

Undercurrent®

The Private, Exclusive Guide for Serious Divers

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Blue Waters Inn, Trinidad and Tobago, West Indies

—current cruising ... for the experienced

Dear Reader,

Sitting on the front porch of my lovely two unit cottage at Blue Waters Inn, 60 feet from the sea, I'm hacking away on my laptop computer describing my week in Tobago. Tomorrow, my review goes off by modem to my printer.

Tobago remains one of the last strongholds of noncommercial culture in the Caribbean. Located just north of Trinidad, off the northeast coast of Venezuela, Tobago's southwestern side sports a few ordinary beach hotels, suitable for inexperienced divers. See only that part of Tobago and you might as well be on any touristy island, anywhere. Drive north for 90 minutes, through tiny villages, along a narrow, serpentine road between the rainforest and the sea, and an isolated world of tropical adventure will be at your doorstep. There aren't many places this close to nature left in our hemisphere. And with such helpful, decent and law abiding residents.

The Blue Waters Inn sits on 46 lush acres, on the end of a private horseshoe bay just outside the Village of Speyside. Ably managed by Reginald and Brenda McLean, and Reginald's mom Judy, the Inn's 28 guest rooms include a suite and a few units with bedrooms and kitchens. Initially, my partner and I were assigned an upstairs room with a lanai opening above the sea grape trees with a view of the sea. It had too much of an apartment feeling for me, so the next day we selected a ground floor room in a two unit cottage. Priced at \$104 double (summer rates \$56/day), the pleasant room had a comfortable king-sized bed, ample drawers and shelves, and plenty of hot water in the shower. The constant breeze through the louvered windows, aided by an overhead fan, kept it cool round the clock.

Each morning I was invariably awakened by parrots or chachalacas, Tobago's national bird, squawking in the trees. Bird life on Tobago is remarkable, which

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is why most people (about half European) come to Blue Waters. I admit to bringing a pair of binoculars, but my mask is more important. After all, Undercurrent hasn't reviewed Blue Waters since 1980. And, since no one else writes about it, it was time again to review this cozy, unspoiled hideaway.

A mile offshore rises Little Tobago Island, a 450 acre bird sanctuary. In between, the smaller Goat Island and several rocks jut above the frothy surface. All diving is conducted in the currents along these isles. Japanese Gardens was a typical dive. After a 10 minute boat ride, six of us were dropped in a slight current that soon turned into a gentle ride. The 45 degree luscious bottom was covered with gorgonia and corky sea fingers, brain and plate coral, and a profusion of basket sponges, flattened, I'm told, by the constant current. I drifted past pairs of French angel fish. An orange file fish hovered; I held my breath 'till we were eye-to-eye. I skimmed past a purple trumpet, a queen trigger, and two cow fish, their tails fluttering while they pushed into the current. I floated by occasional barracuda, schools of creole wrasse, parrotfish and a puffer, all finning with ease into the current. Not one of them seemed the least bit perturbed with this 160 pound bubble-blowing blob floating by. Why should they? Motionless in the current, I was one of them.

Bookends, a couple of rocks poking from the sea, was 15 minutes away through surging, six foot seas. Divemaster Kevin got us two divers in the water quickly while Captain Steve carefully maneuvered the 32 foot canvas-sheltered craft (powered by twin Yamaha outboards). Following the count of 1,2,3, we simultaneously backrolled into the waves. Sloping to a sandy bottom at 80 feet, the floor was covered with a splendid array of hard and soft corals. I drifted along in the casual current, mindful of the profusion of French and queen angels, a score of barracuda, a cluster of grunts, and great numbers of other tropicals. Thirty feet ahead, a sizeable turtle lumbered from the reef, peddling slowly down current. Six tarpon, one sporting a remora, hung motionless above a patch of plate coral, allowing me to get two lengths away. After I entered their comfort zone, they relaxed their grasp of the sea and let the current carry them 50 yards downstream, where they waited to greet me again.

While the visibility one day at this site was 60 feet, the next it was 80 and better. Sperm-sized fry, wriggling above this reef and most others in the area, create veritable snow clouds that cut visibility. If your regulator breathes wet, you'll inhale a tablespoon of protein with every breath. It may be these micro-critters that bring mantas here April through June. At the end of an otherwise uneventful dive at Coral Gardens (where a huge brain coral, about 20 feet across rose 12 feet or so), a 10 foot manta approached within six feet, hung around for a couple of minutes, then swam off into its food supply. Divemaster Andrew told me that on some dives during the season they'll see three or four mantas every time.



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Diving was not difficult, but for novices it could be made easier by the staff of Tobago Marine Sports, the hotel's dive concession. When I introduced myself to Ellis John, manager, he scrutinized my C-card as if he were an immigration agent looking at my passport; he asked me when I had been diving last. I told him "six months ago" and he told me to be at the shop tomorrow at 9:45. I did just that. The staff was not helpful. My questions about weight belts, tanks, boarding the boat, and the return time were answered incompletely. No one offered a hand with any gear. I toted my tank 50 yards to the boat, went waist high in the water, and handed up my gear. The staff seemed haughty and uninterested.

