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THE PRIVATE, EXCLUSIVE GUIDE FOR SERIOUS DIVERS

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Chub Cay:

One of the best of the Bahamas

"Travel you are contemplating may be more difficult to arrange than you had anticipated," read my evening newspaper horoscope. Indeed, I nodded to myself. I was in the throes of arranging a trip to Chub Cay, in the Berry Island group of the Bahamas, but my first stop from Sausalito would be Washington, D.C. (to which I had to return after the trip) while my buddy would be traveling directly from San Francisco. Of course, we were searching for the most economical of flights, and large ads in the Sunday paper touting Goombay Holiday specials with bargain airfares and out-island packages should have made it easy. But, of course not.

None of the four tour operators listed in the advertisements had ever heard of the Goombay Holiday specials, let alone Chub Cay. The Bahamas Tourist office in Los Angeles, which had placed the ad, wasn't well informed either. Next, my travel agent called the Chub Cay booking agent who claimed the club to be completely booked. Finally, I called Chub Cay directly, made my own reservation, and my travel agent got beaten out of the commission. And, with only two flights a week into Chub Cay, my buddy and I spent more time than we wished hanging around Nassau, squandering our meager holdings on the gaming tables.

Now I wouldn't have at all been surprised if my reservations had disappeared once I arrived at Chub Cay, but I was pleasantly surprised to learn that I was indeed fully booked and my buddy and I were quickly ensconced in a large airy room with twin beds, cool white tile floor, white campaign-style furnishings, and a large bath/room. A few feet from my front door was the smaller of the Club's swimming pools, so with a refreshing dip I quickly wiped off the travel dust, then repaired to the bar for a Goombay Smash or three, then dinner. The next day, for sure, I would be eager to dive.

I appeared at the shop, right after breakfast, C-card in hand--which was fortunate because there are no exceptions to the rule of documenting one's certification. (In fact, Charlie Strong, the diver operation manager, later told us he'd insisted on seeing Jack McKenney's certification--but he wasn't sure he would have the chutzpah to ask for Jacques Cousteau's.) Charlie explained that three dives per day (two before lunch, one after) is the custom at Chub Cay, made possible by the great depths and walls of the so-called "Tongue of the Ocean" and its proximity to good shallow dive

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sites--never more than a ten-minute boat ride and usually no more than 4-6 minutes, even with the stately 5-mph exit from the marina. On two days, dives to 190 feet were offered to experienced divers -- one a no-decompression bounce dive, the other a well-planned decompression dive with a ten-minute stop. Those not wishing to take the deep dive stayed at more sane levels, though the scenery was not especially interesting.

Following the first deep dive of each morning, Charlie offered "Canyons and Caves"--a nice area in 20-40' depths with canyons and ledges which were fun to play around in, pestering the poor big eyes who were trying to rest. Just 100 yards from this area is "Chuckles Reef" which ranges in depth from 40'-70'. Here the topography is similar to "Canyons and Caves" but deeper and with naturally, different sea life. Another spot used after a deep dive is "Oasis," a small sand patch surrounded by coral, which for some reason has the greatest abundance of fish of any of the spots we dived. "Salad Bar" at 100' was interesting. We dropped over the reef top at about 60' to 100' and swam along the base of the reef looking up at a wall of lettuce and plate corals. This could have been called "Lobster Bar" as we saw about 30 large bugs watching us from the shelter of the coral.

On each dive I observed great schools of grunts, numerous groupers of several different varieties, scores of blue tang and chromis, many good-sized angelfish, just a few damsel fish and squirrelfish and big-eyes, a couple of tiny juvenile spotted drums -- that would make the most ordinary dive worthwhile for me. A few barracuda hovered around an occasional divespot; once we spotted a turtle, and another time a pufferfish. Other divers reported seeing several eagle rays and a couple of sharks, but to my disappointment I saw none. The coral was in good condition -- lots of lettuce coral, some small brain and flower coral, small but nice gorgonia, but no elkhorn or antler coral. There were practically no sea urchins, but a fair amount of fire coral. The number of dive sites seemed somewhat limited. We had several repeats in my 5-day stay.

Perhaps the best dive of my stay came on a day normally too windy to depart port, but in this case experienced divers jumped overboard, grabbed hold of the anchor line, and let the wind power the boat above. Our drift dives gave us a panorama of the reef, the highlight for me being the score or more of angels I spotted--and at least half-a-dozen large queen angels--and the low point being dragged through a nearly invisible patch of stinging jellyfish, which left me with a red, bumpy itchy rash for a couple of days.

Charlie, I was to learn, does not get into the water with his charges. He claims that most problems and accidents occur on or near the surface and that he can be most helpful there (a rationale, perhaps, for growing tired of diving). He will, however, accompany experienced divers on deep wall dives, if requested. Although I enjoy the freedom to dive my own dive, I could not help wondering what sights I was missing as I tried to follow his pre-dive instructions underwater, occasionally silently disagreeing with my buddy on what direction was south, or what constituted a 45° turn.

