

## Spanish Cove, Grand Cayman, B.W.I.

### *The Fruits Of McMillan's Millions*

Grand Cayman has good diving, no doubt about it. Although there are those who stay away because of the presumed hordes of tourists, the overrun reefs, and the commercial nature of it all, savvy divers who know how to cut through the thicket can have a very satisfying stay--as long as they understand what to expect.

Grand Cayman is surrounded by reefs and walls. There is hardly a spot where one can drop anchor and not be pleased with the underwater panorama. But, as it is at any diving destination, the weather, the preferences of the boat operators, the location of the hotels and the moorage of the dive boats are the variables that determine just where each dive will be taken. The North Wall--the fabulous North Wall--is indeed spectacular. Decorated with large sponges, corals and gorgonia, it drops down forever, into the azure abyss. Although one may not see rays or other pelagics with the same frequency as on, say, Grand Turk, the view is indeed breathtaking. Three resorts sit on this Northside--Cayman Kai, the Tortuga Club, and Spanish Cove. One of these, Spanish Cove, will be the feature of this story.

The West Side of Cayman, where the beautiful Seven Mile Beach spreads just that far, is the tourist development. And for good reason. This is normally the lee side; the water is calm, divable nearly every day, and the sandy beach makes a vacation spa suitable for families. Along Seven Mile Beach, a dozen or more hotels and clusters of condominium complexes are sufficiently spread out to keep the density low and the pace slow. Here, a number of dive services visit the offshore reefs and wall daily. With hundreds of dives being conducted offshore each day, dropped anchors and turkey divers have damaged the coral habitats. Yet many beautiful spots along this side will please even the most picky diver.

South of Seven Mile Beach--and south of the small Georgetown business district

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(filled with more banks than tourist shops since Cayman is a financial center for both complex and quick deals) are two more hotels catering to divers--the Sunset House and the Casa Bertmar--located on the "iron shore," a tough coral beach, sans sand. (Note: when selecting a hotel, if a sandy beach is a prerequisite, then inquire. Hotels not on Seven Mile Beach are often on the iron shore.)

Around the southwest corner of the island, where there are no hotels, one may find solid diving at the South Wall. At the southeast tip of Cayman is the Cayman Diving Lodge, (once-upon-a-time Bob Soto's).

Cayman weather is good year round, so unless a divemaster is hungover or his boat won't start, there's seldom a day when some reef can't be reached. The North Wall is the toughest to dive because quite a chop can build. Most shops and hotels along the west side offer North Wall diving, but some are quick to stick to the west side at the slightest signs of swell to avoid taking their crafts around the island or having to truck divers overland.

Cayman has advantages many islands do not. One can buy all the dive equipment and accessories needed. Nearly all repairs can be handled and boats can be rented to attack the reefs on your own. Undersea Photo Supply has an impressive selection of cameras and lenses and offers 24-hour film processing. Non-diving spouses can take jet ski rides, strap into a parachute for a high altitude pull around the beach by a speedy boat, board a deep-sea charter fishing boat, rent a sunfish, whack balls around tennis courts, take a pleasing tour of the island, browse through the small shops, and, of course, sun...and sun...and sun some more. There are plenty of resorts to choose from, and just about any travel agent should be decently conversant about the island.

The one hotel we have chosen for this issue is Spanish Cove. It's a lovely hotel with decent diving services, away from the madding crowd. Next month, we'll take a look at the Sunset House, a more moderately priced hotel, describe diving in greater detail and comment on the services offered by a private guide, Peter Milburn.

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Once upon a time there was a legendary dive resort. Set on an isolated beach near some of the most famous underwater scenery in the hemisphere, it served up elegant amenities and a well-run diving operation. Indeed, Undercurrent helped create the legend. In February 1978, our reviewer had found Spanish Bay Reef "the best of the lot."

Originally built by Ron and Nancy Sefton, Spanish Bay Reef had undergone several ownership and management changes before poor fortune and worsening word-of-mouth reviews all through 1980 provoked a closing of the doors and a slide into bankruptcy. But the sleeping princess has been revived by a conglomerate's \$2.6 million kiss, delivered by prince John McMillian, and was opened in December 1981, rechristened as Spanish Cove.

I found that McMillian's millions seem to have been well spent-- on a solid new diving operation and on a substantial refurbishing of the comfortable rooms for which Spanish Bay had been so well known. The property's 21 double units, nestled nicely into a pam-landscaped seaside setting, have all been completely

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guttled and rebuilt. They feature sleek modern baths, blessed by dependable hot water, and all new furnishings--not overly "decorated," but chosen with simple good taste. I found that what with the good cross ventilation and the ceiling fan, I had no need at all to turn on the air conditioning, even in mid-May. The tap water was perfectly tasty and maids brought ice daily.

Still, the high spot of the Cove's domain is the beautifully designed main building. Rather reminiscent of a ski chalet, it is fashioned of warm woods and good, rough-hewn boulders which had been chunks of brain coral in an earlier incarnation. The lower level houses the dining room, which offers diners a water view through wooden louvres. Up a curving staircase is a spacious lounge and a stunning circular bar, which is partly surrounded by a panorama of large, backlit transparencies of marine scenes. A terrace of wooden decking joins the main building to the pristine freshwater pool; the deck is spotted with shaded tables and plenty of comfortable benches and lounges for sunning.

