

Young Island, St. Vincent, The Grenadines

for lovers . . . or for friends

"The island is beautiful," she said, studying the brochure. "And I do want to go diving. But it looks too romantic for us--the cozy little cottages nestled in the acres of flowers and foliage. And the whole island is the resort. . .you know, it's just too romantic. I can't go. We have to accept that our relationship is over. It just won't be right. It would be too much."

"But it's the perfect place to rekindle the embers," I protested.

"There are no embers after a rainstorm," she answered. "Look, it's just not right. Young Island is the place to begin a love affair. Not the place to end one."

I supposed she was right. But after four years I didn't want to hear it. I couldn't go without her. The eight others on the trip were really four loving couples. I'd be number nine, half of a pair. I poured out my misery to my good friend. "Is there a better way," he said, "to mourn the end? Sure, you can be a martyr, stay home in the rain, see your therapist, sleep a lot. Or you can be with your friends, sit in the sunshine, do some diving, drink a little beer, and get ready for the next stage of your life. Take your choice."

I took the next plane.

Indeed, Young Island is for lovers, . . . and it's also for friends. Located 200 yards off the shore of St. Vincent, at the northern end of the Grenadines, Young Island is a verdant little mound of tropical splendor, just large enough to hold a dozen lovely duplex cottages hidden in the hillside, a tennis court, a swimming pool, an open air bar and two covered dining areas, and a bit of open space for quiet strolls. Though not a destination for divers in search of the best underwater vistas, it offers warm water, decent diving and diving services, fine food, a pleasant staff, and the cultivated feeling that you were meant to be there forever.

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From St. Vincent, Young Island is reached in 3 minutes by a small covered ferry which shuttles back and forth between the resort island and the big island every 6-8 minutes. When I stepped from the boat I expected to be greeted by a tall man and a dwarf in white suits, but instead a cheery female staff member directed us to the office, where we were signed in, handed rum punches, and led to our cottages. Each duplex cottage is fashioned from stone and local hardwoods, air-conditioned by louvered windows and an overhead fan, and kept clean and orderly by an efficient staff. In the mornings pitchers of iced water would be filled, fruit would be placed in baskets, fresh flowers placed in a vase, and scattered clothes hung and folded. In the evening the porch lights would be turned on and the covers of the king-sized beds turned back. Each cottage porch has a view of St. Vincent and the schooners and yawls moored in the calm waters between the two islands.

After unpacking, I immediately headed for the beach to test the water. There's not much for the snorkeler to see in the immediate waters, although I found a small reef with a few common tropicals amidst some beaten-up elkhorn coral on the south end of the beach. Swimming is pleasant, though in November I found that the sun, on its westward track, leaves the beach shaded after 2:30 P.M. I suspect that's the case much of the year. The solution, which I quickly learned, was to ferry across to the main island to drink cold Caribe beer on the porch of the small bar and restaurant directly across the way. In fact, that became a good solution for other problems after the sun went down when tourists from other hotels and locals drifted in and out. For entertainment we would place our beer glasses close to a railing, wait for flies to be attracted to them, then watch chameleons slide along the railing, above the glass, to snatch flies in mid-air. Anything to pass the time in Margaritaville.

Young Island has no dive shop, but two operations serve it. I dived on three days with Terry and Sue Lampert, who run the Mariner Yacht and Dive Center directly across the water in the same building as the local bar. Together they claim to have eighteen years of experience in the business, which includes work in dive shops in Denver, San Diego, and St. Lucia before moving to St. Vincent three years ago. Their primary dive craft is an 18-foot Boston whaler, which we used on two occasions, but we also had two tanks on a 22-foot covered Bayliner; they also have access to two other boats. They normally take one dive in the morning and one in the afternoon, charging \$20/dive. If one has signed up for ten or more dives, the price drops to \$16.50/tank.