And perhaps the other liability of such a policy became apparent on my first dive when the only other diver on board--a newly certified diver off for his first "real" diving--was assigned to my buddy and me. Like any new diver, his air consumption was awesome; much earlier than I wanted I was forced to turn back to the boat so he could surface safely. Various other divers joined us during our stay, some just for one dive, some for longer periods, with experience ranging from the first time in the ocean to people who owned dive shops in the states.

Dive prices are quite reasonable. A single tank is \$15; a two-tank dive \$23; all three daily dives are \$35. On one day a fourth dive was offered. All diving is done from one of two flattop boats, a 26-footer and a 36-footer. Both offer good shade under an aft canopy and are very stable and easy to dive from and get back onto. Chub has about 50 steel tanks, which are stored right next to the dive boats and can be filled on the spot. They have two Worthington compressors plus storage banks located behind the dive shop and run a hose to the dock for filling tanks. Some tanks had as little as 2100 psi, due most likely to the tanks cooling after being filled in the sun.

Though three dives a day leave you with less time to fill your non-diving hours, Chub Cay Club offers two swimming pools, good shelling, some snorkeling, and tennis on two hard, fast concrete courts, not as well-maintained as they might be. But most of the guests at Chub Cay Club were there for the fishing, so despite the dive boat never having more than a handful of passengers during our stay, there were plenty of people around.

Chub Cay is actually a private club, only part of which is open to guests who participate in the dive program or go out on the charter fishing boats docked in the Club's marina. Members, we were told, include the likes of Joe Namath, Walter Cronkite, A.J. Foyt, and Geraldo Rivera. And Frank Sinatra's arrival was expected, we heard, momentarily. Unfortunately, no one whose face I recognized appeared during our stay, at least no one in the parts of the island open to the "public." But if they didn't have faces that were familiar or names that were household words, it was obvious that members of the Club represent a great deal of money and corporate power. Luxurious private planes, including a ten-passenger

Massacre At Moody's

We journeyed to Moody's Pidertupo Village off the Caribbean coast of Panama in 1979 and fell in love with this seven-cottage resort on a tiny three-acre island—one of 365 San Blas Islands. The local residents, Cuna Indians, lived on only a few of the islands, so the remainder were varied spits of sand lush with coconut palms and no tourists. Indeed, Moody's was a paradise.

But, no longer. This combined AP/UPI dispatch tells of the demise.

"Hotel guests 'smoking marijuana and cavorting naked' on a Caribbean island's beaches so scandalized the local Indians that they attacked the American who has run the hotel for 14 years.

"Tom Moody, 52, of Pittsburgh, Pa., said 20 Cuna Indians attacked his hotel in the San Blas Islands, killed two national guardsmen, shot him, doused him with gasoline, tied him to a tree and set him on fire. Apparently none of the hotel's guests were hurt, but Moody was hospitalized in Panama City.

"The Cuna Indians, from a nearby island, their faces hidden behind war masks and screaming 'down with imperialism,' burned Moody with a homemade firebomb after beating him, authorities said. The Indians said they were angry because Moody's hotel was frequented by young American tourists who smoked marijuana and sunbathed in the nude on the island's beaches.

"Panamanian Justice Minister Jorge E. Ritter said Moody exaggerated his account and that his license to run the hotel, which he has operated for the past 14 years, will be revoked. Cuna leaders had complained that he was a 'parasite' living off their culture and disturbing the isolated region's tranquility.

"Ritter said the Moodys, who have a daughter Marijo who was born on the island, would be reimbursed for their losses after the government determines the value of their property.

"Last year, the Cuna tribe, which numbers about 20,000 and lives throughout the region's 365 islands, had asked the Panamanian government to be the sole proprietor of Panamanian tourist ventures in the Caribbean."

"The attack on Tom Moody is tragic. The closing of Pidertupo Village is sad. But we're not all that surprised it happened. When our travel editor, C.C., was in Pidertupo two years ago the Moodys themselves indicated that the Cunans have never been happy with the presence of a single American resort in their island paradise and that the Cuna Indian who gave them the land lease was, in fact, a renegade from the tribe. Though "cavorting" might have been the catalyst for the attack, it could be that the Cunans—poor Indians who survive by trading coconuts and selling their art work (Mola's)—simply grew weary of uppity rich Americans playing among their undeveloped islands and gawking at their primitive culture.

Then again, maybe they have an offer from Holiday Inn.

prop jet, sat at the tiny airport; boats anchored in the harbor were elegant, many with full crews to serve the owners and their guests. Each evening, we would sip our rum or Saint Pauli Girl on the deck outside the Flying Bridge bar/dining room and watch the yachtsmen pass by in proper yachting blazers and white slacks, their ladies in silk dresses and spiky heels. (This should not leave you with the impression that the resort itself is luxurious; it was nice, but by no means another Rockefeller Resort such as Caneel Bay.)

