randy Preissig (San Antonio, TX) had a Titan experience. “During a rapid drift dive through a shallow pass, we saw dozens of nests and Titan triggerfish ahead -- and we had no place to go. After three minutes of attacks, I can assure you I’ll never dive without a wetsuit and camera. No one was bitten, but we all gained respect for these ‘harmless’ fish.”

“Diving through a shallow pass, we saw dozens of nests and Titan triggerfish ahead -- and we had no place to go.”

Titan triggerfish have a slightly elongated body, usually green to dark gray in color, and have yellow or green fins with black tips and a purple lower jaw. What stands out most is its eyes. Titans have independently rotating eye sockets, and look like they are giving you the evil eye just before they charge.

They are workers and can be seen busily turning over rocks, stirring up the sand and biting off pieces of branching coral, which is why smaller fish tag after them and feed off the leftovers. They’re solitary creatures, and like most reef fish, are active during the day and at night tuck themselves into the reef to sleep. It’s when they are nesting that they get feisty, and will rigorously protect these nests.

Max Benjamin, Walindi Plantation Resort owner, says May and late October through November seem to be the times they’re protecting eggs in his part of the world. “Without a doubt, those big bastards are the most dangerous animal in Papua New Guinea. The two that give us trouble are the Titan and Yellowmargin triggerfish. They like to develop nests on white sandy bottoms, digging large nests that look like bomb craters. While diving during nesting periods, I give these areas a wide berth, I never go closer than 30 feet toward a nest.”

The ‘Danger Zone’ you want to avoid is a cone shape extending from their nest, usually in the sand adjacent to or within the coral. A prominent sign of trouble is when the fish rolls onto its side to get a better look at you. Sometimes you’ll see its black fin tips rise in warning of the attack.

If you see a nest, swim away horizontally, as the zone they’re protecting is an upward cone. Ascending is not going to stop the Titan from defending its turf, as Debra Gookin (San Diego, CA) learned during a dive at Fiji’s Viti Levu. “I was 20 feet away when two Titans noticed me gliding toward them. One charged straight toward me. I pulled away, but the fish just kept coming, so I gave it a solid kick. It bounced off and flipped over, but it just reoriented itself and got ready to charge again. I swam quickly back toward the divemaster while keeping an eye on my attacker. The fish followed for a few yards. After the dive, the divemaster said I was fortunate to have fled by

Amphibico Shuts Down, Deep-Sixing Buyers and Warranty Holders

What's up with the British underwater camera gear manufacturer Amphibico, reader Alice McNulty (Redding, CT) asked us. "I have been trying to contact them for three weeks about returning my housing. I have called multiple times and e-mailed as well. I get only full mailboxes and voice mail in all departments. From looking at its Facebook page, I see people who have paid for new housings and haven't received them! It seems as if they may have closed?"

You're right, Alice. Amphibico has shuttered operations without telling anyone. Its website doesn't mention anything, but the 'Contact Us' page is blank, and the product lineup has disappeared. They didn't reply to our e-mails, and their voice mailboxes are still full.

Apparently, Amphibico has ceased operations, and is for sale or looking for an investor. One customer posted online an e-mail he received from Amphibico, which indicated that it closed April 21. It went on to say, "Bank recalled our loans that forced the owners to close and shut down the Amphibico division. If you placed an order after that date and we can complete it, you will be contacted soon, as plan to honor parts and warranty service still."

But we're not sure if that last part is true. Submerge Camera, a camera gear dealer in Kalamazoo, MI, was in talks to be a repair facility for Amphibico, "but after evaluation of the situation, we just would not feel comfortable being a representative of the line, with so much instability at this time," says Submerge Camera owner TJ Stansfield.

If you do have Amphibico camera gear that needs repair, you may be out of luck, as their North America office's voice-mail box is filled up, too. You can try Submerge Camera (www.submergecamera.com) or another underwater-camera dealer to see if they'll do it. Of course, you'll have to foot the bill yourself.

swimming away at the same depth, because the triggerfish defends a cone-shaped column that extends to the surface. If I had headed to the surface, the triggerfish would have continued to attack me all the way up."