Since divers travel on their stomachs, I was eager to see if Spanish Cove's new management had been able to recreate the fine cuisine of SBR's halcyon days. The food, while not quite up to Michelin standards, was as good as any I'd found at a dive resort on an island where virtually all meat and produce must be imported. The ample breakfasts differed each day--lots of ham bacon and sausage, puffy French toast, a savory Spanish omelet, eggs Benedict. Dinners, obviously looked after with great care and imagination by young chef Chuck Powell, featured entrees such as coconut grouper, Polynesian chicken, spicy ribs. Our only unsuccessful meal starred conch; apparently that chewy fruit-of-the-sea is not on the curriculum at the Culinary Institute.

| SPANISH COVE, GRAND CAYMAN, B.W.I.                          |           |
|---|-----------|
| Diving for Beginners  | ★ ★ ★     |
| Diving for Old Pros   | ★ ★ ★ ★   |
| Beach Snorkeling<br>(weather permitting)                    | ★ ★ ★ ½   |
| Hotels  | ★ ★ ★ ★ ½ |
| Meals   | ★ ★ ★ ★ ½ |
| Money's worth   | ★ ★ ★ ★   |
| ★ poor. ★★ fair. ★★★ average. ★★★★ good<br>★★★★★ excellent. |           |

Unfortunately, package-plan divers were offered no choices from the menu at either breakfast or dinner, and were asked to arrive at an early hour to dine so as to be finished before the local, late-dining guests were to appear. It's a "given" that a small hotel in a resort area must cater to its outside restaurant and bar trade, but the new management has not yet learned how to handle this with grace.

Our modified American plan put my buddy and me on our own for lunch, so unless we felt like dieting or taking a rather long ride, we went a la carte from the Cove's noon-time menu, which contained a pleasant array of salads and sandwiches, well-prepared but pricey. On Sunday the only mid-day nutrition offered was the \$13 champagne buffet on the poolside terrace, obviously less targeted at the hungry diver than at a fashionable brunch crowd of non-hotel guests.

The Cove's shipshape new diving operation is captained by John Larsen, a long time professional diver, instructor and charter sailor from Florida. Larsen's seaside shop, only a few paces from the guest rooms, is perched alongside a petite, newly carved out marina, which provides berths for the Cove's small fleet of dive boats. Access to the boats--described as "a step away" from the dive center--is more like one giant leap for diver kind, yet is nonetheless a big improvement over the wade-through-the-surf drill of pre-marina days. On hand early in May was a 33-foot Bertram and a 36-foot flattop; the latter holds 20 with ease. But during my stay it was occasionally filled with up to 28 divers and guides, a bit too cozy for comfort. Due to arrive was a customized 38-foot Delta, complete with head, shower and galley.



Larsen's efficient shop is well supplied with three high capacity compressors and hundreds of aluminum 80's which I always found filled to at least 3,000 psi. There was also a good stash of rental gear and a freshwater tub, in which I could dunk my gear right in the big green bug bags which they provide for lock-up storage overnight at the dive center, if one wishes. Yet even Larsen's good management and the tidy new marina cannot compete with the occasional kick-ups of the sea on Cayman's north coast. Half the days of my stay, surf prevented boardings in the marina, and divers had to be vanned to a more placid west side launch.

Diving was typically Cayman style, that is, two morning tanks--the first being a deep dive in a more-or-less "follow the leader" mode, and the second, after a brief interval, a shallower, plan-your-own foray, governed by the tight rules of the "H" tables. Dive guides Jack and Ken were pleasant and competent, yet did relatively little to determine what would particularly interest the divers aboard. If it had been their idea to do a deep and quick wall dive, it mattered little that some, who hadn't been wet in a year or who wanted to burn a whole roll of film, would have preferred a shallower, longer dive. As with virtually all Cayman operations, the Cove's trips are not well suited to freshman divers who need their hands held, and not much help is handy for tanking up or for reboarding from an awkward ladder. Yet I appreciated the fact that the boats left on time, tanks were already on board, and there was a convenient bar 10 feet below the boat after every deep dive.

The former SBR dive operation under Athlee Evans (who now operates Quabbin divers) was known for getting you to the best dive sites weather would permit. But it seems to me that the new team tended to forego the better north wall diving at the slightest sign of a whitecap, favoring instead the more common west side sites visited by everyone who's settled in at a Seven Mile Beach condo or hostelry. Some of these sites are exciting--like the new wreck, the Oro Verde-- but others offer up not much save for anchor-damaged staghorn and tattered sea fans. Yes, fine diving still exists off Cayman, but not every guide will find it for you on any given day.

I opted for Spanish Cove's package plan (\$535 per person double, MAP, including tips, taxes and airport transfers) which allows six 2-tank morning boat divers; as a package it appeared very fairly priced, given today's high costs of dive travel. Extra boat dives at about \$20 each for a single tank, would supposedly be available, but none were offered for any afternoon of my stay. And only one night dive-- at \$30 -- could be scheduled. The off-season package price allows unlimited air, but beach diving at the Cove can be a chancy affair even for the intrepid. It's a long swim through perhaps heavy chop for what may be only a fairish dive on the reef called Spanish Bay, which meanders a ways off-shore in front of the hotel.

