

undercurrent®

THE PRIVATE, EXCLUSIVE GUIDE FOR SERIOUS DIVERS

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Somewhere In The Bahamas

Searching For Dolphins

I've not met a diver without a dream. Maybe it's riding a 15-foot manta, maybe it's seeing a feeding frenzy right outside a shark cage, maybe it's photographing all 150 species of Pacific nudibranch. Whatever the dream, I've not met a diver without one. My dream? It's always been to swim freely with wild dolphins. I've been determined to share the same water with all their power, grace and intelligence, to float freely among them and be, myself, a dolphin for a dive.

So when I saw the tiny ad in Skin Diver--"Research and Film Dolphins in the Bahamas with the Living Ocean Society," I hoped my dream could come true.

And it did, in that funny, romantic-realistic, two-edged way dreams have.

The Living Ocean Society is "dedicated to the well-being of marine mammals and the ocean environment." It says that right on my t-shirt! Its director, Hardy Jones, uses the media to focus the public's attention on problems with the oceans and their inhabitants. His recent documentary called, what else, "Dolphin" told the tale of a group of Atlantic spotted dolphins which seem to remain in the same territory near the Bahamas. The film was shown on PBS affiliates nationwide. To finance a sequel, Jones organized a series of week-long trips to the Bahamas, supported in part by diving tourists who pay to participate in the filming and researching of dolphins' communication and social structure. As a contribution to a nonprofit organization, the trip is tax deductible (see sidebar). In return for the financial support, which at \$545/person for five days isn't too far out of line with many standard dive trips, divers were promised a chance to dive with dolphins, see a film being made, and write off the trip on income tax.

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My home for a week in July was the R/V Tropic Bird, normally at berth in the British Virgins, but specially chartered for the LOS expeditions to leave from West Palm Beach, Florida. She is a 98-foot motor yacht with 12 so-called "staterooms." Mine, as it turned out, was exactly twice as wide as the bunks, but a porthole and working air-conditioning made it habitable. For this trip the ship's social quarters were commandeered by the film crew; the sauna was used as storage for the film and sound crews, the forward bar was used for camera preparation and acoustic research. Only the aft lounge, where we took our meals, remained in use for guests. Nevertheless, the Tropic Bird is well-suited for diving, with two compressors, 40 new aluminum tanks, other gear as needed, two side exits, a platform for re-entry, and an intelligent and cooperative crew. Captain Mike Bloss, an affable and humorous fellow, also carries a solid inner core of knowledge and competence.

We embarked from Palm Beach in the muggy, late afternoon, heading off across the Gulf Stream, into the Bahamas. I won't identify the precise location, to help protect the dolphins from unnecessary intrusion. As the sun sank under the yardarm, I began to get a sense of the people who had joined the project. Most of us dozen-or-so research volunteers were young to middle-aged, mostly couples, but there were one or two singles and two older women, neither of whom dived, but both of whom were determined to find adventure. At least, I thought, I wouldn't have to worry about the spear jockeys who occasionally turn up on dive boats; in a sense we were preselected by our common response to the Living Ocean Society advertisement.

The Society is pretty much a one-man-band in the name of Hardy Jones, a tall, energetic, and fairly humorless chap, determined to put his issue in the public eye, whatever that issue may be. He is the writer, producer, director, editor, and no doubt distributor of the films, as well as the star. And he knows well how to grab the audience by the throat with drama. (One night he showed some grisly videotape of Japanese fishermen stabbing dolphins to death for catching "their" fish--Hardy's publicity may have helped change the senseless annual slaughter, since this year the number killed was much smaller than previously.) I have no doubt he is sincerely dedicated to improving the lot of marine mammals in particular, the ocean environment in general, and man's relationship to both.

As we motored along in the deepening twilight, Hardy introduced us to the rest of the crew: Howard Hall, cinematographer extraordinaire, whose films regularly appear on TV and whose still shots can be seen in many magazines--soft-spoken, unassuming, but the key to a successful film project; Steve Gagne, sound man, musician, creator of an underwater piano, and fanatically determined to communicate with dolphins via his music; Sheldon Fisher and Jeanette Thomas, marine biologists from Hubbs Sea World Research Institute, who are studying dolphins' acoustic production and transmissions; and Julia Jones, Hardy's wife, a biologist, in charge of the identification part of the project.

