

# Undercurrent

*The Private, Exclusive Guide for Serious Divers*

Vol. 17, No 1

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## Galapagos Islands, Ecuador, S.A.

*--adventure travel by land and sea*

Dear Reader,

We were struggling into our suits for our first dive when a shout went up: "Killer Whales!" Sure enough, directly in front of us two enormous triangular black fins were cutting through the water. Everyone dashed forward, frantically grabbing for cameras, as the fins moved to within ten feet of the rail, then swerved and sailed rapidly out of sight. Such was my dramatic introduction to the Galapagos Islands.

I am in the land of Darwin to explore above and below water the menagerie of creatures which once gave rise to the theory of the origin of species. But I am on a boat far beyond Darwin's wildest dreams. The Lammer Law, allegedly the world's largest trimaran till she was upstaged by her sister ship, the Cuan Law, is most elegant. Freshly overhauled, with her gleaming blue and white paint, she is a thing of beauty! And what she has to offer is indeed unique: the romance of a sailing vessel combined with a degree of creature comfort seldom found in a liveboard dive boat.

The Lammer Law is 93 feet long and 42 feet wide, providing an enormous amount of open space beneath the two main masts and two narrower jibs. A large amount of room has been allocated to the eight cabins off the main saloon; half sport queen-sized double beds and half have twins. All are equipped with bathrooms, showers, and space for hanging clothes and stowing gear. All meals are served at tables on the deck. The bins for dive equipment are awkwardly located behind the tables, and the space for suiting up is cramped, though this problem is partly ameliorated by the helpful crew. Deck space for photographic equipment is so severely limited that we were urged to keep our cameras and assorted paraphernalia in our rooms.

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The Lammer Law was originally based in the British Virgin Islands, but several years ago she made an expensive trip to the Galapagos. Just as she was preparing to move into high gear, the Ecuadorian government canceled her license, threatening her with financial disaster. Fortunately, things were ironed out and she has been operating from San Cristobel, in the Galapagos, for almost a year.

The overall direction is handled by Mathew Sellers, a smooth, competent young Englishman who briefed us on the boat and what to expect in these waters. "What to expect", it turned out, is the "totally unpredictable". There may be no current -- or a current of great power; it may come from one direction, then stop or reverse itself -- or even shift to a vertical plane. The water can be clear or turn extremely murky, particularly in the first 40 feet or so where plankton grows vigorously. Visibility may be great in the morning and drop to a miserable 10 feet in the afternoon. And since the unexpected may overtake you at any point, he repeatedly emphasized, "this is very, very advanced diving!" Divers may emerge a considerable distance from where they went in (two people were once recovered several miles away), so we were all issued the inflatable red balloon sausages to use as visual signals when necessary and air horns were connected to our BC pressure hoses.

Our first dive, taken after an overnight sail, made all this information dramatically evident. We were diving McClaren Rocks, formations that barely break the surface of the open ocean. No other boat can make the dive, since the rocks are only locatable by the satellite navigation system of the Lammer Law. Our briefing (conducted by Mathew and the two divemaster/naturalist crew members) informed us that we would go down roughly 70 feet and work along the sides of the wall, hopefully encountering large pelagics in the process.

Visibility below the surface virtually ceased, and I lost my dive buddy immediately. Just ahead I could dimly make out the shapes of a couple of other divers, so I followed, striving to keep them in view. And I went down, peering ahead to get the first glimpse of the bottom. After what seemed like a considerable time, I looked at my gauge and realized I was deeper than 130 feet. The 70-foot depth had been a very rough approximation! I leveled out and finally made out the shape of the rocks. Visibility suddenly increased significantly, and I could see lots of color and fish on the wall, my buddy some distance away, and several other divers. Buoyancy control was a problem because forces kept shifting me up and down, but the scenery was lovely. Just as I was setting my camera to capture a King Angel, a current suddenly pulled me inexorably backwards away from the wall. As I watched helplessly, the colors and the fish and other divers gradually faded into shadows and visibility shrank to nothingness. It was both frustrating and alarming to experience such an abrupt loss of points of reference. There being no viable alternative, I decided to surface, after hanging out a few minutes at 20 feet (and hoping I was still in the same continent). No signs of life were at first visible over the high chop of the waves. I bobbed on the surface for a time, debating about inflating the red rescue sausage, but a panga ultimately appeared and retrieved me.

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## Unnecessary Diver Death

If there was ever a need for a Safety Sausage, this was it.

The Coast Guard rescued two lost scuba divers from the Gulf of Mexico in mid-October, where they were attacked by barracudas and circled by sharks during a 21-hour ordeal. Jason Ganeson, who was not wearing a wetsuit in the mid-70 degree water, suffered exposure and became unconscious during the night and died later. His companion, Bob Miller, who was wearing a wetsuit, survived.

The 23-year-old men, who had made only five or six dives, were diving off a boat in about 80 feet of water, 20 miles southeast of Freeport, Texas. They resurfaced as planned, but were a quarter-mile from their boat. Because of wind and waves, they were unable to get the attention of the person they had left on the boat and the current prevented them from swimming back.