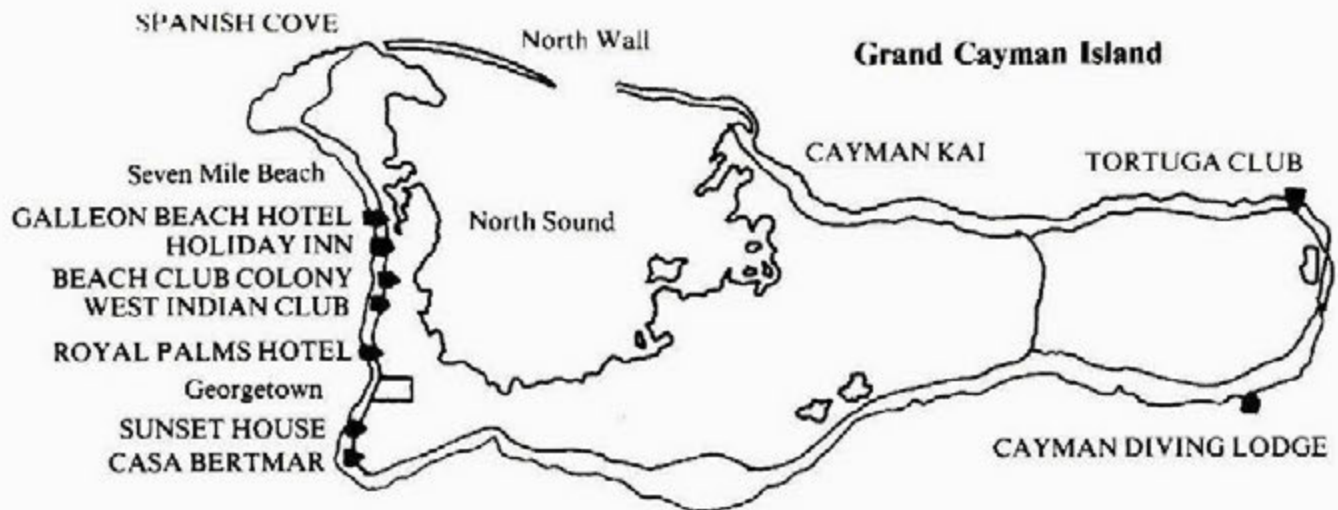
Gorillas might find it hard to pass a non-diving afternoon at Spanish Cove, but I was only too happy to grab a book and dive into a hammock, sociably hung with several others in a rustic thatched cabana near my room. Then, if absolutely overcome by an athletic urge, I could take a few lazy laps in the pool, followed by one of LeRoy's delicious pina coladas or rum punches. (After the second,

#### RECONFIRM RESERVATIONS

Seventy-two hours prior to departing Grand Cayman by air, you must confirm your flight reservations. If you do not, your seat will be sold to someone else and you will find that it will take you 2-3 days to get another flight.

Confirmation is easy. You only need to call your airlines. Many hotels will, themselves, handle confirmation for their guests. Nevertheless, you must confirm. Unconfirmed passengers will find that no excuse, no matter how creative, will get them on their original flight if their seat has been sold.





I could almost forget they cost over \$4!)

The new management team--headed by resident manager Buzz Murphy and assistants Bruce and Barbie--cut their business teeth at Victoria Station. But despite a certain energy they bring to the operation, they have not quite got the act together for providing true warmth and hospitality to package-plan divers. All the rules and policies seem more designed for the benefit of the hotel, rather than for the enjoyment of the guests. It's a sum of small things, each of which could be overlooked in a no-frills setting, which add up to a chillier ambience than would be hoped for in a place which has such a superb physical inheritance. Yet Spanish Cove is definitely-to-be-considered by the moderately experienced diver who wants to make a couple of good dives in a day, and the rest of the time lay back in a setting that offers more pleasant amenities than most packaged dive vacations.

Diver's Compass: Anywhere in the islands, pay attention to prices, which if stated in Cayman dollars need to be multiplied by 1.25 to arrive at U.S. \$\$.... Good places to eat include Pedro Castle, for seafood, and The Almond Tree, for its classy, musical, underwater slide show....Baggage Banditos still prey on gear passing through the Miami airport; either hand-carry photo equipment or pack it incognito, not in stickered, obvious containers...Don't forget mosquito repellent--they get pesty come summer sunsets.

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## For Dive Club Members Only

As you know, *Undercurrent* exists financially only because of the support of its subscribers. We're able to "tell it like it is" because we have no advertisers to offend, no special interest to tout, no members of the industry to please.

Since we don't sell *Undercurrent* through dive shops, many divers who would leap to subscribe have not yet learned of our humble publication. Some may even be members of your dive club. You can help them learn about *Undercurrent*--and help us increase our circulation--by sending us a copy of your current club roster. We'll send each person information about *Undercurrent* and add six months free to your subscription if you're the first from your club to send us your roster.

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# The Theft Of Diving Equipment

## *It Doesn't Pay To Advertise*

The scenario is the same. Only the names change. Divers Jane and Joe Doe leave on what is to be their long-awaited and expensive vacation, but before they have an opportunity to enjoy it, their dive bags containing all their gear are stolen from their car, boat or motel room. They are now faced with the reality that they are, "the other guys." Unfortunately, the theft of dive equipment is increasing nationwide, and appears to be epidemic along the southeastern and southwestern sea coasts.

