

undercurrent®

THE PRIVATE, EXCLUSIVE GUIDE FOR SERIOUS DIVERS

P. O. Box 1658, Sausalito, California 94965

Cable Address: Gooddiving

Vol. VII, No. 1

January 1982

Cuba, West Indies

Four Hours For A Fine Wall

No doubt Cuba is the most unusual dive destination in the Caribbean. Few Americans ever venture to a communist country, so to be able to combine diving with a peek into an alternative and adversarial political system is a novel opportunity. For a few years now dive trips have been run from Florida to the Isle of Pines, located off the southeastern shore of Cuba--surely a convenient location since tourists cannot venture too far into the bowels of the State. In October I took the four-day package tour offered by American Airways Charters in Miami. The agenda, according to the literature I received, was to include on the first day "Havana arrival 1pm, tour of Havana in an air-conditioned bus with a bar; dinner, cocktail and show at the Tropicana Nightclub, accommodations at the Riviera Hotel, Havana." On the second and third days, "one morning dive, one afternoon dive, one evening dive (bring dive light)." On the fourth day, "mini-tour of Havana, lunch in Havana." There were a few surprises.

Day One: We arrived at 2pm, cleared customs, and were then informed we would be going directly to the Isle of Pines--there would be no tour of Havana. Six hours later, we were still waiting in the Havana Airport for our plane. Finally, we were told we would be put up in the Triton Hotel and would depart tomorrow. The wait had not been pleasant. The restrooms were filthy and nauseating. There was no tissue and no toilet seats, not even for the ladies. Once our bags were unloaded we found that many had been rifled but not for expensive gear. Missing were hard to get items: t-shirts, tampons, shaving lotion, deck shoes, razor blades and other personal items. And patches were cut off the dive bags. My response was sadness not anger. The items missing were not so much for resale as they were for personal use. Life must be difficult here.

The Triton Hotel turned out to be fine. We visited the Tropicana, just as we had been promised; the dinner was average, the service good, the floor show excellent--in fact quite similar to a Las Vegas show. In retrospect, I wondered about our airport stay. Was it just that the tour bus was unavailable?

Day Two: Our flight departed about 11am and shortly after 12:30 I found myself at water's edge, boarding the 65-foot converted fishing boat for our first dive. After a two-hour trip to the site I hit the water with great expectations and experienced a decent--but quite common--Caribbean dive. Among

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the pleasant array of soft and hard coral in 35-40 feet of water, were familiar tropicals--wrasses, sergeant majors, damsels, a couple of spotted drums and grey angels. A fine site for beginners, but I had heard there were better sites here, especially the wall, and I was disappointed. Our guide traveled too fast for me to photograph. When we finally emerged he traveled even faster, jumping into a smaller boat for a quick ride back to the hotel while telling us that would be it for the day. After a sustained howl from the divers, the Captain motored us to an interesting wreck, the bottom at about 25 feet and a large portion rising above the surface. Here, in 30-40 foot visibility, were thick schools of fish and French angels, barracuda (one friendly fellow tried to nick the fin of a fellow diver), an enormous green moray, larger groupers and snappers, and a variety of marine life. Visibility ran 35-40 feet. I enjoyed the dive and it salved the wounds of the hassles along the way. But the hassles were not over. There would be no night dive. It would be dinner, after-dinner socializing, and bed. Dinner wasn't bad, but nothing to remember. Well-prepared snapper and grouper, an unusual sauerkraut salad, vegetables, ice cream. The diving tour group had its own dining room, separated from nondivers, many of whom were from Eastern European Bloc countries.

Day Three: Breakfast (ham and egg sandwiches, canned fruit, hearty Cuban coffee) at 8:15 and a 9:30 boat departure with, again, a two-hour ride to the site. The boat was somewhat uncomfortable with not much place to hang out other than the deck. The crew, who lived onboard, was hospitable, as were the friendly and professional divemasters. This time our destination was the wall and, believe me, it was a superior wall. Beginning at 60 feet, it had all the accouterments of a fine wall; tube sponges in all colors, abundant black coral, finger sponges, and plenty of marine life. I located a stone crab, stretching him 20 inches from claw tip to claw tip. Grouper and snapper up to 50 lbs hung out in crevices. Dropping to 120 and then 140 feet, I could not help but break every rule in the book. It would be my only wall dive. I stayed for 20 minutes, sustaining myself by skip breathing to permit me to continue to draw in the beauty. Yes, it's nuts to do such things, but then again it's nuts to come on a four-day dive trip and expect to get my fill of diving. When I finally headed to the surface I stopped to decompress, using the tanks that had been hung over the side for just that purpose.