And this is where the volunteers came in. Julia explained that individual dolphins could be identified by the scars on their backs, dorsal and pectoral fins, and tail flukes, in combination with size, amount of spotting, and sex. (As the Atlantic spotted dolphin ages, its smooth gray upper body becomes more spotted with black.) Our task was to help figure out if there are stable sub-groups of individuals--do certain dolphins always swim together? If so, what is the basis of the group? Sex, age, what? We were to record sightings of individuals, make drawings of distinctive markings, observe and note behavior

patterns and generally be as objective as possible. I nodded solemnly, knowing perfectly well that when that first dolphin raced up to the boat, the last thing I would be was objective.

From a human point of view, dolphins are capricious characters, coming and going as they please. The first day we saw none, sparking my fear that we would spend the whole week steaming around calling "here, little dolphin," and never achieving success. But the next day they came, roaring in from the distant horizon, greeting us with great curving leaps as they raced to the bow of the boat to ride the pressure wave. Four or five would join the wave, slipping back and forth, over and under each other, one dropping out and another sliding into its place. Dolphins are tactile animals, constantly touching and jostling each other; conversely they are precisely aware of themselves in relation to other objects, and can effortlessly avoid whatever or whomever they please. I found the best way to watch them was to lie on the prow and hang over, just a few feet above the animals, and indeed flow with them. One might tip an eye up and appear to smile, another might delicately fluke a little water at me--I could have spent the entire trip being with the dolphins like this.

After a couple of encounters we began to identify the individuals. Chopper had lost the tip of his left fluke. Hot Dog liked to ride the bow wave upside down, flashing his pinkish white belly. One group of five or six--the Heavies, we called them--always traveled together. Their larger size and greater spotting and whitening of the rostrum indicated they were males, and they were more wary and dignified. They liked to move in and take over the bow wave. Then there was Dee Dee. She always swam with three or four younger dolphins, and she had a characteristic signature whistle that could be seen as a trail of tiny bubbles from the blow hole. And, she always had a remora attached. We called it her

Tax Deductible Dive Trips

Red Sea Crown of Thorns, Hawaiian Butterflies

No doubt that participants in the Living Ocean Society trip were lured by the opportunity to work and dive with dolphins. But it's unlikely that many would have made the trip without the benefits of the tax deductions for the expenses they incurred while "volunteering" their services.

Certain trips qualify for tax deductions if the organization sponsoring the trip is a nonprofit corporation, designated a 501 (c) 3 corporation under IRS regulations. Financial contributions made to these corporations are deductible, as are expenditures directly incurred by volunteers pursuing the business of these corporations. To be eligible for such a distinction, a nonprofit must engage in charitable, educational or scientific programs. For the participant to be eligible to deduct direct expenditures he must volunteer his services to legitimate activities of the organization.

When the tests are met, travel, food, lodging and ancillary expenditures are deductible. That means, for example, that for a person in the 25 percent tax bracket, the real cost of a \$1200 trip will be \$900. Anyone who wishes to write off a trip should deal only with reputable organizations to ensure that they in fact qualify for the deductions and then present a list of trip expenses to a CPA at tax time.

Although our article covered a trip with the Living Ocean Society, Earthwatch is the largest and most prominent organization running tax deductible trips. They offer archaeological digs, anthropological studies, botanical research and, of course, trips employing scuba diving volunteers. These are just a few of their forthcoming trips.

Great Barrier Reef, Australia, to study the recovery processes of disturbed coral reef areas by selecting virgin reef sections, creating artificial disturbances, then evaluating the changes over time. September 6-26, and September 27-October 17, 1982. \$650/person plus airfare.

Red Sea, Gulf of Eilat, to study the distribution and behavior of the Crown of Thorns starfish and its destructive impact on the reefs. June 15-29, and October 15-29, 1982. \$1290 plus airfare.

Kawaihai Bay, Hawaii, to study varieties of butterfly fish, the distribution and abundance of food, competitors, etc. June 1-14, June 18-30, July 5-18, July 21-August 3, 1982. \$1495 plus airfare.

For an Earthwatch catalogue, write *Earthwatch, 10 Juniper Road, Box 127, Belmont, Mass. 02178.*

pet--it was always attached somewhere, sometimes changing places as we watched. Hardy even remembered her from the previous year, remora and all.