On the morning of my first dive, two associates--both certified but inexperienced--and I arrived 15 minutes before the 9:30 departure time, but the staff puttered around a bit--which turned out to be the normal practice--and we departed at 10 A.M. for a site about 20 minutes away. After anchoring near a rock cliff, we dropped overboard for what turned out to be the best dive of my stay. We began in 30 feet of water over broken coral, then headed downward to about 75 feet to a sheer vertical wall, covered with several varieties of coral, occasional gorgonia and coiled wire coral jutting in all directions. It was a treat to look directly skyward, through a school of a thousand or more blue and brown chromis, to see the shapes and forms on the wall silhouetted against the surface. At the top of the wall fish were feeding in the surge and below a relatively common array of reef fish--damsels, sergeant majors, puffers, and so on--poked about. I watched a two-foot trumpet fish unsuccessfully stalk a meal and played with several curled

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basket stars whose arms poked from coral holes. Some rested in full view, appearing like human brains, squirming to the slightest touch. During the dive Terry, who had guided us, had the tank strap on his Scuba-pro Stabilizing Jacket pop open (the band was defective on early models and should be replaced; see Undercurrent April, 1980, for full discussion) and while he wrestled with his tank, one of the inexperienced divers accompanying me burned up half a tank trying to help Terry, who tried to make it clear he didn't need help.



Divers Boarding Mariner Dive Center's 22 foot Bayliner; Young Island is in Background

Weather conditions prevented a return to the wall so I was taken to two similar places, where the wall sloped more gently and less spectacularly, where the coral and sponge growths were less interesting, and where the fish life remained somewhat common and small. I did see a few more butterflies, spotted drums were under many coral heads, a couple of large French angels darted about, a few rock beauties appeared, and once I spotted what appeared to be an ocean trigger in the distance. Generally, the coral was average. Visibility ran to about 80 feet (there were several brief rain squalls here in November), and the best, I am told, is December to August. The water was a bit above 80°, surely quite pleasant.

Three of my companions passed a resort course under the competent direction of Sue Lampert. They seemed to learn well. After a shallow warmup dive, we visited a sizeable tugboat which had not been sunk long enough to gather full growth or schools of fish, but there were open passages to pump through and I have no doubt this will become an excellent haven for sea critters. We then swam a hundred yards to a reef dominated by club finger coral, squirrels, grunts and damsel fish—not a great site for the experienced, but enough for the uninitiated.

Terry accompanied us on each dive while his youthful assistant, Foster Haynes, circled the boat above. Though I enjoyed hearty conversation with Terry, I was disappointed in his guiding. He provided little in the way of a dive plan, and no indication of what one might see underwater. He paid inadequate attention to the novices among us and in one case took off for a distant reef leaving other divers to track down one novice who became enamored with the wreck and got separated from the group. In another case we exceeded the tables by a minute or two, but he did nothing to caution me or the other diver about our position on the table or that we might hang for five at ten. Experienced divers might find his carefree attitude perfect; I prefer someone more cautious and I cannot recommend that beginners travel underwater with him alone. There was also not much service for divers; we were tacitly required to tote our tanks from the shop to the boat and there was no help in dressing up once on board. With some attention to providing personal--and safe--service, Terry Lampert would have a good operation for the high-paying clientele at Young Island. As it is, I suspect diving with Dive St. Vincent is the better bet.

Yet, I'm a bit reluctant to embrace Dive St. Vincent, having only two tanks under my belt with them, but the contrast was quick. After calling from the hotel for reservations, Dieter Sachs piloted his boat to the Young Island dock, where I hopped aboard and headed for the reefs. I had told whomever had answered the phone that I was interested in a good wall dive, and as I boarded, enthusiastic Dieter said we would head for the wall. The rains, however, appeared to decrease visibility, so twice he jumped overboard to check the water, settling eventually on a third spot, the identical spot I had dived with Terry Lampert. There were

only two paying divers and Dieter kept a careful eye on us while he pointed out a few creatures we may have missed, and provided the freedom to poke about. Near the end of the dive he and I simultaneously spotted a swimming scorpion fish, its colorful pectoral spread in great contrast to its drab body, which we observed before ending the dive. I had my option of returning to Young Island for lunch or stopping at a beach before the second dive, so I returned to Young, then was picked up promptly at 1:30 for the second dive, directly behind the resort. A driving rain reduced the visibility quickly and the dive was relatively common, but the best that could be mustered in the weather. At all times I was helped with my gear and aided by Dieter or Louise Montreuil, who piloted the boat while we dived. I did not visit their shop, but their 22-foot Mako was efficient and well-maintained and the attitude and service offered by Dieter and Louise on a stormy and somewhat unpleasant day was first-class. Young Island management also seems to prefer Dive St. Vincent. "Unlike the other operation," I was told, "they're prompt and they're here year-round--the Lamperts vacation for a couple of months every year." An experienced diver might as well try both to determine his preference.