Within 36 hours, however, the attitude shifted. The youthful dive crew sported smiles, hooked up gear, and became pleasant characters. Was it because I had paid my dues as a newcomer, proving I could handle the dives? Had they been sizing me up to see if I were respectful or a jerk? Had they now adequately asserted their authority so I knew they were in charge? I don't know, but they proved to be good-hearted fellows, and even invited me along on a private dive in the toughest of current. And my partner enjoyed them too. (P.S. Other divers I talked to reported the same reaction and attitude shift).

Briefings about the current and safety procedures were adequate, but were not often delivered in a manner comforting to inexperienced divers. Every dive lasted 45 minutes. Depending on the sites, the maximum stated depths were 50 to 100 feet, but after the second day, I was allowed, as were others, to dive my computer. The only rule was don't lose sight of the divemaster, who watched divers while hanging upright in the water. The crew carried a reel with a long line attached to an orange basketball-sized float to guide the boatman. The crew is there to solve problems. Nothing else. If you want to go to the surface, signal them, then go. The boatman will be there. Whether your buddy accompanies you is up to whatever you decided beforehand. It's like liveaboard diving.

The Diver as Birder

Have you ever thought of yourself as a birder? You know, those folks who walk around in Tilley caps, plaid shirts, and khakis, with binoculars dangling from their neck, as they squint at every tree branch hoping to see a greater or lesser wren.

I think we divers are a species of bird-watcher, who simply decided to watch fish rather than birds. We like to think of ourselves as tougher and more adventurous, but what's so tough and adventurous about diving off Grand Cayman or Roatan? Bird watching might be more trying, at times.

While sipping a Carib beer at the Blue Waters Inn, I watched birders slip in and out of the forest, just as I watched divers walk in and out of the sea. Birders can't leap from branch to branch like a sparrow, cling to a tree like a woodpecker, or soar through the skies like an eagle. But, we divers can emulate the critters of our affection, making out as if we're one of our fellow piscines. We float with them, soar with them, hover with them. And they come peer in our mask to see just who we are.

Bird watching, at least for most folks, only requires a quiet walk along a gentle path. In Tobago, a mere stroll from the hotel brings countless species. If you travel to the Blue Waters, join the birders and see the cousins of parrotfish, butterfly fish and hawk fish.

And, spend a couple of days in Trinidad's Asa Wright Nature Center, high in the rainforest, an hour cab ride from the Trinidad airport. One awakens in the airy cabins to symphonic sounds of birds rising with the sun. Guided walks through the rain forest produce scores of species. On a boat trip into mangrove swamps to see the evening arrival of 2000 brilliant scarlet ibis, we were treated along the way to a sloth nestled in a tree, a coiled snake hiding in mangrove branches, and the snout of caimans protruding from a sewage filtration pond.

Back at the Center, sit on the veranda and enjoy an afternoon tea while cornbirds and bearded bellbirds keep your eyes and ears busy. Watch tanagers and hummingbirds flit about feeding stations; watch long enough and you might even spot a marvelous toucan.

The Center, a lovely and secluded property, is unique in its mountainous rainforest location. The winter rate of \$95/person includes homey accommodations in screened cottages, guided tours on the property, and three meals a day prepared with a Trinidadian flair. If you enjoy watching fishes, give birds a try.

Caligo Tours represents both the Blue Waters Inn and the Asa Wright Nature Center: 800/426-7781; fax 914/273-6370.

Ben Davison

While the boat usually left within 10 minutes of the schedule (usually 10:30am and 2pm), three days ago two divers arrived from another hotel at the last minute. While I and the only other diver that day expected a dive out of the ordinary, one of the newcomers hadn't been in the water for four years. We left 45 minutes late, so he could get checked out, then went out for a 40 foot ordinary dive. Of course, that's the dive on which I saw the manta.

At Blackjack, the ladder broke and fell to 100 feet. Ellis handed me the reel, signaled the divers to stay put, and headed down to retrieve the ladder. The divers, some of whom were not wearing wet suits, but still carried 16 lbs of lead (more than ten percent of their body weight), didn't get it and followed him down. (With divers like that, he's got to keep an eye on them.) Here, schools of boga and creole wrasse hung above the reef. As I drifted by, I saw swaying black gorgonia, corky sea fingers, and other soft corals. I came upon two brain coral, side by side, large enough to be Gulliver's butt. Two cow fish (common critters here) pirouetted 10 feet above the reef in a sweet dance of courtship. I watched another shoot from the reef, chase away what I presumed was the male, and continue the dance. Down the way I entered a school of 60 southern sennet, barracuda-like fish, about 18 inches long. They slowly swirled around me a couple of times, then lazily swam off. Surely, a fine dive.

Cocktail hour --the full extent of the nightlife-- started around six, with friendly Ancil or Henry pouring drinks in the open bar facing the sea. Carib beer is a buck and a half, rum \$2/shot. Dinners were served by a pleasant staff in the adjacent dining area by candlelight. The food was somewhat middle of the road (I was told that American's object to local food), with a modest Caribbean flair and touches left over from yesteryear: reconstituted milk for coffee, orange juice from a carton, and canned mangoes topping a dessert. Dinners began

Correction for 1993 Divers Speak Out

Dear Undercurrent,

On the bottom of page 11 of the 1993 DSO, you printed excerpts from one of my letters under the wrong dive operator's name. Said letter was dated June 5th, 1992, in which I was rather unhappy with Stuart Cove's dive operation, also known as *Nassau Undersea Adventures*.

I did not dive with Nassau Scuba Centre, and I have never done so.