On the surface we took a two-hour decompression time. An excellent lunch was served--pork chops, fish, beans, rice, bananas, mashed potatoes, grapefruit, coffee, beer. Afterwards, we returned to the same site we had visited the previous day--the first site--and after an hour below I decided not to spend all my air and returned to the surface. Anyone wishing a night dive, we were told, would have to pony up \$31 (though the package claimed it was part of the price). Those wishing to return would be motored home in the small boat while those wishing to dive would have dinner aboard the mother craft, wait till dark, dive, then return. The invitation was declined.

Day Four: There was no "mini-tour" of Havana. Only another stopover and wait. We arrived in Miami at 4pm, after leaving the Isle of Pines at 9:15 and spending another four hours in the Havana airport.

A Month Later: After putting this story together, I contacted Frank Masdeau, who manages the Cuban diving tour for American Airways. He explained that the October tour had gotten "screwed up" and he has held off organizing the 4-day, 3-night tour until the problems can be solved and the night dives guaranteed

as part of the package. For this trip, Masdeau said, Cuban tour officials altered the package without telling him; they unilaterally dropped the night dives and the Havana tour. To make amends, American Airways is refunding \$100 to each of the tour participants. Now that's an honest operation.

Conclusion: I believe Cuba is an interesting dive destination, but unless one is within a short commute from the Miami airport, I think the hassles for a four-day, three-night trip are too great to overcome. The eight-day, seven-night trip makes much more sense. It includes round trip airfare from Miami, a Havana tour, all meals and accommodations, and two dives/day for six days. The price is \$599. With twelve dives, one ought to be able to get 4-6 wall dives (the guides seemed cooperative enough to give the best). Remember, though, the four-hour round trip. Two tanks is an all-day affair. But for many, the spectacular wall may well be worth it.

The hotel--the El Colony--has 90 rooms, each of which is somewhat similar to those in Howard Johnson's, sans carpet. They face the water and most have a nice view; the hotel sits on a small bay, muddy during my stay and therefore without snorkeling. Guests preferred the saltwater swimming pool to the real thing. Fishing and horseback riding can be arranged and there is a tennis court. Though no cars can be rented, tours of the Isle of Pines can apparently be arranged during the day.

CUBA				
Diving for beginners	★	★	★ ½	
Diving for old pros	★	★ ½		(this trip)
	★	★	★	★ (potential)
Beach snorkeling	zero			
Hotel meals	★	★ ½		
Hotel otherwise	★	★	★	
Moneysworth	★	★		(this trip)
	★	★	★ ½	(potential)
★ poor, ★★ fair, ★★★ average, ★★★★ good, ★★★★★ excellent				

Divers Compass: A brochure may be ordered (or reservations may be made) by dialing 800/327-7711 (in Florida it's 305-557-9281); American Airways Charters is located at 1840 W. 49th St., Hialeah, FL 33012....there are no direct flights to Isle of Pines; all require a change of planes in Havana....you must have a passport....don't spearfish and don't collect live coral or shells....a wet suit top is sensible for most divers....the tank fills, strangely, ranged between 1800 and 2800 psi....there's little equipment repair capacity and not much in the way of spare parts, mask straps, etc.; bring everything you need including all your own gear.

Reports From Our Readers' Travels: Part II

BARBADOS: Diving remains average (June '77 review) and the services remain a puzzle. Willy's Watersports, according to comments we receive, is the preferred, but readers differ. "It's an excellent operation which I would recommend highly; guides are helpful, careful and interested" (Bob Gorin, Pittsford, NY). "There was no guide on my boat. The operator was a teenager who told us to dive alone and he would follow our bubbles. He gave no tips on the underwater terrain" (Allen Alben). We don't recommend Barbados for a full fledged dive vacation.