If they come close, try to get your fins or a hard object like a camera, dive slate or other scuba gear between you and the fish. Chuck Wilson (Lincoln, NE) used his camera as protection while on a Palau dive. "As I passed over a patch of sand, a large Titan launched an all-out assault. Zooming at alarming speed, the Titan's dive-bombing runs came within a foot of my head. The only protection I had was my Nikonos, which I tried to keep between my head and the fish. On the last pass, the Titan hit the camera and left a small dent on the metal rim around the lens. Better that than my head."

Fred Turoff (Philadelphia, PA) was on a Sipadan dive when his group passed a nesting Titan too closely. "The fish bit the fellow next to me on the shin - - went through his wetsuit and drew blood - - then came at me. I was carrying my Nikonos V rig and hit the oncoming fish with it. That stopped the attack and we left the area quickly."

Mike Krampf (Houston, TX) recommends bringing a flashlight along for protection. "A Filipino divemaster in Malapascua told me that Titan triggerfish hate light, day or night. If you shine your flashlight at a triggerfish, even while it's guarding its nest, it will swim away. I witnessed it firsthand when the divemaster shined its light at the triggerfish, which quickly retreated. We were able to swim up and check out its nest while keeping the triggerfish away with the flashlight."

Krampf also brings up a good point: Why don't divemasters let you know ahead of time about nesting Titans if you're diving during breeding season? "It was my first dive off Sipadan. Unbeknownst to me or the other divers was that Yellowmargin and Titan triggerfish were nesting. I learned the hard way - - taking pictures of amazing macro critters when all of a sudden it felt like someone hit me in the head with a baseball bat. I immediately knew what it was. After the dive, I showed the divemaster the cut on my head. I was amazed at his reaction: 'You were lucky. Last week, a girl got bitten in the cheek and it took out quite a chunk.' Needless to say, I was amazed that nesting triggerfish were not mentioned in our dive briefing."

Medical Advice for Bite Victims

If you are a victim of a triggerfish bite, don't panic, says Doc Vikingo, a frequent *Undercurrent* contributor. "They are not venomous, nor do they carry any unusual marine pathogens. That's not to say you can ignore their bites. Viral, bacterial and fungal illness can be, and are, contracted by breaks in the skin exposed to water. Bacteria of

particular concern with such a bite include *Mycobacterium marinum* and a number of *Vibrio* species. Treatment is largely common-sense first aid. Flush the wound with copious amounts of fresh, clean, warm water. If a syringe or the like is available, it can provide high-pressure irrigation. Then gently scrub the wound with soap and water to remove foreign material. Remove dead tissue with sterile scissors. Follow by cleansing with hydrogen peroxide (only really effective with a fresh bottle) or isopropyl alcohol. Apply a thin layer of Bacitracin ointment or similar three times a day for three to five days. Keep the wound dry, clean and covered, but not completely cut off from the air.”

And to keep it infection-free, Nick Bird, CEO and chief medical officer of Divers Alert Network, recommends hanging up your fins for the rest of the dive trip. “In the water, bites are way more prone to get infected and be more virulent.” He also recommends a post-bite tetanus booster if it has been more than five years since your last one. Watch for signs of infection such as redness, inflammation, tenderness and warmth. “If you get bitten on a finger or hand, it merits medical attention because the consequences of infection are worse than if the bite is on the middle of your arm,” says Bird. “Ditto if a joint is involved.”

If signs of infection appear, prescription oral antibiotics may be necessary. Get a professional evaluation, even if you’re in a foreign venue where you can purchase antibiotics without a prescription, as you almost certainly won’t know which one to take. In cases where the bite requires suturing, the medical folks attending may prescribe an oral antibiotic prophylactically.

That said, it’s important to remember that Titan triggerfish are only defending against what they believe are intruders in their territory. We shouldn’t harm or behave aggressively towards them in any way, as this will only make them more wary of divers. Defend yourself by dealing with this feisty fish in a non-aggressive manner.