Stuart E. Goldberg

Dear Stuart,

Yes, we did err. My apologies to you, the Nassau Scuba Centre, and everyone else involved.

C.C., travel editor

Blue Waters Inn Caribbean Scale

Diving for Experienced	★★★★ 1/2
Diving for Beginners	★
Accommodations	★★★★ (★)
Food	★★★★
Ambience	★★★★
Money's worth	★★★★ 1/2

* poor, ** fair, *** average, **** good, ***** excellent

with a soup such as pea or sweet potato, then one of two choices: a pork chop or chicken stuffed with swiss chard; lobster thermador or pork loin; or dolphin fish or beef. All served with local vegetables, generally nicely done. The desserts were forgettable, a good way to avoid calorie load.

At breakfast, a waitress would announce "banana, papaya, or watermelon." I ordered all three and even

asked for seconds, which was happily served. Have just toast and guava jelly, or fill up with eggs and meat, maybe pancakes. Lunch? Good chicken salad sandwiches, perhaps a fruit plate, french fries, hamburgers and, best of all, fried flying fish. One tip: if it's not on the menu, ask for it. On the third day, I discovered a vegetarian plate for dinner; on the fourth day, I discovered raisin bran in the kitchen; and on the fifth, I ordered a hamburger at the bar for dinner.

There are better restaurants nearby. It's a 15 minute walk to the Speyside Inn, where a Canadian journalist and his Trinidadian wife served us fresh tomato soup, fresh tuna steak, sauteed potatoes, fresh green beans, and lemon meringue pie. All for \$15 U.S./person. Walk another minute to Jemma's, where, for \$25, two of us had a veritable feast, with excellent shrimp in garlic sauce, green-beans, fried rice with a potato pancake, red bean soup and salad. Two miles in the other direction, over the hill to Charlottesville, Sharon's upstairs restaurant is decorated with Christmas tree lights and faux red wreaths. Pea and pasta soup, king fish or shrimp, and macaroni and cheese, coleslaw, chard, without dessert. Delightful place with only four tables. \$15, total for two. Bring your own beer since neither Sharon nor Jemma serves alcohol.

Tobago's rainforests and bird life provide spectacular communes with nature. My partner and I hiked a verdant path through the rainforest, amidst 100 foot strands of bamboo, enormous ferns and screeching parrots.

An untraveled road from the hotel leads past many lagoons (the next one over was sold for \$5 million to developers). Hire a boatman (about \$10/person) to visit little Tobago where you can hike the hills, and view tropic birds skimming the skies, booby nests, maw maws, flycatchers, and scores of other species. Hire Alexander from the village to guide you for a couple of hours (we gave him \$15).

All in all, Tobago is a real jewel; the Blue Waters Inn a last of its kind. Confident divers will find the fish and reefs excellent 4 to 5 star Caribbean



Boarding the boat

diving- if two tanks a day suffice and you're tolerant of inexperienced companions. I never got a chance to take tougher and more dramatic dives - London Bridge, for example - due to tough seas and inexperienced divers aboard. As for the seaside rooms (numbers 4 through 9), I rate them five stars. The food a 3, the ambience a 4, and money's worth a 4 1/2. It's my kind of place.

Beginning or unconfident divers should get their experience elsewhere. Divemaster assistance is inadequate and the currents may surprise. On one night dive, two divers told me how an unexpected current divided the group to the point where the inexperienced divers began to see the heavenly light (and Shirley McLaine). Those currents may appear anytime and the divemasters might just be oblivious.



The best rooms

Grafton Beach Hotel, Tobago Dive Experience

While diving at the Blue Waters Inn, I met a fellow diver who told me that he uses *Divers Speak Out* as his bible for selecting dive destinations. He'd been diving elsewhere on the island and had found that several changes had occurred. Of course, he had no way of knowing that I was from *Undercurrent*, but after we made a few dives together, it became apparent that he saw things pretty much as I do. So, as he was about to depart, I told him of my clandestine purpose and asked him to write up his experience diving on the island. Here is his report:

"On the southwestern end of Tobago, I stayed at the Grafton Beach Resort. Reputed to be the best hotel on the island, it was too slick and formal for my tastes. We had a nice but unimpressive hotel room with a small private balcony view of the ocean. The staff was competent and helpful, except for the poor and even hostile staff at the resort's restaurant which I found to be very overpriced. The closest good snorkeling is a ten minute drive to Amos Vale, an Italian resort with a bird sanctuary and a good beach. Coral is sparse (it's mostly volcanic rock), but there's great fish. Ask permission at the gate and they will give you access to the beach.

"A dive with Tobago Dive Experience, based at the Grafton, entailed an hour boat trip in 8 foot seas to get to Sisters (a group of large volcanic rocks with good fish life), reputed to be the best diving on that side of the island. Though the return was not so rough, it was still a long trip, particularly in an open boat. Nearly at Tobago's sun was piercing.

"A shallow second dive at beautiful Englishman's Bay had little current, and good coral and fish, but the

sites reached from Speyside — and Blue Waters Inn — remained superior.