BELIZE: Michael Demello (NYC) rates St. George's Lodge (August, 1980) diving at 5 stars for the old pros. "You must dive the Blue Hole and Turneffe. And for trip 100 miles off shore, if you have the money, Phil McKorkor's sea plane will get you there in 20 minutes"Readers report that our review of the Isla Mia (Undercurrent, June '80) still holds. Most divers rave about the virgin diving, the food and the ship's crew ("Captain Henny Tromm never interferes, he always listens. He's a great man," says H. Schwarte, Key Biscayne)If you can get outside the Barrier Reef at Ambergris Cay, you can find terrific diving (but our reviewer had trouble--July '80): In May John Moore (Jackson,

Miss.) saw "hawksbill and loggerhead turtles, sea snakes (in the Caribbean?), nurse, lemon and hammerhead sharks, stingrays, large groupers and abundant lobsters. In February Dan Schimmel saw "Very little fish life anywhere; nothing worth diving on inside reef." Ramon's Reef Resort is now the place; Bill McCormick, (So. Charleston, WVA) says "14-month-old resort has 10 huts and 10 more are being built; the staff is friendly and helpful; the food is fresh and good, but needs more variety. Diving is for the serious diver. You are on your own"....Ken Kizer, M.D., (Novato, Ca.) advises that "malaria is endemic in Belize; some type of malaria prophylaxis should be taken before traveling there." Get your physician's advice.

BRITISH VIRGINS: We hear pros and cons about The Reef Hotel, but we still hear nothing but praise for George Marler's Tortola operation. M. Schlesinger (St. Louis) says "Underwater sights are fine; good photography, but not comparable to Pacific reefs. But good, easy diving."....If you want to spend a few extra bucks and hang out at a class joint, try the Bitter End Yacht Club, Virgin Gorda, which is serviced by Kilbride's Underwater Tours. It's expensive, but Peter Evans (W. Hartford, Conn) says "dive masters and instructors, especially Jimmy and Francine, are great."

CABO SAN LUCAS, MEXICO: Martin Blank (LA) says "your article could have been more helpful. Eduardo Reves operates under Paraiso Diving FMAS Service,

Mask Defoggers and Eye Irritation

Two Products Recalled

Good, ol' spit is the preference of most divers for keeping their masks defogged, yet there is still a healthy business for people who manufacture commercial defoggers. Defogging solutions normally contain surfactants (more commonly called "detergents") mixed with either water or alcohol. Divers who prefer not to use saliva nor pay the price for commercial defoggers, find that some supermarket detergents—especially Lemon scented Joy—work just as well.

The ingredients in surfactants can be harmful to one's eyes if used improperly and recently two products found in dive shops, *Keep Klear* and *Scuba Defog* have been yanked from the shelves because of eye irritations resulting from use of the products.

Keep Klear was originally developed for NASA and was introduced into dive shops in 1968. Bill Warmac, president of Exxene Corporation, the manufacturer of *Keep Klear*, told *Undercurrent* that the first complaint they received was in October, 1980. "We sold nearly 500,000 bottles before that complaint," he said, "but now we've received four others." He's decided to take *Keep Klear* off the market. Forever. "This product only accounts for 1 percent of our business and if it is going to harm anyone, then I don't want to sell it," Warmac said.

If divers used the mask defoggers correctly, there would be little, if any, chance of a problem. Only a drop or two of defogger should be applied to the mask lens, rubbed around the surface, then wiped, or rinsed to remove the excess solution. A thin coat on the lens is enough to keep it from fogging up. Problems occur when too much of the solution is left on the lens or on the mask and it somehow comes in contact with the diver's eyes. In some cases a diver might have a drop on his finger and then touch his eyes.

The initial result is no different than when soap or dishwashing detergent gets in one's eyes. It stings. But the defogging solution, especially if it has alcohol in it, can cause damage if it is not washed away. Should a defogging solution get under a contact lens (*it may permeate a soft contact lens*) and be retained against the eye, actual eye damage can occur.

Complaints of eye irritation have also been cited by users of *Scuba Defog*. Jack Turner of Cover Card Products, whose company distributes the product, has temporarily pulled it off the market. He told *Undercurrent* that he expects to reissue it with a new moniker, *Scuba One Drop*, to drive home the point that it takes only one drop of the solution to keep a mask clear.

Obviously a defogger has no place in a diver's eyes. If it gets there it's because the diver was careless. Nevertheless, many divers find good ol' spit works just fine. And most of our staff agrees. We polled our office and editorial people to determine how many used a commercial product and only one raised a hand. We weren't surprised. After all, she chews tobacco.

not his own name; and the shop is quite a distance from the Finistera. A wet suit is necessary since the waters are not as warm as in the Caribbean. Nevertheless, we found Cabo most enjoyable with real potential for divers. Good hotels and restaurants."