As we saw the dolphins more often in the following days, one flaw in the trip for tourists began to reveal itself--there were too many things going on. The highest priority, of course, was making the film. Howard and Hardy had certain shots they had to get, so they had "first dibs," so to speak. When the dolphins came in, they were first in the water and remained there, alone, until they got the footage they sought--or until the dolphins went away, as often they would (the animals seemed to get bored with us humans easily). Then the Hubbs Sea World people would play some previously recorded dolphin sounds through the underwater speaker to attract them back. This might work, but even as they were trying to record the real-time dolphin response, Howard and Hardy might decide to get closer in the inflatable boat and thus overwhelm the dolphins' sounds with the sound of the motor. But then, perhaps it was the sound of the outboard that attracted them. And Steve Gagne would try to lure them with music he played on his keyboard--and they might go away, or they might come back. And a whole cycle of confusion would begin again.

All this while we paying apprentice scientists were getting increasingly restless to get in the water, partly to make our observations (e.g., the sex of a dolphin is virtually impossible to determine from topside) and partly for the thrills we sought. One day a few of us went out in the inflatable, quietly following a pair of dolphins until they seemed to settle in one spot. I slipped into the water and finally it happened: me and free dolphins in the same ten feet of open ocean. They kept that 10-foot distance for the five minutes that they pleased to remain, circling, curious--and wary. One watched me as closely as I watched him, calmly backing away as I swam toward him. Then with one sweep of his tail he was gone, his easy power making me aware of the limitations of arms and legs in his fluid world. The encounter was too brief. I wanted more.

In between dolphin sightings we made three excellent leisure dives. In this untrafficked and virgin area of the Bahamas, the fish were bigger and bolder than most other Caribbean sites I have visited in my many years. I saw big blue parrotfish, white spotted filefish, queen triggers, French and queen angels and tobaccosfish, and enormous (up to 5 inches) blue chromis. We dived on a wreck in about 40 feet where the macrophoto possibilities were so superb that I hardly noticed the 10-foot nurse sharks that swam out of the hull (well, I did notice them, but I just grunted into my regulator and went back to the three different-colored featherdusters clustered in one spot.)

But I really wasn't there to reef dive. I was still waiting for the ultimate dolphin experience and it finally happened on a day when everything else was going wrong. It was oppressively hot. Sightings had been frustratingly brief. Tension was rising among Hardy's people. The tourists were getting impatient with the whole scene. So during one of the frequent stops, we all just jumped into the water to cool off. Suddenly, there were four dolphins swimming among us. There was a scramble for snorkeling gear and then--45 minutes of magic. Four heavies decided to play with us. They led us in a dance, sometimes getting close as three feet away, although never near enough to touch. But I could actually feel the vibrations when a dolphin echo-located me. They watched us trying to imitate their smooth style in the water. They seemed to especially like us to free dive and would sink and rise in synch with the diver. Even when we began swimming back toward the boat they stayed with us, slowing their pace to suit us ill-equipped humans. In these moments, the problems of the expedition were washed away by the sea. When the dolphins finally left us, I was satisfied. My dream had come true.

Conclusion: Would I do this again? Definitely--but I would have different expectations. First, I realize now that my pleasure is not the purpose of this trip for those who ran it. They have a job to do. Second, I doubt that I made much of a contribution to science. I'm not so sure that the dolphin identification project was carefully designed and much better use could have been made of the paying passengers. Third, because the crew is there for a purpose other than pleasure, the physical and social amenities accompanying any kind of dive cruise really weren't available. The food was hearty (cold cut luncheons, steak or chicken dinners) and an honor bar was open, but it was not a social diving cruise. Finally, involvement with the dolphins isn't guaranteed; even if the dolphins show, the paying passengers get the last shot--and the dolphins would not always wait. Nevertheless, my dream was fulfilled, so I got what I came for. And when my dream comes again, I will know now how to satisfy it.

DIVERS COMPASS: For information about the Living Ocean Society and forthcoming trips, write Hardy Jones at the Living Ocean Society, PO Box 855, Sausalito, California, 94966 (415/332-5410). . . .Other trips are planned for the Sea of Cortez, Sri Lanka, Australia, and the Seychelles. . . .The Tropic Bird, certainly a worthwhile dive vessel, is up for charter; home port is Road Town, Tortola, BVI or call (800) 648-3393. . . .The next dolphin film should be ready for broadcast some time in mid 1982. The Living Ocean Society will visit the Bahamas dolphins again next July; the price is not set. . . .A Sea of Cortez trip from February 22 to March 1 will film Blue and Finback whales; price is \$895.