"Tobago Dive Experience drives 90 minutes to Speyside 2-3 times per week. At both ends of the island, they worked hard to please and gave superb dive briefings. They handle any skill level from beginner to expert without crimping either extreme. Three of them got in the water (with only 8 customers), breaking into 3 groups based on experience. Derick, one of the owners, led one group and pointed out numerous critters — he made sure everyone saw the nurse shark — and gave plenty of freedom to let you do your own dive. Computer divers could set their own depth profile during the drift. They make a safety stop on each dive, no matter the depth. It can be challenging to hang at 15 feet in a current with no line. The norm is two single tank dives, one in the AM and one in the PM.

"Tobago Dive's 32 foot open boat is without a ladder. You set up on shore, lug your equipment through at least waist high surf, and then haul yourself over the side of the boat (with help from the crew). After a dive, you hand up your gear and then haul yourself up on the boat. I know a lot of folks who simply wouldn't dive this way.

"Daphne, who manages business issues, is equally eager to please. In fact, she helped set up my whole trip (hotels, car, diving) over the telephone.

"Tobago Dive Experience is a terrific operation, superior to the operation at Blue Waters. While they currently have an independent dive shop in Speyside, a ten minute walk from the Blue Waters, they hope to break ground on their own resort in Speyside."

Tobago Dive Experience: 809/639-0191.

M.C.

A last thought. A couple of miles over the hill is the picturesque village, Charlottesville. Man O War Bay cottages rent for \$55 a day (phone/fax 809/660-4676), a special place to hunker down and write the great American novel. Danish expat Bjarne Olesen, a PADI instructor, runs Man Friday Diving. While he was not around the three days I tried to track him down, I was told he will dive with just one diver and can get you to the spots I never reached from Blue Waters; it's unlikely he will have novices aboard, so you might get more action. While Tobago Dive Experience has a shop nearby, they too take inexperienced divers. A short ways away, Red Man has a shingle saying he takes out divers, but I didn't visit. If you explore Tobago, maybe you will. Let me hear from you.

C.C., travel editor

Diver's Compass: Caligo Tours represents both Blue Waters Inn and the Asa Wright Nature Center (see sidebar): 800/426-7781; fax 914/273-6370; or call the Blue Waters directly at 800/888-3483; 809/660-4341; fax 809/660-5195. . . . most rooms are without airconditioning but breezes are constant; best rooms are 5 through 9. . . . BWIA, Trinidad's airline, flies to Tobago through Miami; Both American and United fly to Trinidad from New York and Miami, and then connect with BWIA to Tobago (airfares start about \$330). . . . Thrifty rents cars or

jeeps at the airport for \$45/day (or take a \$40 cab to the hotel and rent an auto for a couple of days). . . . there is some beach snorkeling, but the inshore water was murky; a boatman will take you snorkeling for a few dollars or to Little Tobago for \$10; the hotel can arrange. . . rainy season is June to November. . . . the boat could use tank racks for their aluminum 80's, which are piled on the deck. . . . the price of 11 dives averaged \$29/per. . . . water temperature was 80 degrees, but seemed cooler because current riding requires no work; bring a shorty (they have a few loaners, and BC's and regulators). . . . Man-O-War Bay Cottages; 809/660-4377 (fax 809/660-4328).

Out of Air at Depth?

Running out of air is unlikely for a scuba diver who monitors his or her air supply. It can happen, but it is rare. Normally, you will only have to share air when your buddy is out.

Out-of-air is a time for an emergency ascent. Yet, I know a diver who chooses young women as diving buddies because they do not use as much air as men. When he gets his tank down to 300 psi, he shares her tank until it is near empty. Then, he uses his remaining 300 psi to surface.

When sharing air, don't finish the rest of the planned dive. Swim directly to the surface.

Increased Breathing Resistance

Every regulator available is more difficult to breath from at low tank pressure and at depth. In most regulators, excessive breathing resistance starts at about 500 or 600 psi, at depths of 60 feet or more.

But, the type of first stage regulator used does make a difference in breathing resistance encountered.

"...the airless buddy [can] put his or her mouth over one exhaust outlet, block off the other and breathe the expired air."

Divers with an unbalanced first stage regulator may encounter increased breathing resistance at any depth and tank pressure, and may interpret it as out of air. They may begin to panic, breathe harder, and further increase the resistance. Rapid breathing or increased air flow increases breathing resistance. If you breathe slower and deeper and keep the flow rate low, you'll be able to get air comfortably for a longer period of time.

While even balanced first stage regulators can be affected by high flow volume resistance, most are so finely tuned that they will work down to a critical tank pressure and then fail to deliver because the tank is nearly empty. The diver has little or no warning. If one breath has some change in resistance, the next does not come — at least not fully.

— The Solution's Apparent

Swimming ascents

Twenty years ago, an emergency ascent was all very simple. A diver took his regulator out of his mouth, tipped back his head, blew bubbles and swam to the surface.

Some training agencies insisted that a certified diver had to be able to free ascend from whatever depth he dived to. If a diver were going to dive to 100 feet, he had to demonstrate that he could, on a single breath, get all the way to the surface, exhaling all the way.

We all managed to do it and no one gave it much thought. However, as time went by, the medical commu-

Dive-Alert Recall

Dave Hancock, president of Ideations Design, has told us that they are recalling Dive-Alert units designed to work with the Scubapro AIR 2. The Dive-Alert is an airhorn that connects to the low pressure hose and then connects to the AIR 2 and the automatic inflator.

"In some units," Hancock said, "the poppet inside the female coupler of the unit is slightly undersized. Air will not flow into the AIR 2 and thus cannot be used as either an alternate regulator or power inflator." Hancock says that Ideations is unaware of any accidents caused by the device.