CAYMAN BRAC: There are two hotel/dive operations here and diving with Winston McDermott at the Buccaneer Inn, according to our readers, seems the best bet. Gary Nerse led a group of 14 divers from California and reports: "unlimited diving and highly cooperative shop people help select many fine sights with a minimum of hassles; in 6 days I shot 20 rolls of film on 25 dives. Overall our readers gave diving with McDermott 4 stars. But the hotel has problems, the readers report. Although Nerse thought the food was "excellent," Don Herzig (NYC) reports that in November the food was "cold and dreadful." And Dr. Lawrence Cassis found the hotel double-booked last February, with inadequate room and food and "54 divers having to be placed in a boat where only 30 were due"...At the Brac Reef Hotel, the reverse seems to be true; better food and accommodations, but inadequate diving. One reader said "the manager went out of his way to make the visit nice; if the dive operation was half as good they would have something, but it has inexperienced guides who are surly, disruptive, and unhelpful." Bob Weinberger (Riverdale, NY) says "except for a trip to Little Cayman, which was excellent, most diving was poor," and another said, "There's good diving, but guides too lazy to take you there." Dr. Hans Menco (Pittsford, NY) said Cayman Brac diving at Brac Reef "not up to par with Roatan or Bonaire. Dive operation is fair, but the hotel services and meals were fine"...And Ruth Jacobson (NYC) adds, "Cayman Airways carries 16, but has little cargo room so if fully booked only a fraction of the groups' luggage goes along. Many divers lose the next morning's dive awaiting their gear on the next plane--and also lose the afternoon dive on their last day if they're ordered to send some luggage ahead, as most groups are."

NEXT ISSUE: Bonaire Update.

Why Dive Accidents Are Settled Out Of Court

Guilt and Innocence Are Not The Issues

For years out-of-court settlements in law suits have occurred behind the scenes without much light being shed upon them, but with increased publicity on the six and seven figure sums being agreed to, the terms of the settlements buzz through the diving community. The defendants in these suits—instructors, stores, resorts, boats, and manufacturers—are distressed with the awards, especially if they believe they're innocent—which, no doubt, most do. The reasons for the settlements, of course, are financial. Out-of-court settlements are generally less expensive than full litigation, especially if the facts indicate the defendant has some exposure to the liability charges. But before discussing the financial aspects, let's look at a hypothetical scenario leading to a settlement.

A legal action is brought against an underwater instructor, a dive store, an instructor association and an equipment manufacturer for the wrongful death of a student in training. The student died during open water training being conducted by the instructor. The facts from the instructor's accident report include:

- ★ The very thorough course included 40 hours of classroom and pool work.
- ★ Before the open-water training a complete written exam was administered and scored.
- ★ The instructor used medical history forms for the students.
- ★ This was the third open-water dive of the course.
- ★ The dive was in a lake with a maximum depth of 40 feet, visibility of 20-30 feet and water temperature over 70 degrees.
- ★ All students were required to wear at least a wet suit jacket, buoyancy control device, weight belt and have a submersible pressure gauge in addition to the other usual equipment.
- ★ There were twenty students in the water with three assistants helping the instructor in the water.
- ★ Extra dive gear, first aid equipment and helpers with an accident management plan were on shore ready to help.
- ★ The student/victim went to a party the night

before, stayed up late and used both alcohol and marijuana.

★ Before the dive the student said he didn't feel well but was okay.

★ The accident occurred during a buddy breathing ascent while the student was being directly supervised (one-to-one) by an assistant.

★ The student was overweight, smoked, in his late thirties and got no active exercise.

So, we have a good instructor with a generally well-run class and a student who took on himself several risks that he had been warned about during the course. Now comes the suit for \$2,000,000. Should the insurance company go to court to fight the suit?

During the process of the insurance company's investigation, the attorneys taking depositions and a review by an expert in diving instruction, the following additional facts came out:

★ The student missed the night of the medical aspects lecture.

★ The student missed several questions about ascents and buddy breathing on the written exam. The exam was not reviewed with the students, only scored.

★ The medical history form for this student could not be found. He apparently forgot to turn it in.

★ All three open-water dives were conducted the same day.

★ In the lake, there was a thermocline at 25 feet, water temperature below this level was 55 degrees with visibility of 5 feet. Dives were made to thirty feet.

★ The student used a friend's equipment. The wet suit jacket was tight around the neck and loose around the hips. The BC was a small skin diving vest with a discharge of CO₂. The student did not change his friend's weights so he wore eighteen pounds. The vest had water inside and the hose leaked. The gear was checked on shore by an assistant, not the instructor.

★ The instructor was underwater, away from the student when the accident occurred.

★ All the assistants were certified advanced divers, but only one was a certified assistant instructor.