If you think that only dishonest divers will take your equipment, think again! There exists a ready market for your used gear, nationwide and even worldwide. Thieves, who are not organized or who do not have an established "fence" to sell their goods to, will often unload them through the local flea market, garage sale, or swap-and-sell newspaper.

Crime statistics show that the primary contributing factor in thefts of property is the victim. And the fastest way to become the target of a thief is to advertise to him that you have what he wants. This form of advertisement takes several shapes, but the most common are the following:

Dive flag decals and license plate frames on your vehicle or boat tell the thief that in the trunk of this car may be several hundred dollars worth of dive and photography gear! Police reports document that thieves have patrolled parking lots near sea resorts, looking for cars, vans, and trunks so labeled. Also, a boat with a dive flag up, or one painted on its hull, is an open invitation to those specializing in harbor rip-offs.

Recently, four members of my dive club, The Elmhurst, Illinois, YMCA H2 Ogres, had their van stolen while parked in front of Marineland, Florida. When the van was recovered, two days later, all dive gear and U/W cameras were gone. Needless to say, so was their vacation. Displayed on the bumper of this van was a dive decal which stated, "Don't go down 'til your flag is up." The other testimonials carry the same message: "If you want to be ripped off, just wave the flag." The only place for the dive flag is out on the water, and not on your jacket, car bumper, boat hull, etc.

The next most common type of theft of dive gear takes place at airports. Here, thieves look for anything that tells them what's in the bag, and that's easy when it's a distinct diver's bag with a dive flag and or divers painted on its outside.

The best protection against theft is to put your gear and cameras in containers that don't telegraph their

contents. Some of my friends use old, but secure, suitcases. I prefer to use my old Army dufflebag. This heavy canvas bag, cheap and easy to find at most Army-Navy surplus stores, will hold all my gear, and has a hasp for a padlock. Best of all, it looks like hundreds of other GI bags that pass through airports each day.

One other word of caution. If you choose to use old luggage, remove all those old stickers and decals denoting your past trips to the Caribbean. While most thieves are not exceptionally smart, they do conclude that if one travels to dive resorts year after year, one takes scuba gear.

Scuba gear is also stolen from hotel and motel rooms. Thieves who specialize in hotels look for what the potential victim is wearing. When you parade through the lobby in your club jacket with patches from arm to arm, you may be catching the eye of more than just other envious divers. The thief needs only to follow you to your room and return later, after you've left for the evening dinner or the next seminar.

Last year, my wife and I stayed at a major dive hotel on Grand Cayman. One would think that at such a well-established operation, we would be free from pilferage. But not so. Throughout our stay, we were cautioned against leaving our gear laying about or unguarded. These problems were not from the staff or guests at the hotel, but from the many non-guest visitors who pass through each day. Theft is a problem on most Caribbean Islands, just as it is on the mainland, U.S.A.

Protect your scuba investments by not advertising them. Out of sight is out of mind. Also photograph your gear, record the serial numbers, and mark it with an electric pencil (use your driver's license number) so if it is recovered it can be claimed. Do not use your Social Security number! With the exception of State and Federal tax agents, this number has no value to law enforcement, and is untraceable. Be sure that your gear is covered by an insurance policy; preferably one which has a cost-replacement rider. Proof of purchase and photographs of each item claimed will do much to speed your settlement. Most personal property policies will cover losses of property away from home whether taken from your car, your friend's car, or your hotel room. Be sure yours does too.

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# What To Do When You're Out Of Air

## *Traditional Techniques; Emergency Breathing System Tested*

What do you do if you're at 80 feet and all of a sudden you can't suck air? Everyone in the industry has a different opinion. Training agencies have different philosophies, while individual instructors who profess to teach what their agency tells them, often emphasize their own beliefs. So within agencies—and within a single dive shop—everything from buddy breathing to carrying a pony bottle gets attention. In the meantime, most divers are without the clear direction and training—or equipment—to get themselves out of a jam.

If a diver runs out of air, it's most likely because he, himself, erred either by failing to check his submersible pressure gauge, or, if he did check it, by ignoring the warning. Sure a hose can break or a regulator can free-flow, but these are rare occurrences. The typical diver who runs out of air in open water does so because he is careless.

Since there is no agreement in the industry on the best means for bailing out from an out-of-air emergency, there is no consistent training or practice in certifying classes. These are techniques now available.

## Dining on Porcupine Puffer Fish

### *Get High... Or Die!*

At Tokyo's Santomo restaurant, the specialty is "fugu," a porcupine puffer fish that contains a powerful natural poison. The poison, tetrodotoxin, is the number one cause of fatal food poisoning in Japan. More than half the people poisoned by fugu die within 24 hours due to heart attack and asphyxiation. In 1980, about 60 people died from eating fugu in Japan.

This delicacy is not always fatal, but it takes a special kind of skill to prepare a dish that is safe to eat. Fugu cooks are trained for three years in Japanese cooking schools, then required to take licensing exams given by local health authorities. Some cooks may also apprentice in restaurants that specialize in fugu.

"When the fish is caught, it must have its viscera separated from the meat and the skin taken off," explains James Atz, an ichthyologist with the American Museum of Natural History in New York City. "And then there's a certain amount of washing. Exactly how it's done is probably a trade secret, but you have to get rid of enough toxin to avoid a lethal dose for an ordinary meal. The poison is found throughout the muscles, skin, and organs, but its highest concentration is in the viscera, particularly the liver and gonads.