Since January, 1992, about 1700 of these Dive-Alert units for the AIR 2 have been produced. They should be returned to the dive shop where purchased or directly to the manufacturer. When the problem has been corrected, the orange button will be changed to blue and all subsequent units will have a blue button.

Hancock added, "This recall would have been a lot easier if we had warranty cards but we didn't. From now on, every unit shipped will have one packed with it."

For information, contact your dive store or Ideations Design Inc., 4257 24th Avenue West, Seattle, WA 98199; 800/275-4332 or 206/281-0067, Fax 206/285-6897.

Note: This does not affect those Dive-Alert units designed to fit with other inflators.

nity told the training agencies that free ascent was a dangerous practice and should not be done in training.

Buddy breathing

Buddy breathing became the thing to do if a diver could not make a safe swimming ascent. It was the responsibility of each buddy to help. One diver took out his mouthpiece and passed it back and forth. As buddy breathing commenced, divers would grasp each other's harness, so they were securely linked together.

After a few accidents, we realized we had to teach people to exhale when they were not breathing from the regulator. We could have suggested that the airless buddy put his or her mouth over one exhaust outlet, block off the other and breathe the expired air. Two people can

breathe off a single regulator with little difficulty if they practice adequately.

Sharing air led to horror stories such as, "I gave my buddy the regulator and he would not give it back." But, problems that occurred were generally caused by lack of practice which created confusion and struggling.

Secondary regulators

If a diver communicates the basic "I'm out-of-air, I want to share," there are two scenarios.

In the first, the person with air puts his primary regulator in his buddy's mouth and then has to find his spare second stage. Personally, I like to keep my primary and give my buddy my alternate air source. I know the primary works, but I am not certain about my octopus.

The Latest on Emergency Ascents

In an out-of-air situation, Glen Egstrom tells us how to use our buddy or other devices to save ourselves. We asked Dennis Graver, former Director of Training for both NAUI and PADI, to give us the latest on conducting an emergency ascent, for many the preferred way to save oneself.

First, pause, then attempt to breathe. Many times divers who think they are out of air merely over-breathe their regulators, then conclude that they are out of air or there is something wrong with their regulators.

If you can breathe from your regulator but feel starved for air, you are overexerting. Force yourself to cease all movements, rest, and breathe slowly and deeply. You can and should recover from overexertion without surfacing.

Second, if you do not get air when you attempt to inhale, do not reject your regulator. Although you may be out of air, it is only temporary. Your regulator delivers air at the same pressure of the water surrounding you. As you ascend and reduce the ambient pressure, you can breathe the remaining air.

Third, you must decide whether to make an emergency swimming ascent or an emergency buoyant ascent. Depth is the primary factor affecting your decision. If you are deeper than 60 feet, you should establish buoyancy. Other factors might be your respiratory state, your level of anxiety, and your initial buoyancy. If you have any doubt that you can reach the surface easily by swimming, get buoyant.

Fourth, tilt your head back and look toward the surface so that you can see where you are going and judge the distance. Just establishing buoyancy may not be sufficient to initiate your ascent. If you are deeper than 60 feet, you may have to swim for ten feet or so to generate upward momentum. When buoyancy takes over, stop swimming, relax as much as possible, and conserve your oxygen.

Fifth, pay attention to your lung volume; your

lungs should not be full and they should not be empty. Low lung volume is a stimulus to breathe. If your lung volume is low initially, it is OK to hold your breath until the air in your lungs expands to a comfortable volume. Avoid maximum lung volume because additional expansion could cause a lung overexpansion injury.

Sixth, keep your regulator in your mouth and attempt a normal breathing pattern. If you only exhale during an ascent, air can be trapped in your lungs. Attempt to inhale. Reversing the pressure on the airways is sufficient to open them. If you attempt normal breathing, you may also get air from your tank as the ambient pressure decreases. Breathing may be difficult but some air is better than no air.

Seventh, keep quiet during the ascent. Making noise, such as humming while you exhale, requires use of your vocal chords which reduces air flow by up to one-half. The closer you get to the surface, the more air you should allow to escape from your lungs. Don't restrict the expanding air by making any sounds.

Eighth, note your rate of ascent as you approach the surface. If you are buoyant and ascending rapidly, lean back and flare out your arms and legs to maximize your cross-sectional area. The drag will slow your ascent and reduce the likelihood of a lung overexpansion injury.

Once on the surface, immediately inflate your BC. Even if you were out of air at depth, your low pressure inflator will function. Immediate buoyancy is important because if you did suffer a lung injury, you might lose consciousness quickly. Give yourself every opportunity to survive.

An emergency ascent may seem complicated, but it isn't when you are familiar with the principles. A good way to prepare for an emergency ascent is to imagine yourself doing one. Make your imagined experience as vivid, detailed and real as possible.

Hopefully, the only emergency ascent you ever make will be in your mind.

I don't have a problem and I don't want one. I will help any way I can, but the problem is really my buddy's and I want to keep my response simple and maintain my ability to function effectively during the emergency.

In the second scenario, the out-of-air buddy takes the spare second stage. It's unlikely that the buddy knows where it is, because most divers permit their octopus to hang loose. Unfortunately, we have failed to standardize both the location of the spare second stage and the procedure of air sharing when the octopus became popular.