The Cost Of Scubapro Gear:

Three Law Suits Test Their Prices

We think it's a pretty fair guess to say that most American divers see Scubapro gear as top-of-the-market stuff. Divers who sport the big "S" strut the stuff as Brooke Shields struts her Calvins. And because Scubapro gear is consistently priced higher than comparable gear, the diver who owns the stuff is either perceived as affluent or as one who will shell out his last penny for "the very best."

The Scubapro image is no mistake. They work very hard to cultivate it. Of course Scubapro is an innovative company. They clearly lead other manufacturers in developing major new products. Both the AIR II BC inflator/emergency regulator and the Stabilizing Jacket were major product innovations. Their products have a strong reputation for reliability and performance. Yet one cannot walk into just *any* dive shop to buy Scubapro gear. Distribution is limited, cultivating the belief that there is indeed something special about their products. And there is indeed one thing special: a top-of-the-market price which further contributes to the exclusive image. Divers try to beat their high prices by waiting for sales but the chances of finding prices slashed on Scubapro regulators or wet suits aren't much greater than the likelihood of running into a kelp bed in the Caribbean.

For many years we have wondered whether Scubapro is engaged in fair play with their prices. After all, there are federal laws prohibiting manufac-

turers from maintaining and enforcing retail prices. Nevertheless Scubapro prices always seem the same, regardless of the shop. We've heard plenty of rumors that Scubapro ruled its distributors with an iron hand, but it was not until we began researching the issue that we began to understand its scope.

We spoke with a number of Scubapro dealers and nondealers, none of whom were willing to go on record. However, they described curious relationships between Scubapro and the retailers and led us to the discovery of three law suits filed against Scubapro, claiming violation of a number of laws relating to antitrust and retail price maintenance. We tried to elicit a response about the suits from Scubapro President Dick Bonin, but he was unwilling to comment (which was expected, since any comments by a defendant in a law suit can prejudice the outcome).

Suits Against Scubapro

In one suit the plaintiff, a Louisiana dive shop operator, was victorious, but Scubapro is appealing the verdict. Another suit has been filed by the State of Washington and a third, perhaps the most threatening to Scubapro, had been filed by the Federal Government. In this suit Scubapro is cited for alleged violations of the Sherman Antitrust Act. The filing reads:

“Beginning at least as early as 1963 and continuing to the date of this complaint, defendant USI [Under Sea Industries, the official name of the company producing Scubapro products] and co-conspirators have engaged in an unlawful combination and conspiracy in unreasonable restraint of the aforesaid interstate trade and commerce in violation of Section 1 of the Sherman Act (15 U.S.C. sec. 1.)”

More specifically, the government alleges that: “the aforesaid combination and conspiracy has consisted of a continuing agreement, understanding, and concert of action among defendant and co-conspirators, the substantial terms of which, among others, have been:

- (a) *Scubapro dealers will sell Scubapro equipment at prices fixed by defendant USI;*
- (b) *Scubapro dealers and defendant USI will refrain from selling Scubapro equipment to dealers who advertise or sell Scubapro equipment at prices lower than those fixed by defendant USI; and*
- (c) *Scubapro dealers will notify USI of the sale of Scubapro equipment at prices other than those fixed by the defendant USI in order that USI can take steps to eliminate such sales.*
- (d) *Scubapro dealers have been prevented from selling Scubapro equipment at prices other than those set by USI.*

The Federal Government’s case is predicated upon price controls allegedly set and enforced by USI and their dealers, but no additional specifics are included in the complaint filed by the Federal Government. *Undercurrent* sought clarification from several members of the Attorney General’s staff in the nation’s capital, but they would only report that the suit is active and no trial date has been set.

In the second action, the State of Washington brought suit against Under Sea Industries for retail price maintenance, that is, requiring retailers to maintain fixed prices and to not permit discounts from Scubapro’s suggested retail prices. Attorneys would not discuss the case with *Undercurrent*, although we were able to get some information through newspaper reports and other sources.