Of course, I can't speak for the food in the members' dining room, but the non-members' Flying Bridge menu was more than adequate. The dinner included a special each day: an outstanding prime rib on Saturday night, barbecue short ribs another, and usually a catch-of-the-day. Regular menu entrees, all served with salad or conch chowder, included lobster, surf-and-turf, chicken, veal, and a mixed seafood plate which included a small lobster tail. There were no desserts available at any meal during our stay--good for my waistline, but a disappointment to my sweet tooth. Not even ice cream! Breakfast included the usual combinations of bacon/ham/sausage and eggs with grits, housemade English muffins, juice (no fresh fruit, either--another disappointment when you're looking forward to mango and papaya), French toast, pancakes, and good, strong coffee. At lunch one could select fish fingers (no, not like Mrs. Paul's -- these were strips of fresh grouper or dolphin, lightly battered and fried and delicious) with French fries; several sandwiches, hamburgers or cheeseburgers; a chef's salad -- unusual for a menu in the tropics, and very welcome; conch salad and chowder.

Prices at the Chub Cay Club are: standard low season rooms rates at \$50/day double in the "Yacht Club" rooms overlooking the small pool and the marina, \$55 for the "Beach Club," with large pool and oceanview and in each room, a small refrigerator. American plan is available at \$20 more per person (plus 15% service, of course.) There are no other places on the island to eat, though the Club includes a commissary where raw materials for meals can be purchased by those who rent one of the "villas" or who are staying on board their boat with cooking facilities. Consumption of alcoholic beverages really runs the tab up, with beer at \$2.25 and mixed drinks at \$2.50. We invested in a \$10 quart of rum and a \$5 six-pack of mixer at the commissary, and limited our in-the-bar inbibing to a beer after diving, an occasional after-dinner Nassau Royale, or a drink with a new acquaintance.

In retrospect, Chub Cay rates quite well among Bahamas dive spots. Nowhere in the Bahamas have I ever discovered the lush reefs similar to Bonaire or the active fish life, say, of Belize (and St. George's Inn). But the diving here is certainly better than the patch reef diving of some out islands and the possible depths add a special thrill. As to the effect of the private club on the ambiance for the plain old paying tourists, I took no offense. In fact all the people I met were indeed quite personable and one afternoon I joined up with a sailor for a trip to a shallow reef and conch gathering. But, Chub Cay is a fishers' paradise and diving is indeed a stepchild. There's no place to sit and visit with other divers, no diving pictures on the wall, and no beer drinking ambiance of the typical dive resort. It's a bit unusual, as far as places for us divers go, and perhaps that's really its charm.

Divers' Compass: The best diving is in the summer months, but then there's also an outside chance of a hurricane...During my stay in late May, a plankton bloom kept visibility below 80 feet...The current dive package rate per person including air fare from Miami is \$395 (4 days/3 nights) and \$733 (8 days/7 nights)... though the water temperature was 80°, a wet suit top helped and is essential earlier in the season...There's limited repair capacity in the shop and no equipment for sale...

DEMA's Efforts to Put Life into the Industry

—and barbs from NASDS

American diving equipment manufacturers aren't happy with the growth of the industry. In fact, states Ralph Shamlan, President of Tekna, "the sport is not growing. It is contracting."

Industry members cite a covey of reasons for the contraction, some of which are conflicting:

- ★diver training is too long; it's too difficult for most people to commit themselves to training for several weeknights and one or two weekends.

- ★the equipment is too cumbersome.

- ★diver training is too expensive, the equipment too costly.

- ★courses are filled with archaic information from medical and physics texts which serve no practical purpose and only bore the student.

- ★present instruction emphasizes all the negative aspects of the sport—embolism, shark attacks, running out of air—without providing a positive side to encourage the students to continue.

- ★divers are poorly trained and once put out on their own, they are uncomfortable and anxious when diving and therefore drop out.

Of course there will always be people who discover they've taken up the wrong sport—the water is too cold, they have too far to travel to good water, they

don't like what they see once they're underwater and so forth. But many industry people believe that with modifications in training, more people will sign up for a course, more will complete the course and more will remain divers.

In February DEMA convened a meeting to discuss new training procedures to increase participation in diving. After the meeting we received a purloined copy of the minutes. In April NASDS, who had *not* been invited to the DEMA meeting, reprinted the minutes with comments from John Gaffney, NASDS executive director.

We thought our readers might like a peek not only at the minutes, but also at the controversy raging between Gaffney and many other people in the industry. Gaffney has always been an outspoken critic of many industry practices and flaunts his success with NASDS as proof that tying training into retailing is not only better for the industry, but, according to Gaffney, keeps people in the sport much longer. Gaffney claims his students learn how to use the most sophisticated equipment through extensive pool sessions—before entering open water—and therefore graduate as competent divers fully able to control their underwater destiny. Critics of NASDS say that NASDS ties training into sales to such a degree that the newly trained diver comes out with a four-figured equipment bill. NASDS has a franchised string of its own shops, while NAUI and PADI argue that they should remain independent of retail sales. Instead, equipment manufacturers sit on their Boards.

So, here are the minutes of a meeting* of industry moguls and training agencies staff trying to create new training strategies to keep people in diving. Gaffney's comments are in italics.

Meeting was called to order at 8:45 A.M., February 12.

John Cronin spoke of the physical and mental impediments facing a person who wanted to become a certified diver. He reminded the group of the shorter certification courses taught 15-20 years ago, when our industry enjoyed its greatest growth.