Though the diving is not superb, Young Island itself is. Not only is the tiny island a tropical paradise, but also the amenities and ambience, if you will, provide sort of a barefoot elegance in just the right mixture. There's no dress requirement, except for dinner, when long pants and shoes are appropriate, although a cotton coat and white deck pants would surely be smart. The evening social begins in the pleasant, open-air bar about seven where each evening a different local entertainer or group holds forth--one night it was the voice of Richie Havens, or so it seemed, the other evening the calypso flute of Herbie Mann. Diners would move upstairs (and the entertainers would move too) to the tasteful and intimate dining room constructed from native wood and stone. Cordial and efficient waiters would serve up split pea or calaloo soup, fruit salad or lobster cocktail, followed by a carefully prepared main course of two choices, one always lobster, and the other perhaps pork chops or kingfish, accompanied by unique local vegetables, prepared by skilled culinary hands. Accompanied by a bottle of French wine and concluded with a dish of soursop ice cream, the dinners were special affairs. Lunch, served in small beach huts, began with fresh baked bread, a salad, and a choice of entrees which might include smoked kingfish, fried chicken and French fries, fish thermidor or sardine sandwiches. Desert was always offered--and too often accepted. Breakfast was served in yet another small building, where eggs, French toast, pancakes and bacon were cooked in any combination. Aside from the instant coffee-like taste of the morning brew, I cannot offer another gastronomical complaint, although some guests did believe the food was too "native-like," which leaves me to recommend the Chicago Holiday Inn for their next adventure. Also, I was told by locals that winter months find Young Island filled with the geriatric set, but guests during my stay certainly did not fit that image.

Although I was not thrilled with the diving, it was adequate (and the one wall quite nice); my full experience was surely delightful--my eight associates shared my enthusiasm. If boredom strikes, a trip to the Kingstown Botanical Gardens or to the slopes of the recently erupted volcano Soufriere can provide a break. But I didn't feel much of a need to go anywhere. Young Island, itself, was just what I needed. I got along quite well by myself, but when the full moon peeked over St. Vincent and cast its glow upon the bobbing ships and the rippling waters . . . I was glad I had friends. Next time, and there will indeed be a next time, I'll bring a lover. It's a very special place.

The Details: Barefoot elegance is not cheap, but the ambience of Young Island is indeed worth the extra tariff and may even be a bit of a bargain. Off-season doubles are \$125/day and skip upward depending upon the specific week selected. The current high is \$195. But all meals are included and there is no additional charge for tennis or sunfish sailing. Only the bar tab can pump up the price.

Flying to St. Vincent and Young Island is a bit difficult since one must change planes somewhere, most likely in Barbados (and that may require an overnight), to get to St. Vincent.

Divers' Compass: The Mariner's Dive Center can make minor repairs, has decent rental gear, and some equipment for sale. . . On Friday and Saturday nights, discos from across the way play until two in the morning, making sleeping damn difficult unless drugged or drunk. . . Young Island has nothing for sale, but one can take a cab ride to town and back for under \$10 should an emergency arise. . . The staff is willing to pick up items between their shifts; we found one staffer, Smokey, quite helpful. . . Our travel agent for this trip, who has served us well over the years, is diver Tom McEachren, owner of Mill Valley Travel (170 E. Blithedale, Mill Valley, CA, 94941; 415/383-5140).