-- Vanessa Richardson

Litigation: The Dive Industry’s Biggest Threat?

viewpoints by a British dive gear maker and an American lawyer

We often discuss the effects of lawsuits on the dive industry. The most recent was in our February story “Who’s Responsible for a Diver’s Death?” in which we compared the U.S. with other countries in investigating and explaining dive-related deaths, and assigning blame. Martin Parker, managing director of the English rebreather manufacturer Ambient Pressure Diving, had something to say about the topic, based on his experiences in courts on both sides of the Atlantic. Below, he gives his opinion, referring to his experience being sued in the U.S. (read the details in our February 2009 story “Rebreather Firm Wins Its First U.S. Lawsuit) and how the trial shaped his view of the responsibilities of divers, equipment makers and the legal system.

We have been making dive equipment since 1969, and always knew the potential for a lawsuit, so when the dreaded American lawsuit came in 2004, one day before the statute of limitations ran out, it was really one of those things that “we knew would happen one day.” The sad fact is that there are around 400 diving deaths globally, and just over 100 of those are in the U.S. Approximately 20 occur worldwide while using rebreathers of various makes.

With open-circuit equipment, investigations are often a straightforward affair, but that wasn’t always the case. In the late 1950s, the original regulator was known as the “widow maker,” but as the product becomes more widely used and people understand that there are a myriad of potentially fatal causes, there is less emphasis on blaming the equipment and more focus on what the diver did and why. Rebreathers have followed the same pattern.

One of our customers died in 2004 while using one of our Inspiration rebreathers. It is a product that has been tested several times by various third-parties and agencies including the Navy test houses worldwide. Each time, it has been found to be an extremely reliable piece of gear. Named in the broad-brush lawsuit was everyone in the chain of supply: the manufacturing company (us), the manufacturer of one of the critical components, the facilitator of the sale and his partner who owned the dive shop that allowed its credit card machine to be used to take payment, the dive instructor, the training agency, the equipment examiner, and even the dive boat owner whose boat the deceased

Fish Do Feel Pain

You may not hear them say “ouch,” but fish feel pain just the same, according to a new book, *Do Fish Feel Pain?* by Victoria Braithwaite, a professor of fisheries and biology at Penn State. She argues that fish, like most other organisms, are capable of experiencing pain, and that humans can cause fish to suffer. She found that fish have the same kind of specialized nerve fibers that mammals and birds use to detect noxious stimuli, tissue damage and pain. She also explored whether fish are sentient beings, and whether an organism must possess “awareness” to experience pain.

“We now know that fish are actually more cognitively competent than we thought - - some species of fish have very sophisticated forms of cognition,” Braithwaite wrote in a press release. “In our experiments, we showed that if we hurt fish, they react, and then if we give them pain relief, they change their behavior, strongly indicating that they feel pain.”

She was drawn to the issue after reading about fish-farming concerns. “By 2030, half of all fish that humans eat will come from fish farms,” Braithwaite told *Discovery News*. “It seemed logical to me to care about fish, because agriculture

in general is confronting animal-welfare issues. If we are concerned about animal welfare, we should be concerned about animal welfare.”

She believe the U.S. is 10 years behind Europe in its thinking about the way it keeps and kills animals in agriculture. Those concerns are now being extended to aquaculture. “Electrical stunning may change the way we harvest fish at sea. We have a responsibility, I think, to make clean and quick kills of the fish we eat. Certainly, most of us are not comfortable with piles of fish slowly suffocating on the decks of fishing trawlers at sea and in port. People are rightly asking, ‘Isn’t there a better way?’”

To do this on a wide-scale commercial level, Braithwaite recommends that protections related to pain and suffering now given to birds and mammals should be widened to include fish. “There is a perception that fish have simple brains and are incapable of feelings, and this has somehow made them different from birds and mammals when it comes to our concerns for their welfare. But we now have strong evidence that suggests fish are more intelligent than previously thought, and their behavior more complex.”

had dived from 10 weeks prior to his death. All parties were subsequently released from the case, with the exception of the manufacturer (us), who carries the ultimate responsibility. Judges and coroners on both sides of the Atlantic were keen to allow the widow her day in court.