"If fugu doesn't kill you, you get a very pleasant tingling sensation on the tongue, toes, and fingers," Atz says. "It's a high—and probably heightened because you never know how far it's going to go. Also, some Japanese consider it an aphrodisiac."

A fugu high and fugu poisoning start the same way. But in the case of poisoning, problems with coordination set in within 45 minutes of the meal, followed by tingling, numbness, excessive salivation, weakness, nausea, vomiting, diarrhea, abdominal pain, twitching paralysis, voice loss, difficulty in swallowing, convulsions, and death by respiratory failure.

Elizabeth Andoh, a Japanese cooking school graduate and author of *At Home with Japanese Cooking*, says she has eaten fugu many times—usually served raw as sashimi, in translucent white slices with a soy-based sauce. "It has the texture of smoked salmon, but it's a bit grainy and not oily," she says. "But it's nothing I want to risk my life on anymore. I don't play Russian roulette either."

Unfortunately, there is no way to test in advance if a fish is carrying a lethal dose, according to officials of the U.S. Food and Drug Administration. Nor is there any known antidote for fugu poisoning. For that reason, the FDA issued an important alert against fugu in February of 1980. It directed FDA districts around the country to block shipments of globe, swell, and puffer fish, and other members of the family Tetraodontidae believed to come from the Pacific or other tropical seas near Japan.

One of the few U.S. restaurants affected was Yodo, which reportedly offers some of the best Japanese food in New York City. Yodo had served fugu fish dinners for five years. "If possible, we hope to start serving fugu again later this year or next year," says owner Harry Abe. But given the FDA's restriction, that may be wishful thinking. As a Japanese proverb succinctly puts it, "I would like to eat fugu, but I would like to live."

—Science '82



## Buddy Breathing

Most divers trained in the 1970's (and no doubt the majority trained since then) have been taught that the "normal" means to save themselves is to turn to their buddy for air and share his regulator until the two get to the surface. Of course, buddy breathing is fraught with problems. When one analyzes the cause of deaths, it is apparent that in too many fatalities buddy breathing was either an inadequate response to the problem, or simply couldn't be performed.

Under adverse and panic conditions buddy breathing takes a great deal of practice. Most divers never practice after certification. When new buddies come together their personal idiosyncrasies make it even more difficult to handle buddy breathing correctly. Although buddy breathing is a technique that may have *some* merit in *some* situations, it can just as well be the improper response to saving oneself. Should an out-of-air diver have an imperfect partner, the urge to buddy breath can—and often does—become the first step in a fatal process.

## Auxiliary Regulator

A variation of buddy breathing which resolves a number of problems inherent in the relationship of sharing a single regulator is the use of the octopus regulator or, as NASDS calls it, "the safe second." It's a simple concept. Attached to the first stage of one's regulator is an auxiliary second stage to be used in an emergency. If a diver runs out of air, he paddles over to his buddy carrying the auxiliary regulator and grabs it for his personal use. His buddy need not give up his own regulator or, for that matter, even be aware of the problem.

This too is not foolproof. One must rely on the other diver who may not be in sight (buddies do get separated, you know). Conceivably, the two divers who have been diving together may be equally low on air. Furthermore, one has to have a buddy who owns an auxiliary regulator; regular buddies may require each other to have a safe second stage, but people who share different buddies each time they dive will seldom find a second stage available.

We should note that NASDS is the only agency which systematically trains its divers in the use of the auxiliary regulator and, as best as it can, requires their trainees to use a safe second stage during training. Some outsiders whine that NASDS only pushes the auxiliary to sell additional equipment, but the auxiliary second stage is so far superior to buddy breathing that, in our opinion, the arguments are spurious.

## Free Ascent

If the diver is going to save himself he must first realize that he is on his own. It is his life. His safety is

in his own hands. He had better be able to react. In some situations, tracking down a buddy to get air may be impossible, so if that's his first instinct, he may not survive.

A better choice may be to simply head for the surface, exhaling all the way at no faster than 1 foot per second. A calm and controlled diver who knows how to make a so-called free ascent should be able to reach the surface safely from nearly any normal depth. As he rises, the air expanding in his lungs gives him the sensation of having available air, which helps quell panic. Furthermore, as he rises he may find that an additional breath or two will become available from his tank if the regulator is in working order—it becomes more capable of delivering air as the ambient pressure decreases. A diver who seemingly runs out of air at 90 feet may find a brief reserve at 60 feet, and again 40 or 30 feet.

Nevertheless, free ascent is not universally taught, although training agencies and instructors recognize that in the final analysis, an out-of-air diver is indeed alone. Why are many graduates not given the tools of self-rescue? Free ascent performed improperly is dangerous. Agencies and instructors not wanting to risk injury or death to students (and the subsequent liability) discuss it in the classrooms and perhaps provide some training in the shallows. Our survey of training agencies, which we published in Nov./Dec. 1981, shows that of the divers trained between 1976 and 1980, 41% had little or no training in buddy breathing ascent or in free ascent with weights; 66% had little or no training in free ascent without weights.

## Ascent While Breathing Into The BC

Free ascent can be aided by the use of a BC. In an article published in *Undercurrent* in February 1979, author Al Pierce pointed out how as a diver rises, air in the BC expands and a diver can use a BC while he rises by breathing in and out, drawing sufficient oxygen from the reused air to permit him to rise easily to the surface from depths of 100 feet or even greater.