John forgot to mention that 15-20 years ago most diving was self-taught by water-oriented people, good swimmers, lifeguards, surfers, and other "physical types" took up scuba diving. Formal instruction was started because of the accident rate. These courses, in most cases, consisted of certification after pool training or after one open water dive involving mask clearing and regulator clearing. The "greatest growth" might have been enjoyed then because we were using up these water-oriented people. The market today is

BEWARE OF IMPOSTERS

Not long ago we received a letter from a popular resort, wondering when our review on that resort would appear. After all, the proprietor said, it had been nearly six months since our reviewer had been there and wasn't it about time the story appeared?

And just about the same time, we heard from a fairly reputable person in the industry, who had been diving at another resort, that someone was on the premises claiming to be a writer for *Undercurrent*.

Hopefully, neither resort gave away too many freebies to these imposters, for they indeed were interlopers. We never announce our presence. We never let on to what we're doing. We never seek favors. We always pay our way. And if we ever have any inclination that someone knows what we're up to, we cancel the story.

So, just a caution to resort owners that if someone strolls in the door and represents himself as being from *Undercurrent*, be sure to get his cash up front.

not water-oriented, for the most part.

Discussion ensued and it was concluded that we are keeping people out of the sport by teaching the way we do.

NASDS agrees that we are keeping people out of diving by teaching the way some people teach. Inadequate training, unfamiliarity with equipment, noncomfort in the water seem to discourage more potential divers than anything else. Lack of enforcement of training standards to ensure the comfort and safety of the diver has been a problem with the associations dealing with independent instructors. Many of these instructors are so bent on showing how physical the sport is and how cheap it is, the student diver goes away totally confused.

The catalyst for proposed pilot programs seems to be the courses taught in the Caribbean where novices are diving safely in shallow water in a few hours. Marshall McNott asked who was going to fund the pilot programs. Frank Sanger felt that we could no longer afford to wait. He reminded the group of our negative unit growth these past five years.

Possibly the negative unit growth is due to some manufacturers' units being put into places that aren't equipped with a sales or teaching program—mail order houses. Possibly lack of innovation on the part of the manufacturer is a contributing factor. We may be starting at a prime case of product overkill.

Gordie Shear stated we are losing divers before a course is finished because of the difficulty in the present instructional methods, particularly in the amount of time spent learning to dive.

I strongly question Mr. Shearer's assumption that the length of the course has had an important correlation to drop outs. Stronger reasons are inadequate stimulation, improper diving equipment, improper qualifying during the precounseling phase if there is any counseling at all.

John Cronin stated that what we are searching for is the disease. The symptom is a flat growth line. More dangerous sports are growing faster than we are. He asked, "What is the sickness in this industry?"

It was emphasized that DEMA is not proposing quick crash courses to "throw people into the water." We need to evaluate what we have. We must project a positive image of a relatively safe sport. And, if we don't make a change—all we will be able to project is a flat line and reduced profits as the pie shrinks. George Shearer agreed and added, "We have to sell diving as a FUN sport." Jeff Nadler informed the group that drop-out rate is still running at 80% after one year.

Mike Brock reminded the committee of a very successful twelve-hour program he was involved in some years ago. John Cronin and Frank Sanger also spoke of the numbers of students they safely taught in a much shorter time frame.

Harry Ruscigno commented about the parallel between learning to fly and learning to dive. The key he

Sport Diver II

Rising like a Phoenix from the ashes of *Sport Diver* is a new publication for divers: *Ocean Realm*. Edited by the original publisher and editor of *Sport Diver*, Richard Stewart, the magazine is expected to be in dive shops before the end of the year. Many of the staff and writers will be the same—Tim Cahill, Richard Ellis, Rick Frehsee, Carl Roessler—and the format—perfect bound on slick paper with high quality photographs—will remain similar.

Stewart told *Undercurrent* that "*Sport Diver* erred in trying to go to a bi-monthly publication. The industry is not large enough to support that frequency of publication, but can support a quarterly. That's the way *Sport Diver* started and that's the frequency of publication for *Ocean Realm*."

In an effort to get sales support from retail dive shops, Stewart said that they have "no intention of soliciting business from mail order discount houses. Our advertising guidelines do not allow the publishing of prices. We intend to support the retailer. Maybe one day this industry will realize they are the hub of the industry."

Ocean Realm will be published in Miami by Graphcom Publications, the publisher of several boating magazines. Since *Ocean Realm* has no connection with Ziff Davis, the last publisher of *Sport Diver*, former *Sport Diver* subscribers will not be given credit toward an *Ocean Realm* subscription.

believes is to teach fun and get new divers involved in the club approach.

Ralph Shamlian reminded the committee that the original proposal was to create a beginning (student) diver Monday through Friday where the emphasis would be water skills. Open water experiences would then take place with two each on Saturday and Sunday. This would be considered Phase I. The "student" diver would be encouraged to go to Phase II which would offer additional, streamlined lectures on the ramifications of risk (holding breath, decompression, excessive rate of ascent, etc.). Phase II will also include several open water experiences which will further develop the confidence of the diver.

How could anyone even remotely involved in adult education suggest that we take divers into open water environment without prior training in proper breathing patterns or proper ascent procedures?