Though not an experienced boater, the boatman notified the Coast Guard by UHF radio and a helicopter, a jet, a 41-foot patrol boat, and several fishing boats joined the search. The men were eventually found six miles from where they had entered the water.

The death was unnecessary. Had either carried a Safety Sausage, a ten-foot compact plastic tube which is easily inflatable by a regulator, the boatman most likely would have been able to spot them. If not, subsequent rescue craft would have spotted them more quickly.

The Safety Sausage and similar devices are available in most dive shops. Or you can order one from *Undercurrent* for \$12 (2 for \$20). They're indispensable.

*Undercurrent*, 175 Great Neck Rd., Suite 307, Great Neck, NY 11021. 516-466-7788

My buddy's experience was similar, but we did better than a lot of the other divers who never managed to get to the rocks at all. None of the subsequent dives was so drastic, but current and complicating surge were always factors.

Things were a lot better at Champion Island. I dropped to 80 feet and spotted a large eagle ray resting nearby. As I and other divers drew near and the barrage of strobes began exploding, it took off in elegant flight. Soon a turtle passed within a few feet and did not object when I swam near him for a few minutes. Darkly outlined above was a hammerhead silhouette, well out of camera range, exemplifying the photographer's basic dilemma: all those fascinating creatures out there but either too far or too dim for pictures. Still, it was a special experience to share the water with these exciting creatures and to cherish the glimpses I was fortunate enough to get.

All diving was done from dinghies (one hard, one inflatable) into which we weaved precariously, encumbered by full gear, tanks and weight belts. Keeping one's balance from the mother ship to the panga was always a challenge. And re-entry to the hard panga from the water was tricky, though they did hook a small portable ladder over the side. Eight of us were in each panga, and we were drilled in backflipping simultaneously to avoid potential capsizing. When current was particularly strong, we were requested to hold our photography gear as we flipped, so we could submerge quickly.

The basic pattern of our days was: one dive, one shore excursion, lunch, another dive and another shore excursion. Two dives a day doesn't seem like much, but everyone was more than ready for bed when the time came. (Though there were video facilities and a collection of tapes for those who wished to be evening couch potatoes). We made a couple of night dives, but no one saw much of interest. My own consisted of patch after patch of endemic green sea urchins.

During the day, however, the marine life was certainly there: hammerheads, Galapagos sharks, a wide range of rays, turtles and the inevitable sea lions.

There were King Angelfish, large and various parrotfish with or without bumpheads, wrasses of all sorts, yellowtail snappers, grunts, damsels, surgeonfish, triggerfish, puffers and porcupine fish.

Twenty-three per cent of the fish are endemic to the Galapagos, found nowhere else. But fifty-odd per cent are largely affiliated with the "Panama Province" geographic zone which extends from Baja to Southern Ecuador with the offshore islands including Cocos Island of Costa Rica. So divers familiar with those areas could recognize the ambiance. Even California divers found something to make them feel at home -- sheephead. The underwater terrain was largely boulders and volcanic formations, substituting a stark angularity for the more colorful invertebrates of the Caribbean. Water temperatures vary from the mid-70s during January to March to the mid-60s July-October.

My late fall trip was not the optimum time for either visibility or water temperature. I managed to get by with an 1/8 inch suit, but just barely. In fact, during the checkout dive I was distinctly chilly and worried that I might be courting hypothermia in subsequent dives. Fortunately, either the waters warmed up or I was so busy coping with the dizzy currents I forgot about it. I am told that during the spring months there is a higher probability of calmer and clearer waters, though the air temperature becomes uncomfortably hot. (I had dived Cocos Island during the spring months and found the water clarity considerably better. It was an interesting comparison, since the flocks of hammerheads, turtles, rays, etc., were remarkably comparable, though my diving experience on Cocos was better, though Cocos does have the currents.)

With all the difficulty underwater, the Ecuadorian crew, speaking little English, made things easy, being unfailingly helpful with everything from assisting with gear to making an emergency dive to retrieve a dropped piece of equipment. Our cook, Raoul, is competent and innovative. Breakfast starts with various exotic juices from papayas, melons, pineapple, orange or tree tomato (an Ecuadorian specialty). Then there are eggs (often combined with different delicatessen meats), French toast, sometimes an interesting cornmeal creation, local jams and fruit. Lunch is a hearty diver's meal, generally combining several entrees with salad and dessert; e.g., one day it was Dorado, pizza, garbanzo beans, rice, lettuce and tomatoes, canned fruit and fresh bananas. Dinner always starts with soup, followed by rice, vegetables, fish or steak and dessert. After-dive snacks like popcorn, nuts or fritters were offered. The bar is run on the honor system, and coffee and soft drinks are always ready. The crew celebrated our last night on board with free drinks and a special large and colorfully frosted cake.