1980 Travel Reports From Our Readers: Part III

BONAIRE: A short hop from neighboring Curacao and Venezuela, Bonaire has some of the Caribbean's best reef and short wall diving (at good prices) and beach front diving and snorkeling at the four hotels. Cap'n Don Stewart's efforts in the 1960's to prevent spearfishing and conserve the reefs have paid off, but the influx of divers is causing wear and tear. Major operations are Flamingo Beach Hotel, and Dive Bonaire. A year ago John McLay (Holmdel, NJ) wrote "this is the best organized operation I've experienced, and I've dived from Barbados to Palau. . . Divemasters are attentive, but allow experienced divers freedom." Readers' views since have remained similar, although one diver compared it to McDonald's, saying it's "smooth, efficient and obviously successful, but if you don't like your hamburger that way, go elsewhere." Arthur Card (Manchester, NH) deplored the litter on the beach front reef that had accumulated between his 1979 and 1980 Christmas trips and a couple of readers have noted hostility from the hotel staff, both problems which can be altered by conscientious management. . . Apparently Cap'n Don is concentrating on his Aqua Habitat, where divers can live in individual units and, if they wish, cook up their own meals. . . His old operation at the Hotel Bonaire is being run by capable long-time staffers and the hotel, readers say, has improved its food standards substantially since our last writing. . . Best news from Bonaire is that long-time guide Bruce Bowker is now running his own operation at the tiny but pleasant Carib Inn, nearly next door to the Flamingo, and a ten minute walk from town (important, since there's no food service). Calvin Ritchie (Williamsville, NY) says "very good dive shop and hotel. . . especially attractive to new divers. . . we went to a truly virgin area where the contrast with the usual sites was almost enough to make me anti-diving. The coral was undamaged and the fish were considerably larger."

CAVE DIVING: BELIZE: Charles Hettel (Belize Diving Services, P.O. Box 667, Belize City, Belize) writes that an incredible cave system has been discovered under Caye Caulker. One room alone is at least 1500 feet long, 500 feet wide, and 40 to 70 feet high, and filled with a forest of stalagmites, stalagmites, curtains and columns. Experienced cave divers can write him for more information. Paul Heinerth (SCUBA West, Port Ritchey and Hudson, Florida) began a survey of the cave in 1978 and other Florida divers are continuing it.

BELIZE: We loved St. George's Lodge (see August, 1980) and returned in October, finding the diving every bit as good even though the winds made it difficult to get to the Blue Hole. Fish life had changed--for example the enormous grey and French angels were rare, but more queen angels appeared--and we viewed a giant eagle ray accompanied by five rare 3-5 foot cobia, in close formation. A converter is now

Wash Out Your Gear After Every Dive?

Not Some Of The Pros Who Dive Every Day

If you're like most divers, right after a dive you scrounge for fresh water to rinse your regulator, your BC, and the rest of your gear, believing that if you don't you're bound to experience a colossal failure the next time you hit the water. It's common to see traveling divers stand in line behind a dozen others for the opportunity to swish their gear through a garbage can of water—even if the salinity of the water in the can, from days of use, is greater than the salinity of the seawater.

But, why is it that some dive guides, dive shop proprietors and resort operators just stuff their gear in a bag or hang it on a hook and then ignore it until they hit the water the next day? For example, Fred Good, the operator of St. George's Lodge in Belize (see *Undercurrent*, August, 1980) says he's been doing that for years and has never had a problem. Doesn't he know the rules? Is he too lazy to do the extra work? Or does he know something we don't? We decided to find out.

We discussed the issue with a number of people in the industry and found agreement that if indeed you do dive every day, no harm will come to your regulator or BC if you just stash them away overnight without rinsing. The salt water in your gear does not thoroughly dry out in 24 hours, so corrosion doesn't get a foothold and salt crystals don't form. A return to the salt water by the next day simply reverses the processes evaporation has begun and your gear is not affected.

This should be good news for traveling divers who find themselves in remote locations without access to fresh water. No longer do you have to tote your gear back to the shower in your room, wash it out, hang it to dry, then repack it in the morning. If you don't want the hassle, you can leave your gear in the shop until you complete the last dive of your trip, then wash it out before your journey home.

The rule that equipment must be washed after every dive applies, however, to dives in swimming pools—and that's most likely how the idea got started. Chlorine eats away rubber, whether it's O-ring rubber, BC or regulator hoses, or wet suit neoprene. Swimming pool water inside the BC can easily develop bacteria and cause serious lung infections if one happens to breathe from a ripe BC. So, gear used in a swimming pool needs to be carefully washed after every dive.

Rinsing your regulator requires special attention. You can let your regulator soak or you can run warm water through it, but don't push the purge button unless you have the device hooked up to a tank and the air turned on or unless you hold the first stage high above the second stage. If water gets into the hose it can remain there for your first breath, it can begin to attack the inside of the hose or, worse yet, can get to the inside of your first stage and cause invisible corrosion and damage.

When rinsing a BC, warm water should be let into the internal bag and swished around. Should sharp or pointed salt crystals form inside the bag, they could conceivably puncture the wall and destroy the flotation.