Comments were made regarding the economics of instruction in 32-hour courses, whereupon instructors cannot afford to teach. (sic)

Diving resort courses are inexpensive and their growth has increased dramatically.

Our pilot program should maximize water skills in the pool with hard equipment.

Harry Ruscigno related the high drop out rate of students in a course SEATEC paid for and conducted in-house. Of 33 people who started the course, only three finished. John Cronin also had a similar experience at U.S. DIVERS. Ralph Shamlian concurred that protracted programs will allow instructors to make a reasonable amount of money.

NASDS will bet \$10 that neither Harry or John used the NASDS program with NASDS instructors.

Gordie Shearer felt that money and ego are major concerns. Also, that we should look to the "diver of the future" who will only dive 4-6 times each year.

There was concern voiced by John Cronin regarding liability. He proposed we state the needs and allow the agencies to establish their own safe and practical standards. Also, restrictions and guidelines should be placed as to where student divers can dive.

How can one control where people dive if some associations can't even control training within their association?

The representatives of the certifying agreed to develop pilot programs.

Concern was voiced regarding the methods of overcoming instructor opposition.

If we were DEMA we sure as hell would be concerned over these proposed courses. No ethical instructor or store would ever teach a course that he or she did not personally feel was of benefit to the customer. However, with the help of "the leading publication in the diving industry" who gets its advertising from this group may be able to paint a rosy picture of shorter courses while the industry, the stores and the instructors pay the insurance rates.

George Shearer felt that DEMA will have to show the diving retailer (who has control of the instructor) that they can progress and make money. Harry Ruscigno and John Cronin remarked that we have to make the program desirable and palatable. Frank Sanger said that the student should have the right to choose the course best suited to his particular needs.

A discussion followed relative to the success of this program if all certifying agencies did not agree. The demise of the National Scuba Training Council was because the instructional agencies could never agree.

Harry Ruscigno felt that we should offer participation to all agencies. However, he believes we would see a massive campaign to create a lot of heat and dissension. Regardless, we should go for the program and prepare to take the expected criticism.

Send your campaign contributions to NASDS.

Dennis Graver stated that the "terminal objective" of the program would be common; the course content as developed by PADI and NAUI would be different.

Mike Brock recommended that each agency test programs in the best shops.

Bill Oliver commented that the Graduated Length Method was one of the factors that enabled the ski industry to grow so rapidly.

Mr. Oliver should read the last issue of Sport Merchandiser or talk to some of the retailers that are in both diving and skiing and see just what the condition of the retail ski industry is. He should also ask some of the manufacturers. It is a giant disaster.

Our concept is to develop "The Basic Diver" in a Monday through Sunday time frame.

Dennis Graver suggested that the involvement of highly qualified instructors was very important. He recommended that the agencies furnish the outline and

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ask the instructors to put the program together.

Geoff Stern advised that he has developed a program outline and that implementation could begin in thirty days.

John Cronin reminded the committee that the agencies do not want to introduce a program without collateral material.

Ralph Shamlian suggested that standards be developed by PADI and NAUI with field input playing a dominant role.

John Cronin suggested that we agree on a name for the program and basic standards. The agencies will go their own way within the framework.

In my opinion, this is a trap. There is no way that NASDS would ever consider using the same name as suggested by manufacturers. The last bastion of strength left in the retail market is the control of instruction and as long as the retailer has that control he can exist. Once that control passes to the manufacturing group, so will his existence.

Considering this suggestion, the acronym GEM (Graduated Experience Method) was adopted by the committee.

Funding was discussed and a partial grant of \$2500 is to be given to both NAUI and PADI for materials and resources necessary to develop their pilot programs.

Dennis Graver and Ralph Shamlian felt that at least four open water experiences were required in Phase I. Ralph also suggested the development of skill levels for dive site locations. This could be accomplished by involving dive boat and resort owners.

This would be very similar to the system presently used in rating of ski runs/slopes where the participant is advised that certain skills or experiences are required before he can safely manage the particular run.

Geoff Stern expressed his view that this should not just be a new course outline, but that the attitudes of the instructor was crucial and should be positive.

The meeting was adjourned at approximately 2:00 P.M.

*Members in attendance were: Nancy Baily (Sportsways), Mick Brock (Scubapro), John Cronin (U.S. Divers), Jim Hill (Imperial), Bill Martin (AquaCraft), Bill Oliver (Seaquest), Harry Ruscigno (Seatec), Frank Sanger (Parkway), Ralph Shamlian (Tekna), Gordie Shearer (Dacor) and Geoffrey Stern (Blue Water). Invited guests attending were Ted Boehler and Marshall McNoit (NAUI) and Dennis Graver and Jeff Nadler (PADI).

Why Divers Die: Part II

10% of the deaths occur in training

This is the second part in a series of articles reporting on the study of American sport diver deaths prepared by the National Underwater Accident Data Center and the University of Rhode Island. Their report covers two years, 1977 and 1978.