AIR II

Scubapro's Air II is located on the end of the inflation hose and incorporates the ability to inflate the BC while still being able to be used as an alternate air source. The instructions say that when someone indicates "out-of-air," the other diver gives him the primary device, because the primary regulator is in a standard position where the buddy can get it. The thinking is that you know how the Air II works and you must assume that your buddy does not.

In studies at UCLA, we found that a diver can leave the primary in his mouth and hand over the Air II. It's on a short hose, but all that does is bring the buddy in closer. The diver does have to turn it to the outside which results in the hose kinking, but there is always sufficient pressure to activate the Air II.

Several manufacturers have followed the configuration of the Air II, all with different kinds of controls, that require specific training and standardization to make the device work properly during air sharing. Buddies, particularly new buddies, should rehearse on the surface before the dive.

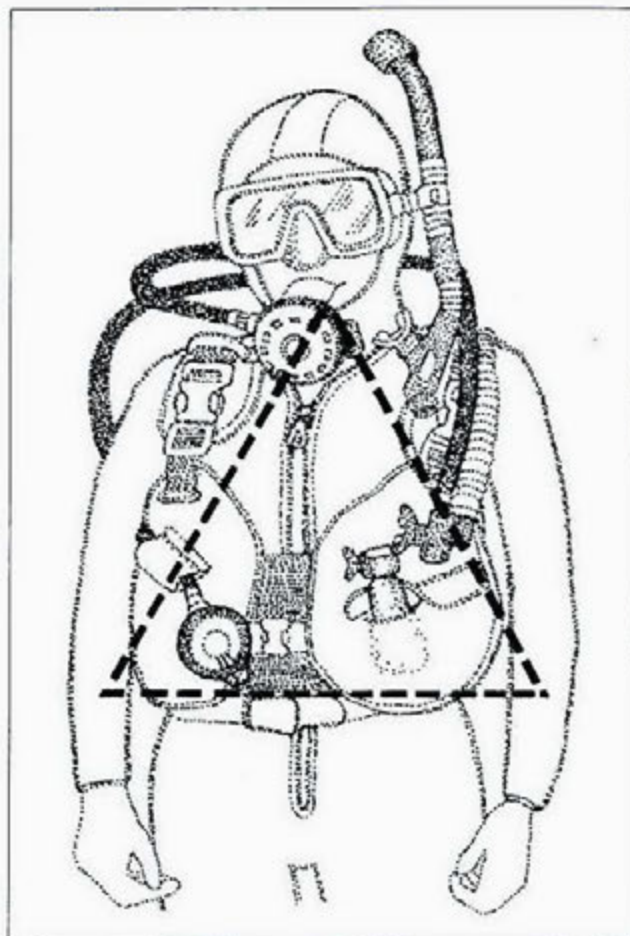
Spare Air

The Spare Air is a small cylinder of compressed air, with a regulator on top. The early ones did not give enough air at depth. At 150 feet, a diver got one full breath and a part of another. At 50 to 70 feet, a diver would get anywhere from four to seven breaths. Newer ones have a high pressure cylinder and perform better.

"...to learn to use an octopus in a standardized location takes more than 12 tries to get it right."

The Spare Air should be turned on before a dive. In a heavy current, it may be activated and emptied, but if one waits until the emergency to turn it on, the person waiting may get tense.

The manufacturer suggests keeping it in a holster. The diver comes up, gives the signal, while the other whips it out and hands it over. The two are now ready to head for the surface. To work every time, the Spare Air has to have a standardized location and standardized procedures.



The Emergency Triangle

Standardization

A recipient who has not practiced or does not know how to use the available alternate air source, may grab the primary regulator. The donor has to sort out the problem; otherwise, the other diver is likely to panic.

If all of the alternate air sources were located in the triangle between the edges of the rib cage and the mouth, this would make them easier to locate. In our tests, placement of the air source anywhere in that triangle resulted in an easy pass, as long as the hoses, if any, passed over the shoulder or were attached near the shoulder in a fashion to permit the air source mouthpiece to be placed in the recipient's mouth.

Our tests at UCLA found that learning to use an octopus in a standardized location takes more than 12 tries to get it right. Buddy breathing takes from 17 to 21 tries. Studies at UCLA have shown that, after three months of not practicing, divers show degraded performance and errors.

Regardless of which system you use, if your buddy has not mastered it and has to think about it during an emergency, it's going to be difficult to perform. If you must go into a problem solving mode during an emergency, it is likely that you will screw up no matter what you decide to do.

Remember, divers need to be able to solve other problems at the same time they are sharing air. One is

propulsion. While buddies are solving the air sharing problem, they usually stop swimming. They need to do two or three things at the same time; it's amazing how few people can.

Mental Rehearsal

Too many divers believe they can rehearse simply by talking. A diver asks, "How are we going to handle an out-of-air situation?" and the buddy says, "By buddy breathing". You can bet that what happens is not what you expected, unless you both trained together.

Divers can learn and reinforce individual skills through mental rehearsal exercises. Imagine going through the process of whatever is going to take place. Buddies should rehearse the same technique under the same mental set of circumstances.

Conclusions

If a diver does not make an independent controlled emergency ascent, he must look to a potential donor for air. The diver should always follow the same procedure.