It's a simple technique to practice. It reduces diver panic because the diver has the sensation of breathing and, in fact, by giving the diver air it makes it easier for him to surface and less likely that he will panic on his rise. Nevertheless, we do not know of any training agency systematically teaching the technique.

## Pony Bottle

Perhaps the most foolproof self-rescue technique is to carry an auxiliary air supply—a pony bottle or the so-called Emergency Breathing System, a recently available device.



A pony bottle, which contains about 15 cubic feet of air and comes equipped with a valve and separate regulator, is strapped to the primary tank. With a pony bottle, a diver has roughly 10 minutes of reserve air he can call upon, depending, of course, on depth and breathing rate. The supply is more than enough to get the average diver to the surface safely, even if some decompression time is needed.

Aluminum pony bottles weigh 6-8 lbs; in the water, buoyancy is positive, so you may need to add a pound or two to compensate for the buoyancy. The weight may not be significant for boat diving but toting the extra pounds while shore diving can be back-breaking.

An aluminum pony bottle with "K" valve is priced in the \$100-\$130 range and with an inexpensive regulator, the price approaches \$200.

Because of the cost and the hassle, few divers purchase pony bottles. Both Nick Icorn (Ocean Dynamics) and Jim Foley (Dacor) told *Undercurrent* their sales come in the form of special orders, normally for only one or two at a time. Apparently, divers in the mid-West order the bulk of pony bottles. "Great Lakes wreck divers are perhaps using them for a back-up system," Foley said, "either instead of, or in addition to, a twin tank arrangement."

Of course, the regulator on a pony bottle needs to be serviced as regularly as the primary regulator, but people often ignore the need. Al Thompson (Professional Scuba Repairs) told *Undercurrent* that "when a diver hears what it will cost to service his additional regulator, a lot of them will say 'hell, I don't use it anyway, just service the primary.'" That's faulty thinking. Sun and saltwater are the primary causes of regulator deterioration, not mere use.

Nevertheless, a pony bottle provides plenty of time in an emergency and obviously permits one to be safe himself regardless of his buddy's disposition.

### **The EBS—the Emergency Breathing System**

Recently, an alternative to the pony bottle has been brought to the market: the Emergency Breathing System (EBS), distributed by Submersible Systems, Inc. of Huntington Beach, California. It does not have the air capacity of a pony bottle, but for a back-up, self-rescue system, it works just fine.

The EBS is an aluminum cylinder 15 inches long and 2 inches in diameter. It holds 2 cubic feet of air pumped to 1800 psi and weighs 2 lbs. It's small enough to be carried on a tank or BC strap, or to be attached to the tank with an accompanying metal clip holder. A regulator is built into the EBS. A "pop-up" pressure gauge is built into the regulator. That's a real advantage over the pony bottle, which requires a separate gauge to check for the fill.

Though two cubic feet of air is not much air, it is



**ABOUT THE SAME SIZE AS AN ALTO SAXOPHONE, THE EMERGENCY BREATHING SYSTEM IS EASY TO USE UNDERWATER.**

sufficient to permit any diver to surface from sport diving depths no faster than the recommended 60 feet per minute. The manufacturer claims that if you use your air conservatively in an ascent from 100 feet to the surface, you should be able to obtain seven good breaths at a normal ascent rate.

The EBS sells for \$140 to \$160 and includes a refill adapter, neoprene holder which fits on a belt, the cylinder, regulator and pressure indicator, (called a pressure gauge by the manufacturer.) The indicator is a pin which indicates the relative amount of air available. If the pin is flush with the top of the mounting the tank is full; as air is used the pin recedes. Also available as extras are a tank attachment (\$11.00) and a second refill adapter which allows filling the cylinder from another tank (\$49.00).

To try out the EBS, one of our staff members recently took the device out to get wet. Here is what he reports:

"The EBS slipped easily into my dive bag. It didn't weigh much and it sure didn't take up alot of room. I carried it on my BC strap in the neoprene holder and found it barely noticeable. Unless I bumped it on something—which I seldom did—it never got in the way.

"Using the EBS underwater is simple; I turned the



circular knob to turn it on, blew through it to clear the water, and took a breath. At 60 feet I had no trouble at all reaching the surface in a relaxed manner. In fact, after my first ascent I returned to 60 feet without a refill and resurfaced again with no difficulty.

"The regulator is not exactly an easy breather. While it was easy enough to get air, I could indeed tell the difference between it and my primary regulator.

"After using the EBS, I hit the purge to clear it of any salt water, rinsed it off, and dropped it into the dive bag. But here I encountered a problem.

"When I got home the knob used to turn the air supply on and off had fallen off. I found that a small Allen wrench is needed to fasten the knob, and an Allen wrench is not a device I carry in my relatively well-equipped dive kit. Who does carry one? Had I been on a dive boat—especially in a foreign country—I doubt that I could have found a wrench and the device would have been rendered useless. The manufacturer should build an Allen wrench into the adapter—or find another way to secure the knob.

"Refilling the EBS is a minor hassle. The refill

adapter has a screw driver blade on one end. To get at it one has to unscrew the pressure gauge and take that out, then screw in the adapter. After the cylinder is filled, the pressure gauge is put back in. If the adapter or the pressure gauge were to get lost, (an easy enough likelihood for a fumble fingers), the EBS would be unworkable until the missing part was replaced.