Age Distribution

The age pattern established in previous years continues in 1977 and 1978, with most of the fatalities

occurring in the age groups between 16 and 30. In 1977 NUADC recorded the lowest number of female deaths (four) of any of the previous years; three were over the age of 36. Quite the reverse is evident in 1978, when the reports indicate the highest number ever of female deaths in a single year (21), and all but two of these were under the age of 36.

In contrast to 1976, when NUADC recorded the youngest diver fatality (seven years old), in 1977 the oldest victim was reported, a 70-year-old man, who

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died of a massive heart attack while diving for golf balls in a lake on a golf course.

Experience and Training

Table I addresses the experience level of non-professional scuba fatalities. There is bound to be some subjectivity, e.g., a case could easily be listed as "Early open-water dive" as "Some experience." Allowing for some overlap in these two categories, it can be noted that the first three categories in each of the tabulated years consistently average about 45 percent of the total for that year, and it is possible, taking into account the above-mentioned subjectivity, that the three categories of "First dive ever," "First dive in open water," and "Early open water dive" may account for 50 percent or more of the total cases.

In the report covering the years 1970-76, the NUADC expressed its concern regarding these early dives. The message is important enough to be repeated verbatim.

Although these early dives may involve up to half of all the yearly deaths, they involve a relatively few number of dives. In 1976, 10 percent of the total involved either the very first dive or the first open water dive, and 30 percent involved less than seven dives per victim. On the other hand, 21 percent of the victims falling in the two most experienced classifications may well have logged hundreds of dives each before the accident. Thus, the sport diving community has a far better chance of intervening in fatal accidents if it concentrates on these early dives, which are well-defined and usually under the control of instructors or other experienced people.

If, for example, the loan, sale or rental of scuba gear to uncertified persons in the United States was prevented, an annual 10 percent reduction in scuba fatalities could be anticipated (12-14 deaths), assuming adequate enforcement and reasonable education of divers. The task of reducing the many deaths in the "early open water dive" category is the responsibility of the instructors. It is essential that all students clearly understand that, having completed a few open water dives with instructors, they will enter the most dangerous part of their activities, a period of open-

water seasoning in which sea conditions, equipment, or buddy problems not met in the class could become a serious emergency and overwhelm them, and they will no longer be under the eye of experienced people.

"There appears to be a tendency to take students too deep too soon, before they have had the opportunity to become comfortable and acquainted with the strange new environment of the sea."

In 1977-78, thirty-two nonprofessional scuba fatalities occurred during training. Twenty-six were in formal training programs. Ten percent or more of all diving fatalities annually occur during training. And many can be prevented. There appears to be a tendency to take students too deep too soon, before they have had the opportunity to become comfortable and acquainted with the strange new environment of the sea. Rough surf and strong currents should be avoided when training new divers. The pressure of time and the desire not to waste a day of diving are often cited as reasons for conducting training even when conditions are adverse.

Training for the out-of-air and emergency ascent situation continues to be the leading factor in deaths during training, followed by exercises in buddy breathing.

The account which follows points out some of these problems:

The students and the instructor were at a depth of 45 feet and preparing for a practice emergency swimming ascent. Visibility was limited because the silty bottom was stirred up. The instructor turned off the student's air and the student removed his mouthpiece and started for the surface. The instructor followed about 20 seconds later. When he reached the surface the student victim was motionless and not breathing. CPR was conducted in the water and was continued all the way to the hospital, where the victim was pronounced dead.

A number of points can be made about this exercise. It should have been conducted in much shallower water, since this was the first time the student had tried an open-water emergency ascent. The air should not have been turned off, nor should the student have

Experience Of Diving Fatality Victims

TABLE I

Experience	Number of Fatalities									
	1970	1971	1972	1973	1974	1975	1976	1977	1978	
First dive ever with scuba	11	16	8	4	11	8	10	10	9	
First dive in open water	6	7	4	5	6	6	5	1	1	
Early open-water dive	31	24	21	34	37	25	30	26	34	
Some experience	33	19	37	26	24	20	34	40	45	
Considerable experience	13	23	14	21	16	28	16	19	7	
Very experienced	6	11	16	10	6	13	5	4	4	

removed his mouthpiece. A firmly anchored down line should have been used. The instructor should have ascended with victim, keeping firm grip on the student and having a means of stopping the ascent if needed by use of the down line.

Activity Of Victim During Fatal Dive

Cave diving deaths (see table II) were considerably lower than those recorded for all the previous years since 1972. The state of Florida is the leading location for cave-diving fatalities with one exception (Texas), in the two-year total of 20 deaths.

Diving on shipwrecks continues to be somewhat hazardous, especially off the New Jersey coast. During

1976 an all-time high of nine divers lost their lives while wreck diving. Though there were no 1977 fatalities four wreck divers died in 1978. Many dives are conducted miles offshore and in water depths ranging from 60 to 140 feet, often during rough sea conditions and with many divers in the water at the same time.

Obviously, these are not the kind of conditions to which a novice diver should be subjected. Yet in at least three of the four deaths recorded in 1978 the victims had very little scuba experience, and in one case the victim had only one previous open-water dive since receiving certification.

As with both cave diving and ice diving, deep wreck diving (over 30 feet) should probably be left to experienced and capable persons who have had special

Dear Undercurrent:

Does the Nikonos Strobe Light Overexpose?