Over the next six years, both parties investigated the incident. The discovery process, where you have to produce all documents pertaining to the matter, is a massive undertaking. In the end, copies of our hard disks were held with a forensic company in the U.S., and the plaintiffs were allowed to search the data. At a joint equipment inspection, we found the equipment was working exactly as it was supposed to. I repeated the dives done by the deceased so I would know what the dive site and the conditions were like that day. Three personal depositions later, we were ready to go to trial in New Hampshire.

The plaintiffs, though, were still fishing. They spent eight full days presenting their case, and at the end, it was clear to all they didn’t have any evidence. They spent their eight days simply trying to trip up the various witnesses and discredit everyone involved. In contrast, our defense took just one day. The next day, we heard the summing up by both prosecution and defense before the jury deliberated. The jury was out for just 30 minutes before unanimously concluding that we the manufacturers were not responsible for the death. Federal Judge McAuliff agreed with the jury’s decision, and awarded my company some of our legal costs.

Around the world, plaintiffs are attracted by the “no win, no fee” deal offered by their lawyers, but are they really aware that they will potentially be liable for some of the costs if the case should go against them? I don’t know for sure, but I don’t believe the widow was made aware of her potential liability, and I suspect she has a legitimate claim against her lawyers for those costs. Certainly in Europe, where the loser pays all the costs, there is a desire to have some evidence “in the bag” before going to trial, and a “no win, no fee” deal would only be offered by the legal team if either the evidence is overwhelming or they hope for a quick settlement from the defendant’s insurance company.

In the U.K., the battleground tends to be the inquest. Having given evidence at three inquests, it seems common for the coroner to allow the widow and her lawyers free rein to follow any and every avenue. During this process, both sides bear their own costs. Before the inquest, the coroner binds you not to release information about the incident, which is frustrating for everyone, and is wrongly seen by some as the manufacturer withholding information.

Invariably the decision is Death by Accident, but in some cases there isn't sufficient information to decide the cause of death, so the coroner records an Open Verdict -- which is all pretty unsatisfactory from the family's point of view. But, the coroner's job is to simply decide who died, where they died, when they died and how they died. An inquest is not about apportioning blame.

In the U.S., the lawyer who does the groundwork is often the lawyer who stands on his feet and fights your case. In the U.K., by comparison, you use a solicitor (British for lawyer) and then employ a barrister to fight your case in court. This means going through the education of the legal team twice over, and sometimes time is a little tight for that. Litigation is one of the biggest threats facing the diving business. Competition from other equipment manufacturers is healthy, but the litigation isn't. It cost us three years of profits to fight our U.S. case, but luckily, enough of our shareholders share the same passion for the business as I do, so they were completely supportive.

I love diving and I love divers . . . well, most of them. I have a passion for the business and for ensuring standards are upheld, and when someone wants to take away everything we have worked for in the past 40 years, you tend to dig in and be pretty stubborn.

So how does Parker's opinion fly on this side of the pond? We asked Rick Lesser, the head of Lesser & Associates in Redondo Beach, CA, and an attorney who has tried multiple dive cases in court, to respond.

In response to Martin Parker's comments, I agree somewhat. In my recent DEMA seminar section named "Top Ten Reasons Why Dive Professionals Get Sued," one of the first reasons is that "Dive Equipment Works." Having been involved in dive litigation for more than 30 years, and more recently on both sides of cases, I will say that Parker's view is generally accurate as it relates to equipment, but the ineptitude that is sometimes seen in instruction and supervision is staggering. So a broad statement covering simply a diver's death needs to be addressed further as to whether it was supervision-based, vessel-based (like leaving them in the middle of the ocean), or equipment-based. The last two are extremely rare these days, but supervision and instruction, problems particularly involving beginning or recently certified divers, are still very much with us.

While the English system may seem more equitable, the U.S. system allows heirs even without money to obtain access to the courts and a potential verdict in the event of dive instructor negligence or incompetence that leads to a loved one's death. Parker is also right in a sense that if a case is correctly analyzed, and the defense makes a very low offer and then does better in front of a jury, then the plaintiff will have to pay costs, but a careful analysis by experienced dive attorneys should avoid that problem. In short, like trying to determine who exactly is a Jones Act Seaman, determining responsibility for a diver's death is a broader question than Parker addressed in his comments.