★ A float and flag were not in the water at the dive site at the time of the accident.

★ The student told about the party in front of the instructor and other students.

★ The student said he did not feel well in front of the instructor and other students. The instructor did not talk to the student about this but simply said to the group, "Let's go, we all dive today."

★ The ascent training was being conducted by one of the uncertified assistants.

★ Was this a heart attack, embolism, or alcohol and drug abuse? There was no medical history, no medical exam and no autopsy.

Although many readers would quickly pin most if not all of the liability on the student himself, the case does raise some questions. And when the lawyers for the defendants consider that the victim was a respected professional in his community and left behind a wife and four children, they can only presume that the jury, composed of lay people who do not understand diving and are perhaps terrified by it, will react favorably to the claim. The question, in financial terms, is just how favorably?

The suit is for \$2,000,000. Six defendants in the case—one instructor, three assistant instructors, a dive shop, and one training agency—have \$1.5 million in insurance between them. Juries are quite aware that it is the insurance companies who pay the award—not the poor shop owner, the instructors, or the training agencies. And they often don't hold much regard for insurance companies. The defense costs, should the matter go to court, will run at least \$30,000. The estate of the deceased has indicated its willingness to settle, out-of-court, for \$250,000. So, it's a dice roll. Pay the quarter-of-a-million or invest \$30,000 to get a decision awarding less than that sum? The stakes are high. \$2,000,000 is on the table.

People who complain about out-of-court settlements want the question of guilt to be resolved. Who was at fault? "Not us," cry the individual defendants in the case. But an out-of-court settlement does not answer the innocent or guilty question because there is no admission of negligence and no pinning of blame. For the insurance companies, it's simply a business decision involving calculated business risks. In this case, what are the chances of losing more than the \$250,000 the estate is willing to settle for? The insurance company reviews the facts, considers the psychological, social and so-called nonrational aspects of the case, and makes their decision. If the insured does not agree with the insurer's decision, he may shout and stamp, but unless he sues his own company—a highly impractical solution—he'll have little to say about the settlement.

"An out-of-court settlement should not be used to implicate the defendants. No parties have been deemed guilty and no one has admitted negligence."

An out-of-court settlement should not be used to implicate the defendants. No parties have been deemed guilty and no one has admitted negligence. The issues of liability have not been addressed and have not been resolved. Moral, ethical and legal questions for both parties have not been addressed and have not been resolved. They've been set aside in favor of a carefully researched business decision and a financial settlement.

But, there's a larger issue worth recognizing. If a training principal is challenged or if a particular piece of equipment is challenged, an out-of-court settlement means that the practice or the equipment has

not been deemed at fault. That training practice may continue. That piece of equipment can continue to be sold. Should the financial advantage to settling out of court be unclear, the advantage of not having a practice or a piece of equipment deemed as contributing to the accident will encourage the defendant to settle out of court. Once the liability is pinned down the door is open for further suits and, in the case of equipment, the possibility that that piece of equipment would have to be withdrawn from the market. Therefore, it may be in the best interest of

the defendant, regardless of the financial outcome, to seek out-of-court settlements to protect its practice, its product, or its reputation.

Eventually, however, faulty practices and faulty equipment will catch up with the purveyor. Insurance rates increase and, if too many settlements occur, an insurer may decide to drop coverage altogether. With settlements crossing the million dollar mark, it may not be long before potential litigation changes the industry, perhaps for the better, perhaps not.

Next issue: Three cases.

The Price Of Scubapro Gear:

Scubapro And U.S. Government Reach Agreement

In our October issue we discussed three suits pending against Scubapro; aka Under Sea Industries. David Lenci, Attorney with the Department of Justice, Antitrust Division, told *Undercurrent* that the federal government has now entered into a consent decree with Under Sea Industries effective October 30, 1981. The consent decree "is not evidence" nor is it a "court finding that Under Sea Industries violated the law." It means that Under Sea Industries agrees to abide by the terms set forth by the federal government. The essence of that decree (reprinted from the Anti-Trust and Trade Regulation Report) is:

"Under Sea Industries, Inc., (USI) is barred from conspiring with its dealers to fix retail prices, discounts, margins, or markups at which its 'Scubapro' equipment is sold by dealers. . . USI manufactures and sells scuba equipment under the trade name 'Scubapro'. The company markets this equipment through authorized dealers. In a 1979 complaint, the Justice Department charged that, at least as early as 1963, USI conspired with its Scubapro dealers to maintain the retail prices at which Scubapro equipment is sold to the public.