The land portion was considerably less demanding than the water -- and a real delight. Annie and Gabriel, our dive-master/naturalists, were highly knowledgeable about the flora and fauna which developed in these islands, isolated from contact with the rest of the world. Largely free of predators and protected from man, the birds and animals have a unique and fearless charm. Small local mockingbirds hopped on our shoes without the smallest concern. Blue-footed Boobies cavort and click bills together and Frigate Birds expand their magnificent red chests in mating rituals oblivious of their human audience.

| Galapagos Islands  |                           |
|--|---------------------------|
| Accommodations   | ★ ★ ★ ★ ★                 |
| Food   | ★ ★ ★                     |
| Diving for Beginners                                     | don't even think about it |
| Diving for advanced for me                               | ★ ★ ★                     |
| for some readers   | ★ ★ ★ ★ ★                 |
| Layout for Divers  | ★ ★ ★ ★                   |
| Layout for Photographers                                 | ★ ★                       |
| Land Touring   | ★ ★ ★ ★ ★                 |
| Moneysworth  | ★ ★ ★ ★                   |
| ★ poor, ★★ fair, ★★★ average, ★★★★ good, ★★★★★ excellent |                           |

## Getting There

Getting to the Galapagos is not easy. Miami is the gateway city; I took SAETA, the Ecuadorian airline, and found both the food and service excellent; round-trip to San Cristobal is \$670. I had to overnight in Quito, then fly to Guayaquil and on to San Cristobal Island in the Galapagos. There, I boarded the *Lammer Law*, and all subsequent traveling in the islands was by boat, returning the last day to San Cristobal, preparatory to flying back to Quito.

Both hotels and food are inexpensive in Ecuador, and it's pleasant to take a few days exploring, visiting the weekly markets in the

small towns and even venturing into the relatively untouched local jungle. If you're lucky enough to have a lot of time, there are wonderful places to hike and explore in the rain forest and the magnificent Andes. And there are plenty of tours ready and willing to guide you.

Land Fall Productions (800-525-3833; 408/246-4710; Fax 408/983-0677) can provide you with further information, as can any travel agent. Good books are *Lonely Planet's Guide to Ecuador* (by Rob Raohowiecki), and Paul Humann's *Galapagos*, a treasury of underwater shots.

Marine iguanas bask in the sun, unperturbed by the snapping of cameras, and ancient giant tortoises muse inscrutably and move on their slow and methodical ways with little interest or concern for their observers.

But the hands-down winners in charm and personality are the sea lions! Sharing our space in the water, they play with us, dally with us, tantalize and occasionally torment us. On land, they are present by the hundreds, interacting and expressing themselves with more vigor and variety than I could ever have imagined. The adults notice you but don't care, being concerned with their own affairs about which they vocalize enthusiastically. The mothers are disturbed only if we come too close to their babies and the males anger only if we appear to be a threat to their harem. The little ones find us fascinating, and they approach with all the curiosity of friendly puppies. Touching them is rightly forbidden--but very tempting. One alpha male decided I was getting uncomfortably close to his harem and launched himself at me in a rocking, lurching and very noisy charge--I backed off at top speed. Our naturalists taught us to respond to these sorts of challenges by clapping our hands as we backed (preferably calmly) out of range.

A slightly different encounter with their cousins, the fur sea lions, was offered us in our last days on the boat. We went to a grotto on one of the islands where the fur sea lions live. For a while we watched them climb the lava and dive back into the swirling waters of the tides below. Then we put on snorkling gear and, approaching their swimming hole through a broad tunnel, we snorkled in along a channel and joined them in the water (while our non-snorkling comrades took pictures from above). They paid little attention to us, but I found it a rather special experience to share their ambiance.

Evaluating the total experience of the *Lammer Law* depends on your priorities. For divers, the special appeal is the challenge, stimulation and exhilaration of adventure diving, seeing and sharing the elements with large, foreign and potentially dangerous creatures. But, clearly, it is not for beginning divers. Nor is it a good choice if underwater photography is your major goal, unless you have significant expertise.

For the amateur, the probability of the kind of pictures you might achieve in mild Caribbean waters is pretty slight. Now, if relaxation and the romance of sailing are your thing, you can bask in the sun beneath the dazzling white sails, assured of creature comforts. As for the land portion, it is hard to imagine

anyone not enchanted by the spectacle of unique, wild and fearless animals. Overall, I found the whole program a very rewarding one, indeed.

E. C.

**Readers Compass.** Trips range from 7 days (6 days of diving) at \$2000, to \$3000 for 14 days; 10-11 day trips are also available.... Tanks are aluminum 80's; take full wet suit including hood and gloves, just in case. ...Transderm patch might be needed for rough weather...Best diving Jan-March when it's hot and calm; May-June better for land animals because it is slightly cooler but still calm; August and September are rough weather months. . .Landfall Productions 800-525-3833; 408/246-4710; Fax 408/983-0677; Trimarine Boat Company 00/648-3393; 809/4942490; Fax 809/494-5774.

## Orca Industries Shuts Its Doors

*--Edge, Skinny Dipper, Delphi owners left in the lurch?*

If the good news at Christmas was that you found an Orca computer under your tree, then the bad news is that if you ever need it serviced or repaired, you may find no one to help. On December 20, Orca shut down their operations and closed their doors, the victim of faulty products and a tough recession.