Of course, if you can wash your gear at the end of each day, do so. But if you can't, you don't have to go to bed worrying that because you broke a so-called inviolable rule of diving that your regulator will stop working in the morning. It just ain't so. Fred Good's known that for years.

available, so strobes can be more easily charged, and the prices are a bit higher, but it is worth every dollar--and then some. . . .

COZUMEL: Felix Vivas disagreed with what other readers had written (see *Undercurrent*, Jan., '81). "The Galapagos Inn is the same cab fare to town as the La Ceiba--\$1.35. Whenever I dive from La Ceiba, Discover Cozumel sends a union boat to pick me up between 10-10:30. . .after two dives and a nice lunch I'm back by 3:30 to 4 P.M. . .good photographers can pull out of current and into the caves, cuts and humpbacks for macro and regular photo work."

MICRONESIA: Plenty of WW II wrecks to see on Truk; some divers complain that the Hotel Continental is too expensive for their needs--and the food is often better elsewhere. Look for tours not using the Continental since they all dive with good guides. . . .On Palau the reef diving is extraordinary, with plenty of unusual fish and a few cruising sharks thrown in for interest. Readers liked tours arranged by Poseidon and Sea Safaris, but some suggested that hotels less expensive than the Continental (people complained about the food here too) be used to cut the price.

Dear Undercurrent

"Is My Dive Watch Not For Diving?"

Dear Undercurrent:

I thought you might be interested in a bit of "new physics." The Casio Mariner Digital watch is advertised, in Skin Diver, as being waterproof to 100 meters. However, the instruction book states "the 100M water resistant casing model can be worn when bathing, car washing, swimming, surfing, sailing, snorkeling, etc. It is not, however, specially designed for scuba divers." When I wrote the company about this, pointing out that very few people wash their cars at 100 meters, I received this reply:

*Donald Mahler, M.D.
Newton, MA*

Dear Dr. Mahler,

Thank you for your interest in Casio Products. The "Water Sports" series is water resistant to 100 meters. That means that the watch is placed in an air tank and the pressure is increased to pressure equal that depth, and found airtight.

You can appreciate that if the same watch is

placed on a diver's wrist and taken to any appreciable depth, the motion of swimming and diving increases that pressure dramatically.

Consequently, we recommend (sic) the "Water Sports" series for most water-related activities and caution those who wish to use it for scuba diving.

Frank J. McMahon
Vice-President, Marketing

Dear Mr. McMahon,

This is sheer nonsense. The pressure at 100 meters is approximately 160 lb/in². Any effects due to the motion are negligible. If this were not true, pressure on various parts of a diver's body would vary sufficiently and cause serious problems. If you don't know the answer, say so, but don't make up diving physics.

*Donald G. Mahler, M.D.
Member, Underwater
Medical Society*

Undercurrent contacted Frank McMahon, who told us that Casio explicitly disclaims any responsibility for leakage due to scuba diving. While the Mariner has been tested to 100 meters and found to be "water free," Casio does not guarantee that it will resist water when swimming at that depth. However, he did say that if the watch failed to function during the warranty period Casio would "more than likely" repair or replace the watch so long as it had not been damaged by mishandling on the part of the owner—i.e. so long as the crystal was intact and there was no indication that excessive abuse had been given to the watch. To us, that's a tacit acknowledgement that Casio would have no idea how the watch leaked and probably wouldn't ask, especially since the watch sells for only \$49.95.

The *Skin Diver* ads were not placed by Casio, but by DWS Marketing, a firm which sells the watch. Randy Lance, national sales manager, told us DWS will repair or make restitution for any watch that fails within 30 days. After that the owner must send the watch to Casio. He said that so far about one percent of the watches had been returned.

Indeed, we find the advertising a bit deceptive. Casio says the watch isn't to be used while scuba diving, but then DWS advertises in a publication which caters exclusively to divers. If the watch isn't for divers, the ads ought to be yanked. However, if the companies are willing to stand behind the warranty, then they ought to say so. Why all the silliness?

What should you do if you have a watch, take it to 50 feet, and find it filled with sea water? Given the dance performed by the manufacturer and marketer, we suppose you simply ought to return it for replacement or repair, without volunteering information about just how it met its fate. It's unlikely that a man of the cloth will appear at your door with a tall stack of Bibles to take your testimony about how you flooded such a well-engineered timepiece, nor would we expect the local gendarmes to arrive with subpoena.