"Among other things, the complaint charged that dealers would report to USI instances of discounting by other dealers. Under the consent judgment, to remain in effect for 10 years, USI cannot terminate, penalize, or threaten to terminate or penalize any Scubapro dealer because of the prices, discounts, markups, or margins of profit at which any dealer sells or advertises Scubapro equipment.

"USI can suggest retail prices or explain the basis these prices are suggested and that each dealer is free to sell at whatever prices, discounts, markups, or margins of profits he chooses. USI has the right to select, limit, or terminate Scubapro dealers, except where these rights are otherwise restricted by the consent judgment.

"The company must furnish a copy of the judgment to its officers, directors, employees, or agents with responsibility for the sale or distribution of Scubapro equipment, as well as dealers. USI must maintain an antitrust compliance program involving distribution of copies of the consent judgment, directives outlining the disciplinary consequences of non-compliance and indicating the availability of supervisory or legal personnel to deal with compliance problems, meetings to review the judgment provisions, and acknowledgments of compliance with the program. The company must also periodically provide the Justice Department with affidavits of compliance. The Department is given reasonable access to files and records of USI for the purpose of determining compliance with the consent judgment and access to interview company employees. Any purchaser of all or substantially all assets used by USI in its scuba diving equipment business must agree to be bound by the judgment. (U.S. v. Under Sea Industries, Inc. No. 79-2579, DDC, 7/29/81)"

In a related case we reported on between the State of Washington and Under Sea Industries, aka Scubapro, a spokesman for the State of Washington Antitrust Division told *Undercurrent* that they have offered Scubapro basically the same terms offered by the federal government, with an additional stipulation of a cash settlement. Nothing has been settled yet, and the case remains open. Additional depositions are being taken.

The result of the consent decree is already apparent in California. In a recent advertisement in the *San Rafael Independent Journal*, the Pinnacles Dive Shop (Novato, California) offered the following prices: Scubapro Air I regulator, list \$250, price \$209; the Scubapro Stabilizing Jacket, list \$290, price \$219, the Scubapro Air II auxiliary regulator, list \$179, price \$139.

Women And Diving:

An Update On Female Physiology

Just as women are increasing their participation everywhere—even on the Supreme Court Bench—so they are turning to diving in ever greater numbers. We welcomed the trend but wondered if it could be statistically documented. We found, after an informal survey of diver training organizations and researchers in the field, that such figures are hard to come by—but that interest in the questions conjured up by a woman in diving gear is substantial.

The percentage of American divers who are female is estimated at 22 percent by Dennis Graver, director of training for PADI. Others guessed 15 percent to 25 percent are occasional divers, and 10 percent are regular divers. Definite figures are elusive because at least one training organization (NAUI) does not collect data on students by sex.

While these statistics are spotty, the direction is clear when compared to a 1970 breakdown that counted only 5 percent of all American sport divers as women.

If more women dive today than ever before, it is equally true that they are diving for a wider range of reasons. Most dive for fun and recreation, just as most men dive for that reason. But the ranks of women underwater now include commercial divers, photographers, actresses, resort guides, and teachers, spearfishermen, writers and editors of diving publications, and assorted scientists: archaeologists, marine biologists, doctors, oceanographers.

The Physical Differences: How Important Are They

Specialists in diving medicine began to focus on the special physiological concerns of women in the water during the mid 1970s. And all but the most militant feminists will admit that a woman faces sex-related challenges in diving. There are limitations of size, strength, of stamina. There are the particular situations of menstruation and pregnancy which—to women's fury—are rarely covered in diving courses, leaving female divers confused, uninformed, and often needlessly timid.

It is widely accepted that women can cope with the physical demands of ordinary diving just as well as men; their greater dexterity, buoyancy and sense of balance can compensate for less muscle power. A woman can carry her heavy gear to the dive site in two trips instead of one; once in the water its weight won't be a factor.

Differences in thermal balance should be recognized. Women's greater ratio of total body surface area to body mass may cause her to feel overheated while

suiting up but will cause chilling underwater more rapidly than in a man. Her sweat glands are fewer in proportion to size than a man's and only produce sweat at a core temperature 2-3 degrees higher than his.