While Orca was the first American company to produce a workable computer and initially had the market nearly all to itself, frequent problems with all its models kept it from ever getting on secure financial ground.

The original EDGE had transducer problems, leading to several bent divers. The Skinny Dipper was plagued with problems, not the least of which was that it leaked: an *Undercurrent* survey of readers found that as many as one-third of their Dippers had leaks severe enough to cut off the computer. The new Delphi had its problems, but having to recall the latest version of that device, The Delphi 3.0, further weakened Orca's financial condition. Add to this the recession and the lower than expected sales for the holiday season and, says Steven J. Carnevale, Orca president, "These factors have made it impossible to continue operating. We have decided to discontinue operations and proceed with an orderly liquidation of the company's assets."

Paul Heinmiller, Orca's chief engineer, told *Undercurrent* that they had hoped that normal sales would overcome the burden of the Delphi 3.0 recall. "Unfortunately the economy has not held up and our sales have been below a normal year. When Steve made his announcement on December 11th, it came as a surprise. Not that we didn't know that there were problems, but we felt that we would pull through."

Orca accepted no units for servicing or repair after December 11. Those that were not finished by the 20th will be returned, Heinmiller said.

Orca owners, most of whom have been fiercely loyal to their computers, even in the face of prob-

lems, are, for the time being, out of luck. With no independent repair services, they may never find anyone to handle their problems or provide replacements. Prior to the closure, Carnevale looked for an infusion of capital, but to no avail.

The best Carnevale has to say to Orca owners now is that "Customers may be contacted some time next year regarding availability of sales and service if the assets of Orca are purchased by someone who intends to resume operation." If no buyer is forthcoming then Orca computers will become technological dinosaur.

In addition to the problems Orca had with its equipment, the decision to remain solely a computer company may have also contributed to its demise. Companies with full lines of equipment — Dacor, USD, Oceanic, Beuchat, Tekna, Sea Quest and now ScubaPro — integrated their computers into their product line; during this economic downturn, the sale of lower priced products helps keep them alive. But Orca, whose only product is a luxury to most divers, learned too painfully that in a recession, the purchase of a luxury item can be easily postponed — especially for divers deciding to postpone travel.

Furthermore, when Orca was the sole producer of computers, both active and new divers were their market. Today, most divers who have been active for awhile have already purchased their computers, leaving the primary market to newly certified divers and those who have been at it for a short time.

So while more and more companies entered the market, competing both in price and product, Orca's share dropped dramatically.

For the past few months, rumors were afoot that Orca was in trouble. Though those rumors were denied, the hand writing was on the wall. It was not a matter of whether Orca would fold, but when. Now we know the answer.

And we also know that Orca, although the first victim in this recession, may indeed not be the last.

# Why Divers Die: Part V

## —divers without knives

The National Underwater Accident Data Center (NUADC) at the University of Rhode Island investigates the diving fatalities of United States citizens wherever they were diving. For several years, *Undercurrent* has been analyzing these reports, editing and condensing them, to share the relevant data with our readers. By reporting the unique and varied circumstances in which divers die, we believe that we may all learn how to become safer divers.

These are reports from the 1989 NUADC files. The series began in the May, 1991 issue. This is the last in our series of articles covering the deaths of 114 American sport divers occurring in 1989.

### Diving Conditions

Off Monterey, California, a 41-year-old female died while entering the water through heavy surf. Her partner found her bobbing on the surface and aspirating water in a panic state. She was unable to assist the victim. The body was recovered about 25 minutes later in shallow water in the surf line.

Strong currents were a factor in the case of a 63-year-old man who became trapped in debris in Lake Mojave, below Hoover Dam in Nevada. The victim was forced by the turbulent waters into a funnel-shaped crevice and became entangled in logs. The water flow from Hoover Dam had to be curtailed for recovery divers to reach the victim.

A 41-year-old male diving in swift water in a Washington state river became entrapped in a deep hole. He was diving alone; it took several hours for recovery teams to bring in his body.

A 42-year-old male who had never been diving lost his life in the British Virgins after borrowing his friend's gear. He became caught in a current and drifted too far for the partner to assist him. By the time the partner reached the boat and took off after him, the victim's body was being recovered by another boater.

### Sharks:

Two deaths were possibly due to sharks. In the first, a 33-year-old male disappeared off the coast of Bay County, Florida. He had been carrying a stringer of fish attached to his weight belt and several sharks had been sighted in the area.

In the second case, a 32-year-old male disappeared while spearfishing in Hawaii. Several days later, parts of a body were discovered in the water, but could not be retrieved before being eaten by sharks in the area. Some of the victim's equipment was recovered at that time, but it could not be determined whether shark attack had occurred prior to or

following the victim's demise.

### Entanglement

Two cases of entanglement in kelp were recorded in California, off Santa Catalina Island. A 50-year-old male in excellent condition and with 20 years of scuba experience, was found several feet below the surface, severely entangled in kelp. According to the other diver on the boat, they were not in the habit of practicing the buddy system but simply did their own thing. The victim did not wear a BC and failed to drop his weight belt during the emergency.