Dear Undercurrent:

I am interested in information about the Nikon strobe light—the SB101—sold as an accessory to the new Nikonos IVA. Several people have told me that there were many problems with the strobe and I'd like some clarification. I've already purchased the camera, but I'm hesitant to add the strobe if the problems I hear about aren't correctable. Are there bugs and if so is Nikon working them out?

Bernd Sokolowski
Washington, D.C.

Dear Bernd:

Yes there is a problem with the Nikonos SB101 strobe and so far as we can tell that problem has yet to be corrected.

About the same time your letter arrived we received a set of overexposed slides from Dr. George Smerlis, a subscriber from Damascus, Maryland. Smerlis claimed that the slides were taken with his new Nikonos strobe. One of our testers rushed to the pool to test and sure enough, we overexposed the subject by roughly two f-stops while on the automatic setting. The sensor, built into the strobe housing is supposed to turn off the strobe light when precisely enough illumination reflects off the subject to give it proper exposure. According to the instructions, the sensor will not take an accurate reading at distances of 16 inches or less, so one can expect overexposed film at close range. But the problem seems to be that no matter what the distance, the automatic strobe would overexpose.

After a series of calls to Ehrenreich Photo Optical, the United States Distributor for Nikon and Nikonos, we were finally referred to Arthur

Kramer, technical consultant to Ehrenreich, for answers.

Kramer told us he had traveled to Grand Cayman to join Jim and Cathy Church to test the Nikonos and the SB101 strobe and while there he too had the problem. Since the problem does exist, Kramer said, those owners of the strobe should return it to Ehrenreich (or to the retail outlet through which it was purchased) for repair.

Normally, that would end our query, but when we received reports that Ehrenreich had been unable to repair some strobes, we called Dr. Smerlis to see if Ehrenreich had repaired his strobe. Indeed he had sent it, he said, "but it still overexposes as much as it had. I've given up using the automatic and now simply operate it on manual."

But we weren't about to give up. We contacted several other people in the industry, including one prominent underwater photographer, who has discovered that the problem is in the circuitry. He too had tested several strobes which were allegedly modified, but found the overexposure still occurred. Ehrenreich, however, is now shipping him new strobes for testing. We too will test that model as soon as it arrives.

For the time being, our best advice Bernd, is to delay your purchase until the corrected model—if indeed it is corrected—arrives on the marketplace.

If you already purchased the strobe, you can use it under certain conditions by advancing the lens two f-stops to "fool" the sensor and anticipate the overexposure.

And, one other point. Unlike previous Nikonos' models, the IVA back opens for film insertion similar to other 35 mm cameras. But a lock on the door must be turned if the camera is to seal and become watertight. If there is a problem beyond the diver's failure to lock the camera, we've been unable to discover it.

training for these activities.

Multiple diving fatalities have taken place primarily in caves in both 1977 and 1978. A double fatality in 1977 occurred in the Blue Hole off British Honduras, the location made famous by a recent Jacques Cousteau movie. This very popular diving area is quite deep, and has even deeper caves angling away from its base, many of which are too deep and too long to allow exploration. NUADC, however, decided not to classify this event as cave diving because there is no verification that the divers did in fact penetrate any of the caves. The only witness to the accident was the charter boat captain, who stated simply, "they went down but didn't come back up."

A second multiple fatality occurred when two divers died in a Florida sinkhole. None of the four divers involved had entered the cave but they had gathered at the 130-foot-deep base of the sinkhole. Both the victim divers finished their dive and, with 900 psi of air remaining, started up to their decompression stop where an extra tank had been tied off on the down line. When they did not surface at the appropriate time, a search was started and the bodies

were located at the bottom. The extra air tank was missing from the line. One of the buddies may have removed it to take down to his troubled partner.

During 1978, multiple fatal events took 18 lives. Twelve of these were accounted for in six double-death dives and six occurred in each of two tragic events which resulted in three deaths.

"The recovery divers first found a slate about 75 feet into the cave with the message, 'Which way is the shortest way out?'"

With some exceptions, most cave diving fatalities involve young inexperienced divers without proper training or equipment, and more often than not they result in multiple deaths. A triple-death cave dive in 1978 is typical. The trio, who were visitors from another state, were in their mid-twenties and apparently had little or no cave diving experience. They entered the cave with only one light each and without the all-important reel of safety line with which to find their way out. The recovery divers first found a slate about 75 feet into the cave with the message, "Which way is the shortest way out?" All three victims were