Decompression sickness is probably the primary physiological concern for women divers. While the data are incomplete, and samples small, Dr. Susan Bangasser's survey of diving instructors in 1979 indicated a susceptibility to decompression sickness 3.3 times higher in women than men. In the early 1970s, U.S. Air Force studies reported an incidence of altitude decompression sickness up to ten times higher among female flight nurses than their male counterparts. As Dr. Bruce Bassett summarized in *IQ₁₀ Proceeding*:

"In spite of their smaller mean size and stature women are four times more susceptible to altitude DCS (decompression sickness), have more skin symptoms, a more rapid onset of bends pain, have more recurrences and lasting effects of DCS. . .the same differences documented in terms of altitude DCS may well be found among diving women."

More research in this area is sorely needed, particularly because DCS in women is suspected of being qualitatively different (more severe with higher rate of recurrence), as well as quantitatively different, from decompression sickness in men.

Pregnancy and the Fetus

In 1978 the Underwater Medical Society held a NOAA-supported workshop, "Effects of Diving on Pregnancy", that reviewed research to date, stimulated further investigations and produced some recommendations, conservative in nature, that discouraged diving by pregnant women, especially deeper than 30 feet—at least until potential damage to the fetus could be ruled out.

Laboratory studies of pregnant sheep produced contradictory findings regarding the relative incidence of bubbles in the fetus and in the mother during hyperbaric exposure. A survey of actively diving pregnant women (Bolton, 1979) found a 5.5 percent incidence of infants with birth defects among the 109 respondents, and three infants with abnormalities among the 24 women who had dived to depths greater than 100 feet during their pregnancies. Dr. Kenneth Kizer (*Physician and Sportsmedicine*, 1981) sums up the risks as follows:

"The fetus may have a greater chance of suffering significant damage from any intravascular bubbles that might form after a hyperbaric exposure. The presence of a patent foramen ovale, ductus arteriosus, and ductus venosus in the fetus would allow intra-vascular bubbles to bypass the capillary beds of the lungs and liver, which act as filters in more mature individuals. When these embryonic shunts are open, any circulating bubbles and their blood element complexes are more likely to embolize developing vital tissues. . . The pregnant woman may also be at increased risk (of decompression sickness) because of edema and the resultant altered tissue perfusion and diffusion characteristics."

He points out that a woman who suffers decompression sickness may need recompression in a chamber, thus exposing the fetus to possible damag-

ing hyperoxia. This exposure is considered of such potential danger in some countries—France, for example—that no women is allowed inside a hyperbaric chamber, whether or not she is pregnant or of child-bearing age.

Women in the later months of pregnancy usually find their suits and weight belts are too tight, or that a general feeling of increased bulk and clumsiness makes diving unappealing.

While the case against diving while pregnant seems substantial, several women defend the practice, including Dr. Bangasser, who dived herself through the ninth month. She recommends it only for the experienced diver, at shallow depths (no deeper than 30 feet), in mild weather, and always guided by common sense. Her justification is the physical and mental conditioning diving provides. Linda Ashmore (*Diver*, 1981) agrees there is much therapeutic benefit from

Who Says We Never Have Anything Good To Say?

Four Strokes For The Industry

Last month we wrote of problems with the Chronosport, but just after we went to press we discovered this letter from reader Elizabeth Klopfer (Logan, Utah) which might help round out the story: "My fiance gave me a beautiful Chronosport watch for Christmas, but when I was in the surf on Grand Cayman only three months later I left the water and found my watch missing. Heartbroken, I wrote Chronosport and told them what had happened. Immediately they wrote back, asking for my wrist size, saying they would replace the watch at no charge. Most companies would have written it off as negligence, but not Chronosport. I am so pleased to have them react so quickly."

Some time ago we ran an article commenting that Dacor had received a 40 percent response to a recall notice for its Pacer Regulator—a very high response in the industry. Lee Morris, President of the Underwater Society of America, wrote: "Dacor has long been a supporter of the 'grassroots' diving club or council. If any diver's organization asks for DACOR's support for newsletter advertising, they get it! When the company wanted to get the recall information out to the consumer, DACOR had the Club, Council and the Society's newsletters to do it and the dispersal of recall information was efficient."

In a recent article we quoted U.S. Divers' President John Cronin as saying that he believed their recall of the U.S. Divers Calypso regulator may have actually improved the company's image, contrary to beliefs of other industry executives that a recall may discredit a company. Reader Ken Byrum of Tustin, California recently wrote, "He's absolutely right. My son owns a Calypso and when we saw the recall notice we drove to the company (we live nearby) where we were treated very courteously and intelligently. A technician explained the problem and assured us the fault could be fixed. Three days later the same technician handed me the corrected regulator as courteously as before. This is the kind of service that wins life-long customers. They acted responsibly, timely and humanely. Bravo Mr. Cronin, *et al.*"

Reader Gilbert Brown wrote to tell us that the components of his Pelican First Aid kit were destroyed when the ice pack leaked. Pelican replaced the ingredients without any questions, explaining that the plastic covering had turned brittle, then broke, allowing the ice pack to leak. The problem has been corrected in current kits, but if you have an old kit with a leaky ice pack return any damaged components for replacement to Pelican Products, 23763 Madison St., Torrance, Ca. 90505.

the weightless feel of diving and especially advocates safe pool diving.