### Shark Fatality In Maui

"Everyone around here knows that the old boat launch area of Hekili Point is a feeding and spawning ground for sharks", Maui Police Sergeant Waldo Fugie told me, "and most know that thrashing around on the surface is one of the things that you just don't do when there are sharks present."

But, 41-year-old Martha Morrell, who lived at Hekili Point, five miles south of Lahaina, repeatedly snorkled there, and about 9 A.M. on November 26, 1991, she was attacked and killed by at least one Tiger shark.

Morrell was in less than ten feet of murky water. Her companion reported that the victim spotted sharks, panicked, began thrashing around and was attacked. When her body was recovered, her left arm and both legs had been amputated by the attack and there was a large hole in the left side of her torso. From initial measurements of the bites and witness reports, it appears that one Tiger shark of at least 15 feet was involved and perhaps several smaller sharks.

This was Hawaii's first witnessed shark attack and fatality in 33 years, although shark-mutilated bodies of swimmers and surfers and even scuba divers have been recovered, but it is unclear whether those victims were attacked by sharks while alive or dead, due to other causes, and then devoured.

Ben Davison

A 37-year-old male with only two dives since certification drowned, after becoming entrapped in kelp 12 feet below the surface.

Two cases involved entanglement in mooring lines beneath a private vessel, one in a harbor off San Juan, Washington, and a second at San Mateo, California. A third case was that of an environmentally conscious 14-year-old boy who was attempting to dismantle an illegal lobster trap off Santa Catalina in California. He became entangled in the lines and drowned.

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*“The victim’s body was found on the bottom in 65 feet of water, extensively entangled in the spearfishing line.”*

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A 56-year-old man in the Gulf of Mexico off Kenelaw County, Florida, surfaced, switched to his snorkel and then found that he had become entangled in his spearfishing line. His buddy had already left the water with the intent of raising the boat’s anchor. The victim’s body was found on the bottom in 65 feet of water, extensively entangled in the spearfishing line.

A 43-year-old man died in eight feet of water in upper Narragansett Bay, Rhode Island, when he became extensively entangled in a quarter-inch line that was attached to his surface float. His boating companion entered the water and heroically attempted a rescue, but was unable to keep the victim afloat. This man had lost his weight belt on a previous dive and may have become entangled in the line while attempting to replace the weight belt. The CO<sub>2</sub> cartridge of his buoyancy compensator was rusted in place, but nevertheless, fired properly in a test following the accident.

[Eds note: It’s our observation that too few divers carry knives. They’re essential in kelp diving, but I think they’re essential in tropical waters, as well, where it’s not uncommon to find strings of strong monofilament line left by fishermen. If the entanglement is around your tank, you can probably ditch your gear and rescue yourself. If you somehow get your legs entangled, the only way out is to cut the kelp or line.]

## **So You Want to Be a Dive Instructor? Part II**

*--one man’s experience*

There was not a day’s break between the conclusion of the Pro Dive Instructor Development Course (IDC) (which I wrote about in the last issue) and the

### **Equipment:**

The NUADC has assigned only six cases of equipment-related fatalities, two entanglement cases reported elsewhere, two cases of out of air at depth, one shattered face mask, and one complicated case.

While conducting a night dive in Narragansett Bay, Rhode Island, divers in 30 feet of water found the body of a 38-year-old male, face-up, with his mask and weight belt in place. The mask was full of blood. It had been shattered by a distinct impact on one precise point above the right nostril area, leading to speculation that this accident could have resulted from the sudden release of the rubber on the spear gun coming back and hitting the face mask. The spear gun was never recovered, but the diver’s flag and float were found a mile-and-a-half from the site of the body. The deceased had apparently gone diving alone.

A 25-year-old man diving off Santa Rosa Island in California failed to follow his buddy after being given a “low on air” signal. The buddy ascended, but the victim did not. Recovery divers located the victim about 45 minutes later in 80 feet of water with a completely empty air tank.

While diving off La Jolla, California, a 39-year-old male ran out of air and grabbed for his partner’s regulator. When the victim refused to return the buddy’s regulator, the buddy panicked and bolted for the surface. The victim was found on the bottom about 10 minutes later in 60 feet of water and despite extensive CPR, he never regained consciousness.

A 30-year-old male who had enrolled in a diving course but had yet to complete it, died in a shallow cove off the coast of Maine. He had purchased a dry suit and a commercial full face mask regulator system. He had rigged his 58-pound weight belt with an over-the-shoulder suspender system that was mounted beneath the tank harness, making it impossible to drop his weights. He entered the water with a buddy who became cold and left to warm up. When the buddy heard the victim yelling for help he re-entered the water and attempted to help the victim. Both were dragged underwater and the attempted rescue was abandoned.

[See the September issue for an analysis of equipment-related deaths in Australia, which derives far different conclusions about the role of equipment in diver deaths.]

beginning of PADI’s Instructor Evaluation (IE), held at Broward County Community College. Unlike the IDC, where our between-class personal needs were



taken care of by Pro Dive, these two days were PADI's show and we were on our own. Pro Dive provided tanks, but no one provided transportation to either the college or the open water evaluation site. Some would rent cars, and those with cars would help arrange rides for others. Everyone had to tote their own gear and tanks.