Diver Rescued off Bimini

thanks to not one, but three skilled captains

The diver could see his boat, but could not swim to it. He saw his wife onboard as she searched for him, looking in the opposite direction. Within minutes, Captain Mike Galgana heard the wife's radio call reporting her missing husband. His mind immediately shot back to a similar call years ago, a call he didn't answer, a call he thought other boaters would help with.

"I'll never forget the time. Guys were trapped in an overturned boat and they didn't survive," he said. "I regret not going to help." He didn't want that feeling again, so he conferred with Captain Baron Rohl on *M/Y Texas Star II*, who immediately put a call out for nearby vessels to help in a search. Captain Russ Grandinetti, aboard *M/Y Jade Mary*, heard that call and jumped in his tender.

It was late May near Bimini. Sara Cesbron had called for the U.S. Coast Guard about 4:30 p.m. when her husband, Jean-Jacques Cesbron, failed to return from a dive. She, their 18-month-old son and his 81-year-old father

had remained onboard. “She was on the radio and calm, but you could tell she was getting frantic,” Grandinetti said. When he arrived at the rendezvous spot, he found Rohl, a friend he had known more than 20 years. The three yacht captains each had many years on boats, and they pooled their knowledge to define the area using location and conditions, with calculations made from the coordinates of the diver’s anchored vessel, the *Jacques Angelo*, between Turtle Rock and Gun Cay, about two miles off of Cat Cay. “All the boats fish there,” Rohl said. “It’s shark alley.”

To figure out which direction Cesbron might have drifted, Rohl filled a water bottle with seawater and enough air to keep it above surface, and tossed it in the water. Grandinetti used the same technique to verify the wind was pushing his tender south as the current flowed north. They determined the Gulf Stream was flowing about three knots to the north, and organized the search at the south end of South Bimini. Radio contact between the tenders was limited because of technical issues, but the three instinctively made the right decisions in how to proceed with the search. “We all knew what had to be done,” Grandinetti said.

For a couple of hours, Rohl and Galgana ran their tender parallel to the beach a mile from shore, and searched with binoculars while Grandinetti ran a zig-zag from shore to their tender and back to shore. It was after 7 p.m. As dusk fell, the winds picked up to 15 knots out of the northeast. The tenders were running low on fuel. With the setting sun, objects in the water were harder to see against the choppy sea.

Cesbron had been in the water several hours and had ditched his tanks. He was tired and dehydrated. He spotted a tender and held up his mask. The last glints of sunlight caught it and alerted Grandinetti. “I saw what looked like a little black coconut in the water. I literally almost ran into him.” Pulling him aboard, Cesbron asked, “How did you find me?”

“By the grace of God,” Grandinetti said. “Now get in the boat.”

Hours after the rescue, Grandinetti was somber when thinking about the waning light and time. If they had not found him when they did, he said, the outcome would have been much different. “It would have been the difference between a celebration and a funeral.

This story, written by Dorie Cox, originally appeared in The Triton.

Divers Try to Speak “Dolphin-ese”

Dolphins can understand more than 100 words, decipher human instructions and even use iPads to learn basic communication skills. But that’s unfair of us humans, don’t you think? Shouldn’t dolphins be able to ask for more smelt without learning our sign language or using our gadgets? A researcher in Florida aims to meet the mammals in the middle, creating a new language that both humans and dolphins can understand.

Denise Herzing, founder of the Wild Dolphin Project in Jupiter, FL, and Thad Starner, an artificial intelligence researcher at Georgia Tech, developed software called Cetacean Hearing and Telemetry (CHAT) and is testing it this summer. It involves a small computer encased in a water-proof shell and two hydrophones capable of detecting the full frequency of dolphin sounds, which can be up to 10 times higher than the highest pitch a person can hear. A diver will strap the computer to his chest, using a handheld device to select which sound to make in reply. The diver will wear a

mask with LED lights that indicate where the sounds are coming from, so he will know which dolphin is talking.