But for offering this kind of advice, they sure might soon be looking for us.

Keeping Your Time From Running Out

—Maintaining And Rescuing Your Dive Watch

In the January 1981 issue (Freeflow) we reported on the causes of accidents of divers who were required to spend time in NOAA's Florida recompression chamber. A surprising statistic is that 32 percent of divers who were treated for bends, embolism or similar accidents were not wearing a watch or a depth gauge. We're constantly amazed at the number of divers we see on dive boats or at the beach who fail to wear a watch when they dive. They claim they can know the diving tables, and how to compute whether the dive is a decompression dive, but how can one dive by any plan if one does not have a watch? The tables have two variables, time and depth. Both a watch and a depth gauge are required to monitor those variables.

"...32 percent of divers who were treated for bends, embolism or similar accidents were not wearing a watch or a depth gauge."

Nevertheless, many divers don't use a watch (or a bottom timer). Some rely on a buddy or a dive guide. Others trust that they won't have a problem on a single tank. Some expect to stay shallow enough so that they won't have problems, and there are those who believe that they have an intuitive sense of time so that they will be able to leave the water when their time is up.

Of course, these reasons are simply nonsense. Any diver who dives without a watch is on a self-destructive path. It can't be too long before his time runs out. That's what happened to 32 percent of the divers in NOAA's chamber.

Buying A Watch

For divers who aren't self-destructive but believe they can't afford a watch, the \$20 to \$50 dive watches with bezels, big numbers, second hands and plastic bands surely will suffice. The cheap watches are not splashy jewelry, but they do the job. They can be found in dive shops or can be ordered through the mail. (See the ads in *Skin Diver*, for example, but read the accompanying *Dear Undercurrent* first.)

The most important variable in buying a cheap watch is the depth to which it will retain its integrity, that is, the depth to which the watch can be taken without leaking. Some claim 300 feet, but others only 100 feet. If you glance at the watch ads you will notice that watches are not advertised as "waterproof." They are "water resistant." The U.S. Government has apparently decided that "water-

proof" is an absolute term and will not permit a watchmaker to make that claim for a timepiece. Therefore, "water resistant" is now appropriate. Watches advertised as water resistant to 100 feet should, in fact, be waterproof to 100 feet and should provide a diver that kind of performance at least through the warranty or guarantee period of the watch, normally one year. With appropriate maintenance and care the watch will last substantially longer—perhaps even a diving lifetime. And, you can take simple precautions to prevent extensive damage to the watch if, in fact, it does leak.

A First Aid Kit For Watches

If your watch ever leaks you'll need to know how to remove the back, so ask your dealer (which can be a little difficult if you order by mail). Some backs are threaded and must be turned to be removed. Others have tiny screws holding them. For many inexpensive watches, such as Timex, the backs can be pried off with the sharp edge of a knife or even a fingernail. Of course, if your watch is under warranty and it leaks it should be returned intact to your dealer.

Assemble and keep handy a dive watch first aid kit. Buy or find a bag of silica gel, which is used to absorb moisture. If you have a previously used bag, (they're often included with shipments of products which must be kept dry), place the gel in a low temperature oven for a few minutes to remove the moisture and to ensure maximum absorption. Then place it in a plastic bag and seal it with tape. Next, get a small tube of silicone grease and a small plastic bottle (about a half-pint) filled with water. If your watch needs tools to be opened, add the tools, then put all the items in a larger bag. The kit is ready.

After each dive, rinse the watch with the fresh water in your kit, then dry the watch. If you wear the watch in a swimming pool, rinse it off as soon as possible because chlorine will cause the O-rings to break down faster than salt water.

"Even though your watch will go to 150' underwater without leaking, it could leak while taking a shower."

Spread a little silicone grease on the watch stem, pulling out the stem and spreading the grease on as much of the stem as possible. Many watches leak here, especially those which must be wound. If there is a thin space between the back and the watch, smear grease into the crack. This will keep the exposed portion of the

O-ring lubricated.

If Your Watch Leaks

If you notice water inside the crystal of your watch, especially after a salt water dive, you should act fast. If you are far from shore, begin right on the dive boat.

Remove the back from the watch and carefully save all small parts in one of the plastic bags. Rinse the watch out several times with the bottle of water. Blow inside the watch to remove as much water as possible and insert the watch, with the back removed, into the plastic bag containing the silica gel. Reseal the bag.