To become an instructor, one must pass written and oral presentations and demonstrate certain watermanship skills. There are two written tests: an open book test on PADI standards and procedures (score less than 75 percent and you fail) and a five-part diving theory test on physics, physiology, equipment, diving skills and environment, and the Recreational Dive Planner. If you score less than 75 percent on a single test, you may retest; if you score less than 75 percent on two tests, you fail.

Several teaching presentations are required: an academic lesson, a pool lesson, and two open water lessons. You may repeat the academic and pool presentations if your scores are too low, but there is no second chance if you fail the two open water presentations.

Finally, you must complete an 800-yard mask/fin snorkel swim in less than 17 minutes, tread water for 15 minutes, and demonstrate a proper open water surface rescue in full scuba.

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*“The material in the IDC had not been difficult.”*

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I felt well prepared. The material in the IDC had not been difficult. It proved more of an indoctrination into the PADI system and repetition of the basic concepts of diving. I had completed all of the teaching and watermanship successfully in the days prior and was ready to go.

### **The Two-day IE**

We began at the shop at 6:30 a.m., then were off to the college for our tests. About half the 50 candidates were from Pro Dive. We were allowed to stay in the teams with which we had trained and were assigned the same evaluator for all our presentations. I was able to breeze through the theory tests and the standards and procedures test, which is open book. My son, too, passed with flying colors.

The snorkel swim was next and everyone passed easily, though one Brit made it under the 17 minute cut by five seconds. Once again, Tankred, the oldest diver at 45, had the fastest time.

For the pool presentations we split into two groups of four, with my son's group going first.

They emerged from the pool with big smiles and high marks, to me a sign that our evaluator would be O.K. My group followed. I demonstrated the proper way to share an alternate air source and “the fastest finger in the west” had solved the bubble blowing

### **Become an Instructor with just 20 logged dives!**

Pro Dive advertises breathlessly that “It is possible through Pro Dive's Total Immersion Program (T.I.P.), to go from an Open Water Diver with one year's experience and 20 logged dives to a Master Scuba Diver Trainer in just four weeks.”

Having been diving for more than six years, I was curious to see how divers with relatively little experience would be forged into instructors. Do they emerge just as skilled?

Some who went through TIP had a lot of previous experience and proved to be excellent divers and will be excellent instructors.

Others, especially those with but 20 logged dives for starters, left me unconvinced. One student in the IDC took his tank down to 500 psi on a deep dive before most others were at 1700 psi. In a few more days, he was a PADI instructor.

Today there are some instructors beginning work whose total experience is only 40 dives. You can be assured that I would not recommend such a neophyte to one of my friends. Such instructors need much more experience in the water before they accept the responsibility of teaching others.

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problem immediately. After I was given my passing mark, the evaluator, well aware of the intensity and stress of the evaluation, told me to relax a little on the control and ease up on my finger. When one woman in my group just about blew her demonstration completely and still received a fine mark, we all knew we had lucked out.

Although my team had done well in the full class, one student failed two sections on the dive theory exams; he would be allowed no make-up and would have to return to an IE another time. A half dozen other students had failed only one of the theory exams and would be permitted to take a make-up tomorrow.

### **Moody's Mud Hole**

The second day began at 5:15 a.m. once again at the dive shop. We had to be at Moody Lake at 7:00 a.m. for our open water presentations. Ninety

minutes later we were riding up and down on the back roads of Florida, with no idea of where we were. Somehow, we rolled up to Moody Lake a few minutes after 7 a.m., to be greeted by PADI evaluators — and every mosquito in Florida.

Here I was at the IE, the culmination of eight concentrated days in the IDC, not to mention divemaster, rescue diver and open water training. Here is where I was repeatedly told that control would be of the utmost importance in passing. I had come to Fort Lauderdale where the water was warm and the visibility clear. In addition to paying Pro Dive \$995 for the IDC and squandering a big sum on books, I had paid PADI a fee of \$375 to take the IE. I had listened for two weeks about how PADI was the class act of the diving industry. I had driven almost two hours, past pristine beaches with water like glass, to Moody Lake.

To call it a mosquito infested mud hole would

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*“We were more concerned with the amoebas than with our marks.”*

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be a compliment. This was the quintessential archetypal dump. Like it or not, we had to actually put our bodies in it.

We started by giving briefings on two open-water skills and then we had to enter the mud hole to perform our diver rescues. The rescues went off without a hitch and we were ready to descend to the bottom for our presentations. Ironically, after all the focus on “control” during the past two weeks, the only control required was trying to land perfectly on the wooden palette which had been placed on the bottom, somewhere between a junked Buick and a Cadillac, and then remain as still as could be. Any movement, however slight, would stir up the muck and cut the one foot visibility to zero. Needless to say, we finished the presentations as quickly as possible and got the hell out of there. Whether the evaluators could even see us divers perform seemed beside the point; we were more concerned with the amoebas we picked up than with our marks.