Activity Engaged In At Time Of Accident, 1970-78

TABLE II

Activity	Number of Fatalities									
	1970	1971	1972	1973	1974	1975	1976	1977	1978	
Spearfishing	14	6	8	11	7	3	4	7	3	
Photography	2	2	0	1	2	0	1	0	1	
Ice diving	0	1	3	3	1	4	3	2	3	
Cave diving	10	9	19	17	25	20	21	7	13	
Wreck diving	2	3	2	1	6	5	9	0	4	
Night diving	0	0	2	4	3	2	2	2	2	
Research	3	0	0	0	1	0	2	0	0	
Underwater search	2	3	2	2	3	4	6	2	1	
Abalone diving	6	7	7	2	7	3	1	0	3	
Shell/lobster fishing	5	3	2	0	5	4	6	4	5	
Attempting to save diver	2	2	0	0	1	0	0	1	0	
Testing equipment	3	1	1	0	2	0	0	0	0	
General underwater maintenance	0	0	0	0	0	0	1	1	0	
Unspecified recreation	46	61	58	67	59	59	73	57	67	
Instructing	4	0	0	2	2	3	0	1	0	
Receiving instruction	11	14	15	15	20	24	18	18	14	
Total	110	112	119	125	144	131	147	102	116	

Diving Partners During A Fatal Accident

TABLE III

Number with Victim	Number of Fatalities									
	1970	1971	1972	1973	1974	1975	1976	1977	1978	
Zero (diving alone)	13	16	8	4	11	8	10	10	9	
One other (buddy)	47	7	4	5	6	6	5	1	1	
Two others	11	24	21	34	37	25	30	26	34	
Three others	10	19	37	26	24	20	34	40	45	
Several others	19	23	14	21	16	28	16	19	7	
Unknown	10	11	16	10	6	13	5	4	4	
Total	110	112	119	125	144	131	147	102	116	

located about 10 feet apart and about 250 feet into the cave, which was 35 feet deep. All three were facing toward the right direction for the exit, but all had empty single 80-cubic-foot tanks. All three lights were in working order.

Diving Partners And Their Activities

Table III was in the past erroneously interpreted as indicating that it is safer to dive alone, since smaller numbers of fatalities are reported in this mode than when diving with one other or more. The industry has for many years emphasized the importance of the "buddy system," but it's apparent that the buddy system is sometimes not properly practiced, though we believe the buddy system does in fact work when conducted correctly. Training agencies have continually taught that the buddy system requires a one-

on-one relationship; that is, two individuals working in close proximity, each looking out for both himself and his buddy. There is no proper buddy relationship when three or four or more are simply in the water together.

The buddy system also breaks down when visibility improves and the buddies tend to drift farther apart. (See table iv.) An example is the buddy 40 feet away who runs out of air or merely thinks he has. By the time the divers can get to each other, the victim is in a state of near-panic and refuses to give back the regulator offered by his buddy.

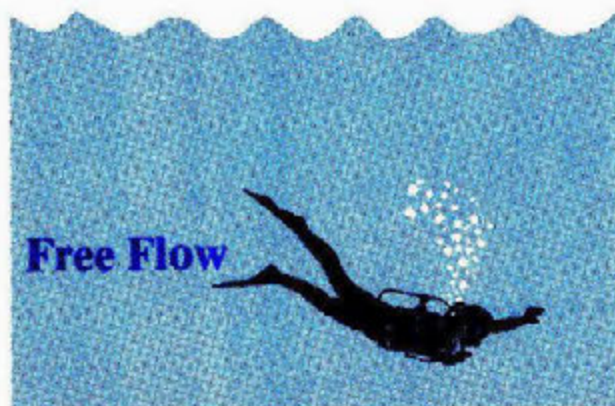
Some deaths which occur under the condition of poor visibility could be prevented by the simple use of a buddy line about 6 feet long to keep divers close to each other even when they can't see each other.

Next Issue: Part III

Buddy Activity During Fatal Accident

TABLE IV

Activity	Number of Fatalities							
	1971	1972	1973	1974	1975	1976	1977	1978
Buddy stayed with victim	25	27	22	40	20	39	24	32
Buddy lost victim underwater	24	25	38	36	52	34	12	18
Attempted buddy breathing	15	14	7	11	14	15	14	8
Buddy left water ahead of victim	9	4	4	3	6	11	4	2
Buddy lost victim on surface	12	15	14	11	12	7	6	9
No buddy	12	11	10	21	13	18	24	22
Unknown	15	23	30	22	14	23	18	24
Total	112	119	125	144	131	147	102	116



The Dean of Diving Doctors, Charlie Brown, wrote to tell us of a fine new book on Diving Medicine from Downunder, and sure enough, *Diving and Subaquatic Medicine* looks like the bible for all finning physicians. This is the second edition of the definitive text by Carl Edmonds, Christopher Lowry and John Pennefather and in its 562 pages has thorough chapters

on every conceivable topic of interest to the medical profession. Topics include: dysbaric Osteonecrosis, hypoxia, marine animal injuries, underwater blast, barotrauma, hearing loss and disorientation, and virtually every other aspect of diving medicine. Sport divers who devour every printed word will find it interesting, but it's written for the practicing physician. The book can be obtained by airmail for \$34.50. Send your check to B.M.S. PTY, 25 Battle Boulevard, Seaforth 2092, Australia.

Each year thousands of marine mammals and sea turtles wash up on North American beaches. For example, each summer nearly 2000 sea turtle carcasses are found. To help rescue live animals and provide scientific information on the movement and death of these creatures in the Southeastern United States, call your sightings into the Southeastern United States Marine Mammal Sea Turtle Stranding and Salvage Network. The toll-free number is 800-327-6545. In Florida call 1-800-432-6404