Apparently one Scubapro dealer sent a customer to another Scubapro dealer to buy equipment. Once the sale had been made the second dealer “threw in” another piece of equipment (not Scubapro’s) for no additional charge. For some reason the customer showed the sales slip and the items to the owners at the first dive shop, who apparently notified Scubapro

that the other shop had “discounted” Scubapro equipment by “throwing in free items.” Scubapro allegedly notified the second shop owner that they would no longer supply him with the Scubapro line. The shop owner apparently contacted a Scubapro salesman to discuss the matter, bringing with him an attorney whose identity was not disclosed. During this luncheon, the Scubapro salesman allegedly explained his company’s position and stated they would no longer supply him with Scubapro products. This became the basis for the suit brought by the State of Washington against Under Sea Industries.

In the third case, Alabama dive shop owner Cliff McClure was awarded \$20,000 in damages (which were then trebled to \$60,000) plus \$85,000 in attorney’s fees. Scubapro has appealed the decision, which concluded that Scubapro had violated restraint of trade laws.

“Alabama dive shop owner Cliff McClure was awarded \$20,000 in damages (which were then trebled to \$60,000) plus \$85,000 in attorney’s fees. Scubapro has appealed the decision. . .”

McClure, who had been a Scubapro dealer for several years, sold about \$25,000 of Scubapro gear each year. While in the retail business, he had an idea for a new piece of equipment and received some development money from another manufacturer. In light of the assistance, he agreed to begin stocking part of this manufacturer’s line. Scubapro allegedly took a dim view of this and told McClure to drop the other line. McClure refused. So, he claimed, not only did Scubapro stop shipping products to him, they stopped shipping replacement parts for the gear he had sold, effectively preventing him from repairing any equipment he had already sold. The court ruled in McClure’s favor, but Scubapro is appealing the judgment, both on facts and on law.

Fair Trade History

In 1963, when Scubapro started business (and, alleges the Federal Government, when Scubapro began their illegal business practices) diving was in its early adolescence. There was no national fair trade law, though several states had fair trade laws which permitted price fixing. Under the guise of protecting small businesses from being hurt by the discounting practices of larger stores, manufacturers or distributors were allowed to fix the retail price on their products and to require retailers to sell only at the established price. If the retailer tried to discount the product, the distributor could legally discontinue the line. From store-to-store, these products were available at one price only. Laws varied from state-to-state and in some states price fixing was illegal or

only some products could have prices set by manufacturers.

Although fair trade laws varied from state to state (in some states, they did not exist) retail prices could be fixed in most other states. In some cases *any* items could be fair traded, (that is, the price fixed by the manufacturer) and in other cases only certain items could be fair traded.

Scubapro entered the marketplace and developed franchised dealers who were screened for business acumen and their willingness to sell a product at a "given" price. Fitting neatly into their concept was an existing organization of retail dive shops, The National Association of Skin Diving Schools (NASDS). At that time, NASDS was the only organization whose efforts were directed to "marketing" the pro-dive shop concept. Their approach coincided with Scubapro's marketing and strategy, and Scubapro moved into the NASDS scheme. Not every NASDS member received the Scubapro line. Some shops did not want the products and others did not qualify. But enough NASDS shops began selling Scubapro to create the image of the Scubapro line being an exclusive line, available only in NASDS shops. From these professional shops, Scubapro received good income and a strong marketing base. Where no NASDS shops existed—or where the shops refused Scubapro products—other retail outlets were "permitted" the Scubapro line. The image of exclusivity, of Scubapro being diving's premier manufacturer, continued to develop.

Retail outlets handling Scubapro products had a vested interest in maintaining the "suggested retail price." By maintaining this price a healthy profit could be made as long as the demand grew. With the perceived and real exclusivity of the products, the effective Scubapro marketing program, and perceived and real product quality, the demand indeed grew. Furthermore, shop owners had an interest in seeing that other Scubapro dealers maintained the preset

prices. Any break could lead to a price war, presumably reducing their small profits. Organized and enforced price maintenance was one effective way of keeping the profits up.

Many states gradually repealed their fair trade laws and in 1975 the federal government outlawed nearly all state fair trade laws—and those under which Scubapro apparently sought refuge. Nonetheless, any diver who has shopped for Scubapro gear recently is surely aware that the price of that gear remains stable from shop to shop. Is that price fixing? Is there collusion between Scubapro and the retail outlets? Is there a violation of state/federal laws? That's what the three lawsuits are all about.