I asked three evaluators why PADI would conduct the IE at such a horrendous spot (which it apparently had done several times), given the nearby Atlantic. One said that it was the potential legal liability of conducting an evaluation in the ocean. Another said it was because of the difficulty of figuring out which beach would be best on a given day and then notifying and getting everyone there in time. A third said that PADI wanted a calm site for

the rescue evaluations because there had been too many failures in the ocean. Finally Greg Mackay said that PADI people had told him the weather was too questionable at the ocean and also cited logistics. Yet, the weather all week had been superb, the seas had been flat and he didn't know why the logistics would be so difficult.

### **Most Pass, Some Fail**

With Moody Lake behind us, we returned to the College for academic presentations and the finale. The individual presentations dragged on and on and by the time I gave mine, I was almost burned out, but still managed a strong score. My son breezed through his, managing to outscore me by a hair. Only one student failed his initial academic presentation (he had the same evaluator who failed the others in their pool and rescue performances), but managed a high score on his second attempt.

Of the several who were required to take make-up theory tests, one failed a second time. That made a total of two people from Pro Dive's IDC who failed the IE. This was the first time in at least two IDCs, Pro Dive claimed, that Pro Dive students failed. Both failures were on the theory tests, where 90 percent of all the failures occur.

At the short graduation ceremony anointing us as the newest PADI instructors, the “sell, sell, sell” philosophy once again grabbed a fin hold. Even as we were standing to accept our certificates, we were told that the open water level in Open Water Scuba Instructor was the same as the open water level in Open Water Diver certification. Indeed, we were now on the bottom wrung of a new ladder, the PADI Leadership Program.

PADI wouldn't even give us our day in the sun without pushing its continuing education on us.

That night was party night, with a hot dog and beer cruise scheduled down the Fort Lauderdale water way. Greg Mackay opened the dive shop at night for the first time all week, and coincidentally sold a load of Pro Dive Instructor shirts to us newly crowned Scuba Gods. Some of us, of course, had started to party earlier and wanted nothing more than to get in the flow, but before we could get on the boat we were marched back into the classroom to fill out a questionnaire about Pro Dive and the IDC. Nobody, to a soul, wanted to relate to this at this time. This guy really has his timing off (or did he figure on no negative comments at this time?).

### **Continuing Education**

PADI's levels are designed to expand your awareness as you advance up the chain. At the entry level of Open Water Diver you are concerned with only yourself. Advanced Diver makes you aware of the surrounding environment and Rescue Diver expands your consciousness to the safety of others

## Three Tekna Regulators Deemed Dangerous

When Ocean Edge took over Tekna, it also took over problems it didn't expect, leading to the recall of three of its regulators, the T-5500 regulator, T5501 octopus, and T-3005 Second Wind. If you have one of these products, stop using it and return it to Ocean Edge (Tekna) and you will receive the newer T-6600 as a replacement.

Dell Price, President of Ocean Edge, told us that they had received 50 letters complaining about these units becoming progressively harder to breathe starting at around 40 feet. Though not one letter mentioned that the unit shut down, he said "I know that is what I would feel."

The units are not to be used, he said. "They are not safe."

Price says that no one mentioned problems deeper than 50 feet or having problems returning to the surface. "We can only suppose that they had some form of auxiliary air or else it just got so hard to breathe that they aborted the dive and came to the surface normally."

Randy Long, Customer Service Manager reported that none of the divers who issued complaints ran into serious problems and "no accidents or fatalities have been reported."

Price told *Undercurrent* that "it was not just one part that was causing the problem. It seems to be the entire design. That's why we took these units off the market and initiated the recall." About 1500 of the 4000 units manufactured have been returned for replacement.

How such a poorly designed product can get into the market place is a question in itself, but Tekna long ago developed the reputation for rushing poorly tested products into the market place, letting the results work themselves out once they got in the hands of the consumer. (One example was their rush to the market place in the late 70's with a dive computer that failed in all sorts of ways!) The problems with this regulator, developed under old Tekna leadership, may not do much to help the new image trying to be cultivated by Ocean Edge.

An example of the problem was provided to

us by *Undercurrent* reader Allen Dean of Tegucigalpa, Honduras, one of the first people to contact Ocean Edge (Tekna). "I had about 25 dives on my new Second Wind. With use it hardened up to where I had to blow through the mouthpiece a couple of times or hit the purge button to get the air flowing. Then it would ease up and work okay and then suddenly get hard to breathe again. Thankfully, it was the Second Wind mounted on my BC, and I also have a full octopus rig. But if someone needed air and tried to get it from my Second Wind they might have had a tough time."

Only the second stage is being recalled. The T-5500 series has a chrome valve collar located at the point where the hose joins the mouth piece assembly. All others have a plastic collar. Additionally, the T-5500 and 5501's have a gray exhaust cap and the T-3005 has a yellow case and black exhaust cap.

None of the earlier T-2100 series regulators are affected by this recall.

A spokesperson for the Consumer Product Safety Commission in Washington, D.C. told us "that Ocean Edge is doing a good job on this recall. There are legal complications but they are working around them to get these units off the market before someone gets hurt."