The team hopes to create a new language using a call-and-response method. Divers will play one of eight sounds they’ve already created, which correspond to dolphin desires like “play with seaweed” or “ride the boat’s wake.” Using CHAT software, the diver will determine whether the dolphin repeats the sound. Over time, the system will learn to recognize the dolphins’ accent, as it were, and learn how to decipher natural dolphin sounds. Ultimately, the goal is to serve as a sort of Rosetta stone for dolphins, deciphering the fundamental units of dolphin language.

Herzing has successfully taught dolphins to associate symbols with specific requests, like “play with seaweed.” But her system wasn’t very dolphin-friendly, she tells *New Scientist*. The CHAT system will ideally play to the strengths of both dolphins and humans, allowing people to make dolphin-like communications that are more appealing to the cetaceans. And then they can tell us what they really think of living as aquarium attractions. -- Rebecca Boyle, *PopularScience.com*

Flotsam & Jetsam

The Most Whales Ever Recorded. Undercurrent was the first dive publication to report the summer whale shark circus happening in Mexico, between Holbox and Cancun. Scientists at the Smithsonian recently made an accurate count of the group north of Cancun: 420 individuals, all in search of their favorite food, zooplankton, which is the world's smallest organism. A less dense gathering, known as the Cabo Catoche aggregation, off the northern tip of the Yucatan, prey mostly on shrimp and small crustaceans called copepods. Apparently, the same animals are involved in both aggregations. Last year, Undercurrent subscribers contributed more than \$30,000 to provide buoys that keep tankers and other ocean vessels away from these gatherings.

Diver on a Mission to Find the Dead Bin Laden. A California salvage diver is preparing a two-week trip this month to the north Arabian Sea to make sure Osama bin Laden is really dead. Bill Warren, 59, vows to scour the sea bed to find the al Qaeda's leader corpse and take photographic evidence. Warren, who has discovered more than 200 wrecks, said he wanted to expose the truth. "I'm doing it because I am a patriotic American who wants to know the truth. I do it for the world." He expects to spend \$400,000 for the trip, renting a ship in India for \$10,000 a day, and another \$1,000 per day for a remote-operated submarine.

More Shark Protection in Latin America. Honduras is declaring its waters, both Pacific and Caribbean, to be a permanent shark sanctuary. President Porfirio Lobo Sosa signed the bill banning commercial shark fishing into law during a visit to Roatan last month. Legislatures in Chile unanimously backed a bill to ban shark finning in its waters; it now awaits action by the Senate before President Piñera can sign it.

Diver's Death by Propeller. Hitomi Shibata, 22, died instantly after her head struck a boat propeller while she was diving near Phuket, Thailand, on May 4. She was taking an openwater course with Kontiki Divers. Apparently, Shibata pushed the inflator button on her BCD too hard, causing it to inflate rapidly, carrying her headfirst into the propeller of the dive boat, which was maneuvering to pick up another group who had just finished their dive. While this was diver error, when will boat captains learn to keep their engines in neutral when there are divers down? Moreover, what crew members failed to keep a lookout?

Terrorizing Bear Gets Away Scot Free. Brian Horch was diving in Puget Sound last month when he saw what he believes is the suspect in terrorizing events that forced the lockdown of three schools in Port Orchard, WA. Officials were trying to track down a black bear roaming the town streets, hence the school shutdowns. They baited a trap with doughnuts and marshmallows drenched in syrup, but the bear ignored it. They got close enough to hit it with a tranquilizer dart, but the bear ran off unharmed. Perhaps he sensed his luck was running out -- Horch saw the bear swimming from Port Orchard to Bainbridge Island, which hopefully has more unpopulated space for him to roam.

We're Appreciated -- and We Appreciate It. *Undercurrent* just received a \$1,000 grant from the Singing Field Foundation, a family foundation in New Hampshire that gives grants in the areas of environment, animal welfare and health, and other causes close to family members' hearts. Jonathan Scott, Singing Field's president, wrote us that the grant is for "continuing support for your coverage of environmental issues, advocacy and fundraising for marine conservation causes." And that's what we'll be using this money for.

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