The Diving Community

For the sport diver the real question is whether the results of these court cases will bring competitive prices in Scubapro gear. As Cliff McClure has learned, winning the first battle does not necessarily mean winning the war. With presumed financial and legal backing of Scubapro's parent company, Johnson Wax, it will take a tough character like McClure or a persistent government agency to carry the fight through various appeal levels. If the courts do rule in favor of the consumer, the response of the dealers must still undergo close scrutiny. If they independently or collectively decide to maintain prices,

"Any action that will reduce the cost of equipment while still giving everybody a fair share will be welcome news."

expect little short run decline. In the long run, however, it's doubtful that the shops can or will maintain consistent prices among themselves. Nevertheless, there are still those who believe that

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price fixing through collusion is a prerogative of the free marketplace. Should competition come to the Scubapro prices, they argue, the bottom will fall out of their profits. Really now.

No doubt profits will drop on single items, but there are plenty of shops which sell U.S. Divers, Dacor, Sportsways, who don't maintain across-the-board prices and do just dandy. Indeed, lower prices may spur an interest in Scubapro gear. Surely there are plenty of divers around who would like to chuck

their old horsecollar BC for a Stabilizing Jacket but find the exorbitant prices prohibitive. A 10-15 percent cut might just be the incentive. And as volume increases, so do the gross profits.

As you know by now, *Undercurrent* doesn't write for dive shops. We write for divers. Any action that will reduce the cost of equipment while still giving everybody a fair share will be welcome news.

Plaintiffs, hang in there.

Why Divers Die: Part V

In the past four issues we carried a series on *Why Divers Die*, digested from the University of Rhode Island (URI) National Underwater Accident Data Center. We believe this data will help divers understand the various events leading to diving fatalities and therefore, be better able to take care of themselves. The data still suggests a number of causes of accidents not fully explored in the previous articles so in this issue we'll raise a few questions not fully addressed by the URI study.

Accident Causes

In the last issue the table entitled, "Proximate Starting Causes—Non-Professional Underwater Diving Accidents" indicated presumed causes of the fatalities. Yet to truly understand the accidents, one should look at events preceding these so-called "causes" to understand the causes of the accidents—something quite different than the causes of the fatalities. From 1976 to 1978 thirty-eight people died of air embolism—the cause of death. But it's the cause of the accident that led to the embolism that we must discover to improve diver safety. For example, one may have died from an embolism because he held his breath and rose too quickly. But why did that happen? Did his buddy leave him? Did his regulator malfunction? Did he panic unnecessarily and shoot to the surface? Did he press the wrong button on his automatic inflator and get into an uncontrolled ascent? These are the questions pertinent to scuba safety.

Panic

Panic is a contributor to many, if not most, diving deaths. Although panic may overcome any diver, some divers are far more likely to panic than others. A person who recognizes himself as being susceptible to panic and notice symptoms of panic occurring in his everyday life—a sense of impending fear, rapid heartbeat, breath holding for some, rapid breathing

Causes Behind The Causes

for others—perhaps ought not to be a scuba diver. It seems reasonable to hypothesize that the person who is likely to panic in a crowded subway or a dark room is indeed susceptible to panicking beneath the surface.

Of course, some degree of panic will hit just about anyone underwater. A large shark bearing down on a diver would cause anyone's eyes to bulge and heart to race. To escape, a panicked diver might gasp, hold his breath, kick to the surface—and embolize. A cool-headed diver finds a way to resolve the problem without panicking and doesn't embolize. He's deliberate and able to pull out of any tough situation.

"In the panicked diver, body responses dominate the mind; his physiological and emotional reactions prevent his cognitive processes from getting him out of trouble."

In the panicked diver, body responses dominate the mind; his physiological and emotional reactions prevent his cognitive processes from getting him out of trouble. The panicked diver becomes unable to help himself whether at 100 feet or on the surface.

Panic has some relationship to stress. A diver who brings stress with him may be less able to take care of himself than he would otherwise. If he's feeling particularly edgy about a dive, has been in a fight with his spouse, or is stressed from hassling with his gear, he's more susceptible to problems. It's a rare person who says, "Count me out. I'm not up to taking this dive." Yet, if it were possible to analyze the emotional state of accident victims prior to their fatal dive, we would no doubt learn that had some of the victims trusted their intuition and not dived, they would not have become a University of Rhode Island fatality statistic.