- Signal out-of-air.
- Signal for sharing air.
- Establish contact with the donor.
- Guide the offered air source to the mouth without taking it from the control of the donor.

The donor should respond by:

- Grasping the other diver's harness or tank and facing the recipient.
- Immediately pass an air source across to the mouth of the recipient who will now be facing the donor.

The donor may be prepared to share air by an alternate second stage or an Air II or similar device. Each of these has variations that complicate standardization. However, the process of holding part of the recipient's gear while passing an air source can be standardized. These moves can be done easily if the air source is in a consistent location where the donor can, in a single move, grasp the air source and pass it to the recipient's mouth.

Training is paramount to cope with an emergency. Not only should the skills be well learned, but they should

Murder, He Wrote

Sharon Powell, of Fair Haven, NY, died in 1991 while diving with her husband in Lake Ontario. Investigators said her scuba gear was working properly, leaving the cause of death a mystery.

Now, with the release of the Medical Examiner's report, the case has been ruled a homicide and Cayuga County authorities are investigating.

Richard Middleton, an investigator with the District Attorney's office, told *Undercurrent* that "many things about this case just don't add up. Powell and her husband Mark had been diving in a sheltered cove in about twelve feet of murky water. While her gear had recently been repaired, she was not wearing either her fins or a buoyancy compensator. The fins were found on the shore but the compensator was not around. And her weight belt was not equipped with a quick release mechanism.

"Her husband claimed that she had indicated a problem and that he had tried to help her but could not get her to the surface because he didn't have his fins on either. Then, he left her, came ashore to call for help, and gave a location some distance from where she was eventually found. When she was located, she was still alive. She died later at the hospital.

"The medical examiner found extensive bruises on her face and lacerations on her tongue. The head of our dive rescue unit told me that wearing a mask on those bruises would be extremely painful and that he doubted that she could hold a regulator in her mouth with the lacerations found on her tongue."

No one has yet been charged in her death, but a man named Lee Williams, with whom Sharon Powell had a long love affair, was previously charged and convicted of conspiring to kill her husband Mark Powell. Williams claimed that the woman planned to leave her "abusive" husband to marry him.

Ben Davison

be periodically reinforced, especially in circumstances where the buddies are diving together for the first time.

This article is by Glen H. Egstrom, PhD., Emeritus Professor of Kinesiology, at the University of California, Los Angeles (UCLA).

Do Decongestants Threaten Your Dive Safety?

— A Call for Analysis

In recent months, several accidents and near misses have produced concerns as to the effects of Sudafed and other decongestants on divers, especially while deep diving or mixed air diving. Here are some examples:

* A diver using air died while cave diving in Missouri recently. He halted his dive, then bolted. He had taken Sudafed before the dive. On one other occasion, he had exhibited the same behavior and survived. Before

that particular dive, he had again used Sudafed.

* Last summer, a Nitrox cave diver died on a 90 foot dive well within the partial pressure of oxygen limits. The diver's blood gasses contained a high level of pseudoephedrine, a major ingredient in Sudafed and associated generics. We vaguely questioned if this may have contributed to, or even caused, the accident.

* A newly certified nurse with 16 dives made an air

dive to 129 feet on a Florida wreck. She had a bottom time of 10 minutes and a total dive time of 15 minutes including a safety stop. Before the dive, she took Sudafed and Dramamine. She felt sluggish, high anxiety, heart palpitations and had difficulty breathing. She signaled to end the dive and made a controlled ascent. Since then she has made 47 other dives without taking Sudafed and has had no problems.

“after taking a Sudafed... I experienced the most severe narcosis I have ever had on a much shallower dive than I routinely make.”

* A nurse from Orlando made a 70 foot dive on air and experienced high anxiety and panic. She terminated the dive. The initial explanation was that her Farmer Jane was too tight. However, since then, she has stopped taking Sudafed and has had no subsequent problems. (She is still using the same suit).

* Last summer, a diver accustomed to diving to 160 feet went almost comatose on a dive. His two companions had to maintain his regulator and assist him to shallower water. The only thing he had done different from normal was to take Sudafed before the dive.

* A few years ago, my wife Patti took a 12 hour Sudafed before diving and felt apprehensive, out of it, and fought to maintain consciousness at 120 feet. That was her last 12 hour Sudafed while diving. Patti had similar sensations on a 90 foot dive which she made after taking a Benadryl anti-histamine tablet for a reaction to a jelly fish sting.

* In the seventies, while on a saturation dive on Hydrolab, one of my dive partners developed a cold. The dive medic gave the diver Actifed and he went into a coma for two days, finally coming out of it once we were well into decompression.

* Early this year, after taking a Sudafed prior to a deep dive, I experienced what I thought was narcosis. However, it was the most severe narcosis I have ever had on a much shallower dive than I routinely make. Since I was on a light Trimix mixture and not on air, I can only attribute this to Sudafed.

Recent recreational occurrences in Australia, as reported by Rob Cason of the International Association of Nitrox and Technical Divers, parallel those referenced above. Cason reports Oceaneering International, a commercial dive company, banned Sudafed over ten years ago due to its adverse effects on their divers. Sudafed warnings have likewise been issued here.

These incidents are not conclusive as to the adverse effects of Sudafed or other decongestants. But, they do represent grounds for concern and further investigation.