"Nevertheless, the EBS serves its purpose as a light-weight self-rescue breathing device. I would choose the EBS over a pony bottle because I don't need extra bottom time, as a cave diver or cold water wreck diver might need. I only need safety, and light-weight safety at that, because of my travels.

"I also believe that the EBS (as well as a pony bottle) is superior to any other self-rescue system because it provides an auxiliary air supply. In fact, if one intends to spend \$70 or \$80 dollars for an auxiliary second stage, he might just as well go another \$60 or \$70 and get the EBS.

"But since most divers reading this won't buy any additional safety device, then how about familiarizing yourself with the BC rebreathing procedure? It could be a life saver."

## Divers Who Smoke—

### *Special Problems Lurk Beneath The Surface*

It's no secret that smoking damages the heart and lungs, the organs which are stressed most by diving. The diver who smokes is therefore at risk, the magnitude of which depends on the extent of smoking, the time of diving, and the actions of the diver.

#### **Smoking Effects**

Smoking impairs breathing and decreases the body's ability to supply oxygen to vital tissues. This is partly due to mismatching of air and blood flow to the lungs, meaning blood may leave the lungs without a full supply of oxygen. Furthermore, carbon monoxide in cigarette smoke decreases the blood's ability to carry oxygen by preventing the binding of oxygen to hemoglobin. This forces the heart and respiratory muscles to work harder in the smoker and exert a greater than normal demand on the already compromised oxygen supply. The increased demand is due to the stimulant effects of nicotine and the irritant effect of cigarette smoke in lung airways. Irritated airways constrict, thus increasing breathing resistance.

Air trapped in the lungs of an ascending diver may induce lung rupture—embolism—whether the diver smokes or not. However, smoking-related disease progressively weakens lung tissue and increases air trapping, thus posing an additional hazard to a diver.

A cold is especially serious for a smoking diver since it leads to obstruction of small airways and the possibility of further air trapping.

Lung damage from smoking occurs quickly, being measurable in teenagers who have smoked for as little as one year. However, the early stages of smoking-induced lung damage are reversible if one stops smoking.

#### **Regulators**

Since a diver who smokes may have an increased airway resistance, it is especially important to minimize the additional resistance to breathing found in regulators. Use a clean and tuned regulator requiring low expiratory and inspiratory efforts documented at depths of 100 feet or greater. (See *Undercurrent* U.S. Navy Regulator tests, September, October, Nov./Dec. 1980). Surface values are no substitute for a measure of regulator performance during actual or simulated diving conditions, since resistance increases with depth. While high resistance may not be troublesome on a relaxed dive near the surface, they may be quite troublesome to a tired diver at depth, working hard, with low air supply. Labored breathing under such conditions can turn into a vicious cycle ultimately leading to hyperventilation and panic—or at the very least, an extremely unpleasant dive.



## **Decompression Tables**

Decompression sickness occasionally occurs even when divers conscientiously follow Navy decompression tables. For smokers, a conservative approach to the standard tables is suggested.

## **Ascent Rate**

Practicing or teaching free ascents is risky. Gas trapped in the lungs by smoking-related disease processes could conceivably lead to lung rupture upon ascent. For all ascents, a slower than standard ascent is advisable.

## **Colds**

Do not dive with a cold. No matter how decongested the nose and sinuses might be, small airways in a smoker's lungs may still be obstructed, posing a hazard upon ascent.

## **Evaluate and Plan**

Strenuous dives with long swims, currents, or heavy work loads require both diver and equipment to be in optimum condition. A smoker should be aware of his potential handicap, honestly evaluate his strength and recent diving experience, and be prepared to modify his dive plans to ensure an en-

joyable dive. A diver who pushes beyond his limits is a menace to both himself and his diving buddies.

## **Modifying the Smoking Habit**

Divers should refrain from smoking for at least one hour before a dive, since some of the acute effects of smoking disappear within that time period. Some effects, however, may linger on for weeks or even years, depending on the previous extent of the diver's smoking. Obviously, the longer a diver abstains from smoking before a dive, the better off he is. Since smoking lessens a diver's performance and safety on each and every dive, a diver would be well advised to give up smoking all together, or at least, give up cigarettes, which have a more harmful effect on heart and lungs than pipes or cigars.

## **Medical Exams**

The physical impairment caused by smoking varies greatly, both with time and among individuals. Only your physician can evaluate the damage done to your body by smoking, and thus should be consulted at regular intervals.

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This article was written by Dr. John Clarke, Department of Physiology, the J. Hillis Miller Health Center, University of Florida. His research was supported by the Sea Grant Program of the National Oceanic and Atmospheric Administration.

# **NASDS Seal Of Approval Stopped By Feds**

## ***Called "False" And "Misleading"***

For awhile, it looked like NASDS had come up with a spiffy marketing device. Its "Seal of Approval," slapped on any gear sold in its stores, added an aura of respectability to the products bearing the Seal. Its official appearance suggested a stamp of approval not unlike seals from testing labs or other official outfits, and no doubt helped the customer spend his money in an NASDS shop.

But the seal is no more. NASDS has entered into a consent agreement with the Federal Trade Commission which bars the training organization from further uses of the seal...unless the products bearing the seal are supported by appropriate tests.