Indecision

Indecisiveness—or the failure to make a correct

decision to bail oneself out—can be the cause of many deaths. In some cases panic can create the circumstances under which an inappropriate decision is made, but for plenty of unknown other reasons indecision or a bad decision may lead to death. Consider the diver who gets particularly cold (even in the tropics) but still stays down longer. The cold can impair his judgment and in some circumstances, render him unable to take care of himself in an emergency.

In many situations it seems as if a diver could have saved himself with a free ascent, but the decision was never made. Why? Panic? No trust in skills? Too cold to consider it? Who knows?

Weights and Buoyancy

Divers who carry too many weights and try to use their BCs to overcome that weight are asking for trouble. Should the buoyancy fail or should it not be employed, the diver will simply sink. Divers should weight themselves to be buoyant on the surface and then "swim through" that positive buoyancy in the first few feet of the dive. Should one get into trouble and fail to drop a weight belt or fail to inflate the BC, he will always be buoyant.

Equipment

Though the University of Rhode Island stated they had their first death attributable to regulator failure in many years, we still suspect that the limitations of regulators contribute to a number of deaths whose causes remain a mystery. U.S. Navy reports (see *Undercurrent*, August, September, October 1980) demonstrate that a number of regulators fail to deliver air in relatively shallow depths during heavy workloads. A person in a pre-state of panic with a low supply of air may find that he cannot get the air through his regulator that he needs, even though air remains in the tank. If so, he'll then pull harder and find even greater difficulty in getting air. Panic can follow and the diver may shoot to the surface, or even give up and sink. In too many cases dead divers are found on the bottom, with air left in their tanks. Although the stated cause of the death, for example, may become "drowning," there is never an explanation for why he failed to breathe the 200 psi left in his tank.

Many regulators will not give air under heavy workload conditions at depths greater than 90 or 100 feet. Some regulators are even inadequate at 60 or 70 feet. Is the cause of death drowning? Diver error? Or regulator failure? We pin the blame on the regulator—and on the manufacturer who refuses to provide information about his regulator's limitations.

Other cases of equipment failure should also be referred back to manufacturers. In one case a hose popped out of the BC, allowing the BC to flood.

Perhaps the diver did not have it on tightly or did not maintain the clamp. But one must ask whether the hose to a BC, a crucial life support device, should be held in place in such a way that it could be pulled free. We think the design ought to be foolproof.

Poor product design contributes substantially to accidents and deaths. Isn't it about time the finger of blame gets pointed at manufacturers as well as divers?

Buddy Breathing Deaths

The University of Rhode Island maintains that buddy breathing works if practiced right, yet they cite plenty of deaths where buddy breathing failed. A panicked diver simply may not be able to cope with the complications of buddy breathing.

The "safe second," or octopus, back up, second stage regulator attached to the first stage, is the best and safest means to aid an out-of-air diver. NASDS emphasizes (i.e., insists on) the safe second; other training agencies recommend it. But too many divers are unwilling to spend an extra \$100 for a second regulator, even though it's for their safety as well as their buddy's. Perhaps a diver will learn that lesson the first time an out-of-air diver yanks his regulator and refuses to return it. Had a safe second been available to the divers who are now URI statistics, many would be alive today.

Conclusion

Though the statistics seem to indicate that diver safety is improving, the number of deaths is still alarming. Most are preventable. A reduction of fatalities will require greater discussion of the causes of death in training and much better training. Divers who get certified need better skills than they get. Equipment manufacturers will need to provide more information about their equipment and manufacture fail-safe systems. Publications need to discuss more openly the causes of deaths. Dive shops have to encourage inept divers to get retrained or not to dive.

And most of all, divers themselves must understand their equipment, understand the conditions in which they are to dive, keep within their limits, and stay out of the water if they don't feel right.

Be sure to take a look at our Special Holiday Gift Supplement enclosed with this issue. You'll find some very pleasant surprises in store for the holidays.

The Deep Sea Connection

—Smuggling Divers Frustrate Drug Enforcers

When Peruvian authorities saw a scuba diver near the 500-foot ship *Santa Mercedes* in Lima harbor on January 6, 1981, they became curious. So curious did they become, in fact, that military men were dispatched to pick up the diver for questioning.