There is general agreement that a woman should wait at least six weeks after delivery before resuming diving.

Menstruation And The Pill

Diving during a woman's menstrual period is not contraindicated if she feels well. Cramps may even be lessened, some women say. While few studies have been done on this question, it is theoretically possible that the hormonal changes women undergo during menstruation might produce fluid retention and edema, slow circulation and lead to greater risk of decompression sickness.

Another theoretical concern is that platelet adhesiveness increased by use of birth control pills can also increase a tendency to blood clotting. This is the type of question a women diver should discuss with her doctor, as other contraceptive methods, equally satisfactory, might be safer.

One aspect of a woman's menstrual cycle would be quite dangerous. If she is subject to severe premenstrual tension, she may be more accident prone and less alert.

Psychological Concerns

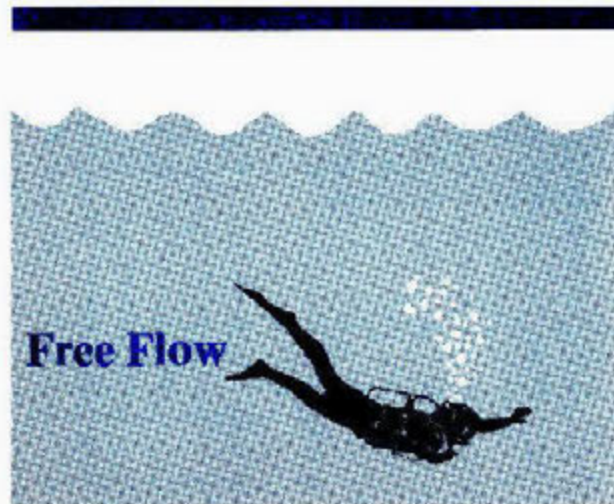
Diving in general appeals to women for psychological reasons, its freedom, the confidence and euphoria it can give. But because of women's

social conditioning over the centuries, it can lead to minor problems of attitude. One is the traditional dependence on the male—either an instructor or diving buddy—that may be conscious or unconscious. Its opposite attitude, equally unwise, is an over-competitiveness with men that often is revealed in mixed training classes. In diving as in many other areas of modern life, women have to find a path for themselves that is independent without being militant or hostile to men.

Equipment—Finding A Fit

A problem at least as monumental to a new woman diver as her attitude or her physiological differences is the technical one of finding gear that fits. Equipment for divers has to be comfortable. Men-sized wetsuits on diminutive divers just won't do. There have been improvements over the past few years in what manufacturers offer, but many women report they still have to wear a junior-sized mask, for example, as the adult ones are much too big. New buoyancy compensators come in shorter lengths, or are adjustable, suits are made in several sizes and women can now find smaller but quite adequate tanks. (They consume less air than men.) Today, relatively minor adjustments or modifications on equipment can generally make a woman seaworthy—but there is still room for improvement.

The author, Lyn Teven, is Associate Editor of Pressure (the bi-monthly newsletter of the Undersea Medical Society) in which this article first appeared.



"Escapism is the major motivation of sport divers in Finland," is a finding of a survey of members of the Finland Sport Divers Federation. Although an interest in science and technology is also a motivating factor, the survey concludes that "fundamentally, divers are somewhat reckless and not completely free of sensationalism."

A visitor to Catalina Island, across the sea from Los Angeles, accidentally dropped her suitcase from a pier into the water below. A dashing gentleman who happened to have scuba gear handy saw the incident, dressed up and retrieved the suitcase. The gentleman? None other than Senator Sam Hayakawa. Though Snoring Sam is up for re-election in '82, the retrieval was not a campaign stunt. He has a C-card and frequently practices snorkeling in the Senate swimming pool. According to the aide who confirmed the story for us, the senator looks "real cute" in his gear.

Undercurrent correspondents are located strategically in the major diving areas of the world as well as on all coasts and major inland waters of the continental United States.

The editors welcome comments, suggestions and manuscripts from the readers of Undercurrent.

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