Owners of the recalled second stages should take them to their Ocean Edge (Tekna) dealer or ship them prepaid by UPS to: 7992 Miramar Road, San Diego, California, 92126. For further information contact the Customer Service Department at 1-800-922-1764.

PS: *Undercurrent* did not learn of this recall until two months after it was initiated. It boggles our mind that the industry believes they are doing a proper job on a recall, but prefers to send information exclusively to magazines in which they advertise — which can take up to three months to print it — when we can get this information to people in one-third the time. It's a common pattern in the industry which, in our estimation, is not in the best safety interest of people who own the product.

around you. Divemaster lays a solid theory foundation and develops the relationship between the diver and the environment. As Instructor you are totally capable of anticipating a problem from a specific diver before it happens. Your awareness and experience level in the water are exceptional. This aspect of PADI's continuing education is highly recommended.

Specialty training is offered, as well, and though some courses may be worthwhile (e.g., photography or equipment), those who pursue this branch of PADI's continuing education seem to me no more than underwater boy scouts in pursuit of PADI merit badges, with no purpose other than to earn a patch to adorn the sleeve of some dive-stud jacket. Of course for PADI there may be (or one may suspect)

another purpose — put another dollar in.

The claim made throughout the IDC, however, was that resorts are looking for instructors with specialty ratings. (There's even a Resort Operations Specialty Course!) Pro Dive, they claimed, is constantly being called to place new instructors all over

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*“PADI wouldn't even give us our day in the sun without pushing its continuing education on us.”*

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the world. Instructors with specialties, we were told, were in greater demand because when divers go to a resort for a week or two, they frequently like to get in a specialty certification such as underwater photography, deep diver, night diver, etc.

### Conclusion:

PADI's levels are designed to expand awareness as you advance up the ladder from Open Water Diver to Instructor. Both the Divemaster and the IDC courses were great fun. The knowledge and skill I now possess has taken my confidence and awareness of diving to a new level. I've become a more competent diver, fully capable of teaching someone else how to dive safely and conscientiously.

I found Pro Dive a great place to climb the PADI ladder. The facilities are convenient and the instruction was exceptional. And, it's a great ex-

perience to be taught by Alex Brylske, the principle author/designer of the IDC and IE, as well as the PADI Rescue Diver, Divemaster, and Instructor cross-over programs. Indeed, as Pro Dive claims, you can “learn from the man who wrote the book.”

Yet, this strong symbiosis between Pro Dive and PADI (it's like PADI's unofficial college) makes it seem like the emphasis here is on dollars and the dive industry. There should be more done to modify the IDC, expand the ecological content of the course and assure that the IE isn't conducted in a swamp.

And for myself? My new mission awaits me. I realize that having my name on someone's C-card doesn't end with his or her's competency as a diver. It also must assure that the person will have an understanding and respect for the new world they are entering. It is a twofold responsibility: *Of safety and of ecological awareness*. Yes, scuba is a sport to be enjoyed by people of all ages, however it is a sport whose field of play is so fragile that in this game we must all be our own groundskeepers.

Every instructor, whether from PADI, NAUI, SSI or wherever, has a responsibility to instill upon each and every diver this respect for the undersea world. Let's add Consciousness as well as certification into C-card.

Now I'm off on my new mission: To make sure everyone I certify is a new and improved New Age Diver. (Is that a new specialty?)

The author, Stephen Hoffner of San Francisco, is waiting for his wife to fully recover from surgery to make her his first official student. His son Jude has already conducted his first certification class at Wesleyan University, once again beating out his father.

## Obituary for Florida's Coral Reefs?

Florida's coral reef system may be doomed by the year 2000, the UPI has reported. Researchers issued the warning in December by releasing a study from the Universities of Georgia and Florida, which said the 200-mile-long reef off the Florida Keys was imperiled by water pollution and marine disease.

In 1986, marine researcher, James Porter found that the reef was dying at the rate of 4 percent a year. Five years later, he said, parts of the reef are dying at 10 percent a year. At that speed, the reef would be irreversibly damaged by the end of the century.

John Ogden, director of the Florida Institute of Oceanography, agrees. “There is a precipitous decline in rocky corals,” he said. “It's something we're seeing generally in coral reefs around the world.”

Not everybody agrees. Walter Jaap, of the state's Marine Research Institute, has been study-

ing the reef for nearly 20 years and said the study's conclusions go too far. “To say something's going to be dead in 10 years, that's going pretty far out on a limb,” Jaap said. He said while some parts are dying off, others are thriving and still others are unchanged.

Overpopulation and the estimated 1 million tourists each year may be too much for the coral to handle. Human sewage and farm runoff stimulate algae growth, which has overwhelmed parts of the reef. Sediment produced by coastal erosion clouds the water and the coral animals. Black band disease and an unexplained malady that almost wiped out reef-cleaning black spiny sea urchins throughout the Caribbean, also are a problem. Global warming may be increasing the bleaching of shallow-water coral, the study said, while cold fronts shock and kill parts of the reef.

Coming in *Undercurrent*: the role divers play.