The diver was 32-year-old Richard Schmidt of Seattle, Washington, a self-described "adventurer," according to a dispatch from Associated Press. Another Seattle man was also picked up and booked by the military.

The Peruvians, as it turned out, were quite certain of the purpose of Schmidt's underwater activities. Why would a young American go diving near a ship in the murky Lima harbor if he wasn't involved in some kind of illicit activity? Especially when the young man was from Seattle, the very place the ship was bound for.

According to subsequent testimony, the Peruvians beat a confession out of Schmidt. Then they notified the U.S. Drug Enforcement Administration (DEA) to examine the *Santa Mercedes* when she reached Seattle.

Schmidt escaped from his Peruvian jail twice and was recaptured twice. It was in Seattle where he finally faced a judge. The judge ruled out Schmidt's confession in Lima because it had been obtained by force. However, the *Santa Mercedes* reached Seattle before Schmidt's June, 1981, trial. DEA agents found a two-foot cylinder containing four and half pounds of cocaine worth about \$340,000 bolted to a steel plate that had been riveted to the hull below the water line. Schmidt was convicted of smuggling.

Underwater Techniques

Schmidt was only one of a growing number of drug smugglers who used scuba gear to outfox government officials. He is perhaps unique because he planned to get his cocaine into the U.S. without the voluntary assistance of seamen or pilots.

Usually a diver acts in concert with smugglers aboard a ship or boat. The normal procedure is for a ship carrying illicit drugs to anchor before it reaches harbor. Speed boats operated by the smugglers—capable of outrunning Coast Guard boats—approach the ship, and the drugs are lowered to them although sometimes a ship will instead be visited by divers.

The advantage of using divers is obvious. If a boat approaches a smuggling ship but never actually comes alongside her, it isn't clear that contraband is being exchanged. Of course, if a diver leaves the boat and swims to the ship, an exchange is underway.

California and Texas millionaires who take their yachts to Mexico for a weekend "vacation" sometimes return with a rubber raft in tow. The raft, which is carry-

ing a cargo of narcotics, is cut loose before the yacht docks, and divers slip out underwater to retrieve it.

Divers are also handy for approaching ships at anchor in harbor which have contraband aboard. This is perhaps what a Portland, Oregon diver was doing when he was interrupted by authorities. As he came ashore, he was spotted by lawmen who made an effort to arrest him. They opened fire when the diver leaped back into the water. Although they were certain that they had shot the diver before he disappeared beneath the water, his body has never been found.

According to Associated Press reports, a Columbian "swimming ring" was broken up four years ago by federal authorities. Members of this ring allegedly swam to ships at anchor in San Francisco Bay, had packages of cocaine lowered to them by associates aboard, and then returned to shore. The cocaine was allegedly distributed on both the West and East coasts, the profits banked in New York.

Another tactic, according to Ron Layter, a writer for the *Portland Oregonian*, is for someone aboard ship to toss a hermetically sealed plastic bag containing cocaine overboard. Also in the bag is a radio transmitter. The transmitter is later activated by remote control and a scuba diver, dragged by a sea sled, locates it by using a radio direction finder. A variation on this is to drop the bag into the sea from a light airplane.

The Most Elusive Smugglers

Scuba diving smugglers are among the most elusive to federal narcotics officers. Generally they're apprehended only when someone inside their ring informs, when a run is accidentally discovered, or when they're banking their loot.

Cocaine is the drug that they specialize in. The reason is simple: low volume, high profit. Although marijuana is a premium commodity these days, cocaine is worth more. Much, much more. A kilo of cocaine, in fact, can fetch one hundred times as much money as equal amounts of marijuana. All of which means that a diver cannot carry off enough marijuana to make his great risk worthwhile. But a small bag of cocaine, weighing only a few pounds, has a value measured in the hundreds of thousands of dollars.

So far the government hasn't been able to cope with smuggler-divers. This isn't surprising considering that it has also failed to cope with the larger, more obvious ships and planes making smuggling runs. Whether the government will eventually be able to devise methods to uncover the deep sea connection remains to be seen.

David Braly is a free-lance writer whose work appears in U.S. and Canadian magazines. He has also written several books about Oregon history and is currently working on his first novel.