The FTC issued a press release about the settlement, stating:

"NASDS sold its Seal of Approval for use on diving products even though the products had not been tested or did not meet objective quality standards. The association also allegedly encouraged retailers to use the seal as a promotional device for the products even though the products were never tested.

"The National Association of Scuba Diving

Schools (NASDS) is a marketing and management organization, selling and promoting diving equipment to more than 200 retail stores nationally. Its 'Seal of Approval,' featuring terms such as 'Integrity,' 'Safety,' and 'Instruction,' appear on price tags, and decals sold in bulk to retail stores without restriction on use. The retailers, in turn, attach these seals to the equipment. NASDS also advertises in divers' magazines and on store displays that products have earned its seal and urges customers to look for the seal before they buy.

"The complaint charged that, by promoting the seal in this way, NASDS represents the seal as attached only to diving equipment approved by the association and that approval is based on tests or some other objective quality and performance criteria. The complaint alleges that no tests have been done. As a result, the Commission contends such representations are false, misleading and in violation of federal law.

"The proposed order prohibits NASDS from representing that any seal used with diving equipment



is a sign that the equipment meets objective standards of performance, safety or quality unless tests have been performed. The proposed order also requires the association to stop using or allowing others to use any seal misrepresenting that fact. NASDS also must disclose any material connection between the tester and the product.

"In addition, the order bars any misrepresentations about the significance of a seal or emblem.

"Finally, the proposed order requires the company to provide all users of the seal with a copy of the order and demand that they stop using the seal in any way inconsistent with the order. To ensure compliance, NASDS will conduct a surveillance program and stop doing business with any retailer who does not comply."

### **NASDS Responds**

John Gaffney, Executive Director of NASDS, sent the following communique to his dealers:

"When you read the report from the FTC, you think that NASDS members and NASDS National Headquarters were really bad people. What a bunch of nasty folks they must be to allow a Seal of Approval to be used on equipment without testing.

"The real truth is that the Seal of Excellence was put on store guarantees for the air delivery systems that the NASDS stores sold, as well as other products that the NASDS stores backed with an in-store guarantee. Anyone in this business that knows the repair facilities of the manufacturers, knows that for self-defense, the in-store repairs done on equipment bought by the consumer in retail diving stores is a safeguard, both to their safety and to the NASDS store's reputation.

"The real problem lies in the fact that 'someone' in the diving industry took a shot at a NASDS marketing program, and blew the FTC's whistle. The FTC told us what we had to do to comply with a complete testing program on all the equipment that the Seal of Excellence went on, and it doesn't take a genius to know that it would cost more money than the promotional value of the Seal program would be worth.

"We complied with the FTC. We ran a release in the Diving Retailer and Professional Instructor (Vol. 4, Number 1), and we stopped shipping any material with the seal on it. Big deal. The FTC did their job, and caught the NASDS program with a violation of the law, as it is written in the Great FTC book.

"It is interesting to note that a few issues ago, on the back cover of *Skin Diver Magazine* (where else?), there was a full color ad for U.S. Divers. Guess what one of the features of the ad was? I will save you looking it up. It's 'Your Certificate of Excellence' from U.S. Divers.

"NASDS doesn't think that the FTC did a hell of a

lot of good for the consumer. They didn't do much for the small retailers that make up 100% of the diving industry. Everyone knows that the NASDS stores use every product they sell. They teach in the equipment, hopefully, six nights a week. They dive in the equipment every weekend. There is no question in our minds that NASDS retail store/schools are not going to put the Seal of Excellence on a product they have trouble with.

"On the other hand, when was the last time DEMA sent the diving retailers a complete up-dated list of every recall or product maintenance required to protect the consumer? So score 1 for FTC, and 1 for the 'someone' that blew the whistle on NASDS and a big, fat 0 for the NASDS store/schools and the consumer.

"This is NASDS' story, and this hopefully is the end of it."

### **Undercurrent Comments**

John Gaffney's comments notwithstanding, we think the FTC was correct in its ruling—and Gaffney admits it. But his complaint about the U.S. Divers "Certificate of Excellence" misses the point of it all.

U.S. Diver's "Certificate of Excellence" relates to the equipment *they* manufacture or distribute to retailers. No independent organization (NASDS, for example) is certifying the equipment, making claims for it, or recommending it. On the other hand, NASDS is independent of the manufacturer, and consumers presume that independence. By putting the seal on *any* manufacturer's equipment sold in its stores the endorsement could easily be construed by a consumer as something far more important than a sticker slapped on any piece of equipment being pushed. There's a big, big difference between the U.S. Diver's certificate and the NASDS Seal.

Gaffney's comment about DEMA is on the mark (though unrelated to the FTC ruling). "When was the last time DEMA sent the diving retailers a complete up-dated list of every recall or product maintenance required to protect the consumer?" DEMA could perform a fine service by sending the kind of information Gaffney suggests to all stores, but DEMA doesn't do such things. DEMA represents manufacturer's interests, not consumer's interests. Until the diving equipment manufacturers collectively understand that information about recalls, product maintenance and so forth means a good name for the industry—and safety for divers—they'll continue their self-serving ways.

Gaffney, on the other hand, represents his stores' interest, which is one step closer to the consumer than the manufacturer. Although the Seal of Approval did more to deceive the consumer than help him, Gaffney's jibes do more to blow fresh air through the smoke-filled rooms of the diving industry than just about anything else around.