The 1991 Physicians Desk Reference describes the adverse reactions of pseudoephedrine hydrochloride, Sudafed's active ingredient, as

“... nausea, cardiac palpitations, irritability, excitement, headache, dizziness, stomach pain, seizures, slowed heart rate, shortness of breath, and/or troubled breathing; with an overdose, add anxiety, tenseness and respiratory difficulty.”

Treatment: Includes the statement, “If convulsions or marked CNS excitement occurs Diazepam may be used.”

I've given up a ten year habit of Sudafed diving. If you or anyone you know has had adverse reactions following a Sudafed or other decongestant dive, please forward this information to us. We will pass it on to researchers investigating the problem.

Author Tom Mount has logged over 11,000 dives spanning a career as a Navy Diver, NAUI Instructor, dive shop owner, University Diving officer, a founding member of the National Association of Cave Divers and president of the International Association of Nitrox and Technical Divers. A version of this article originally appeared in the International Association of Nitrox and Technical Divers Journal. You can contact Tom at IANDT, 1545 NE 104th Street, Miami Shores, FL 33138, 305/751-4873 phone, fax.

Two Die In Cozumel

Too much weight, not enough buoyancy

Mike and Neena Hagen of Rockport, Illinois, disappeared while scuba diving in the Horseshoe section of Palancar Reef on February 2, 1993.

According to eyewitnesses, the couple went out with Del Mar Aquatics after receiving a good pre-dive briefing. They were told to meet up with the group on the bottom at approximately 50 feet. “They were descending with us,” said Robert Loenichen of Hager City, Wisconsin, “and then began a rapid descent. My wife started down after them toward the divemaster Tony. The couple kept going straight down. I saw Tony signal to them to join us. When everyone was together, we entered the reef formation. We went single file through the reef until we came to an open spot. Tony stopped and counted heads. He signaled us to continue and went back for the missing divers.”

From other accounts, it appeared that the Hagen's were having buoyancy problems. The divemaster apparently helped them with their buoyancy and the couple rejoined the group. Something happened during the initial entry into the reef and the Hagen's came to the surface, signaled to the boat that they were o.k. and descended again.

The divemaster searched the area until out of air, came to the surface and signaled a boat to call for assistance. He then led another group of five divers to continue the search while other boats searched the surface for bubbles. Within an hour, a Mexican Coast Guard plane joined the search. The Hagen's bodies have not been located.

The group was diving in water about 90 feet deep with little or no current. Nearby was a wall that drops to 900 feet. Unable to control their buoyancy, the Hagen's may have slipped over the wall into the abyss.

An Undercurrent Dive Trip? Part I

—An Overwhelming Response, 83% Say “Yes”

Last month, we asked a significant sample of subscribers whether or not they'd be interested in an *Undercurrent* dive trip. We were curious to know whether subscribers wanted to dive with other fellow subscribers at destinations they themselves would choose.

The response to our survey has been overwhelming. Over 1200 responses were received (making our already paper-filled office a Federal disaster area). A whopping 83% of the respondents said, “Yes,” they would be interested in an *Undercurrent* dive trip.

Of the 17% who were not interested, the three main reasons were as follows: do not like traveling in groups (6%); concerned about *Undercurrent* remaining objective (3%); do not have time in the near future to travel (1.5%).

So, before we go any further, a word or two about *Undercurrent's* objectivity. Please rest assured that nothing will affect *Undercurrent's* objectivity-- NOTHING! *Undercurrent* will continue doing what we do best-- traveling anonymously (and paying our own way) to critically review the world's dive resorts and liveboards. We will continue to “tell it like it is” because that's what makes us unique and because that's what you pay us to do.

Undercurrent is not (I repeat, is not!) going into the travel business. This survey was simply our way of finding out whether subscribers would like to go diving with fellow subscribers at a resort or liveboard of their choosing.

And, find out we did. You told us by a vote of 83% to 17% that you wanted to choose your own destinations to dive with fellow subscribers.

The Winning Liveboards

While over 50 different liveboards received votes, the two clear winners were Peter Hughes and Aggressor. In particular, the two most popular liveboards you selected were:

- (1) Peter Hughes' Wave Dancer (Belize) 17%
- (2) Okeanos Aggressor (Cocos Islands) 13%

We have reserved each of these liveboards exclusively for *Undercurrent* subscribers (see chart below). If you're interested in diving with fellow subscribers on either of these superb liveboards, please call **1-800-237-8400 Ext. 222**.

As soon as your deposit is processed, you will receive an entire packet of information with all the logistics (including a travel insurance application and the boat's cancellation policy). Please note that the number of spots is limited. So, it's strictly first come, first served.

One final point. People have asked us, “Will anyone from *Undercurrent* be on the trip?” Well, yes and no. As always, we'll be traveling anonymously. But, since the boats will be filled with *Undercurrent* subscribers only (we urge everyone on these trips to submit their reviews), chances are the crew will do everything possible to guarantee a helluva trip.

Next month: the land-based results.

THE WINNING LIVEBOARDS

Liveboard	Date	Cost/person*	Deposit required	# of Spots
Peter Hughes' Wave Dancer	1/8/94 - 1/15/94	\$1,595 (Master stateroom) \$1,495 (Deluxe stateroom) \$1,495 (Twin stateroom)	\$600 \$500 \$500	6 8 6
Okeanos Aggressor	3/24/94 - 4/3/94	\$2,495	\$800	21

* Excludes airfare and taxes