If you have an expensive watch take it to a dive shop or a jeweler who repairs dive watches. If the O-ring on the back of the inexpensive watch is intact, you may be able to salvage it yourself. After a day in the silica gel bag, regrease all the O-rings and carefully replace the back. Press firmly on the back to seal it, but be sure the O-ring hasn't squeezed out.

And a final tip. Even though your watch will go to 150' underwater without leaking, it could leak while taking a shower. If the water is hot enough it could cause unequal expansion of the metal and the rubber O-ring. Enough moisture could enter the watch to cause condensation to form when you return to a cooler area. If you want to be sure your watch stays free of water, then it's best to remove it before a trip to the shower—or the hot tub.

How Much Is A Hole Worth?

If you're one of the majority of readers who store back issues of *Undercurrent* in notebooks, then you may have wondered what happened to the binder holes punched in each issue. They've give way to the logic of the New York State Sales Tax Department.

Although *Undercurrent* editorial offices are located in Sausalito, California, each issue is printed and mailed by the publisher, Atcom, Inc., which is located in New York City. The folks who establish tax policy believe that *Undercurrent* is less a newsletter than, would you believe, chapters of a book. Otherwise, they argue, why would hole punches be needed? There are plenty of reasons, our publisher argues, but the tax man is unswerving. *Undercurrent* is a book, he says, and we must pay sales tax on all back issues and in the future collect that tax from the readers—unless we agree to leave out the holes.

We could unleash our attorneys to fight the issue, but just how much money is a hole worth? Especially when there's nothing in it. Not much, we concluded, so rather than pass the sales tax burden on to our readers we'll have to pass on to you the burden of punching your own holes.

The Body Language Of Sharks

—Predicting Attack Behavior

The tropical gray reef shark, commonly inhabits the coral atolls of Polynesia and Micronesia. Although reaching only about two meters in length (6.5 feet), it is the most aggressive shark of the area, and has attacked divers and underwater vehicles on numerous occasions. Significantly, nearly all of these attacks have been prefaced by a recognizable exaggerated swimming posture. Study of this behavior is one of the major tasks of the Office of Naval Research supported shark-research project of California State University, Long Beach.

The strange "body language" of the gray reef shark was first studied in detail in 1971 by project scientists R. H. Johnson and D. Nelson at Enewetak Atoll, Marshall Islands. Called agonistic display, it consists of a tense, laterally exaggerated swimming with back arched, snout raised and pectoral fins lowered. Among other things, the approach of a diver triggered the display especially if the shark was in a cornered situation. If the diver approached too closely, or too aggressively, or produced certain unusual stimuli (light flashes, sudden sounds), the displaying shark would

suddenly launch a violent attack. These high-speed strikes are so fast that defense is almost impossible. The resulting bites or tooth-slashes would produce massive wounds requiring emergency treatment, hospitalization, and even reconstructive surgery.

Study of this phenomenon by unprotected divers is too risky, so the Long Beach team uses a specially designed, one-man, bite-proof Diver Protection Vehicle (DPV) which serves as an "attack model." During initial tests at Enewetak in 1977 and 1978 by project researchers D. Nelson, R. R. Johnson, J. McKibben and G. Pittenger, ten attacks were experimentally elicited on the observation vehicle. Several were double strikes. Pursuit of the shark in a "confined environment" triggered attacks. Lone animals seemed more prone to attack than grouped sharks. Unbaited sharks (those already in the test area) seemed more prone than baited sharks (attracted in from other areas). Motion picture analysis revealed just how quick the strike can be. In one attack the shark required only 0.33 second to hit the vehicle whereupon it bit the forward electric motor, breaking the plastic propeller. In future studies,

a special high-speed movie camera will be used to obtain a more detailed analysis of these attacks.

What motivates the threat/attack behavior of gray reef sharks towards divers and vehicles? The attacking shark is certainly not trying to eat the DPV, and thus probably regards it as either a competitor for food or as a "predator"—a danger to itself. If the reason is competitive, is the shark defending territory? Since no obvious territorial behavior has yet been seen (e.g., no chasing of one shark by another), the answer will require detailed information on the home areas and movement patterns of different individuals. For this, the researchers are using small transmitters concealed in bait and fed to free-swimming sharks, allowing them to be tracked by day or night for periods of up to several weeks.

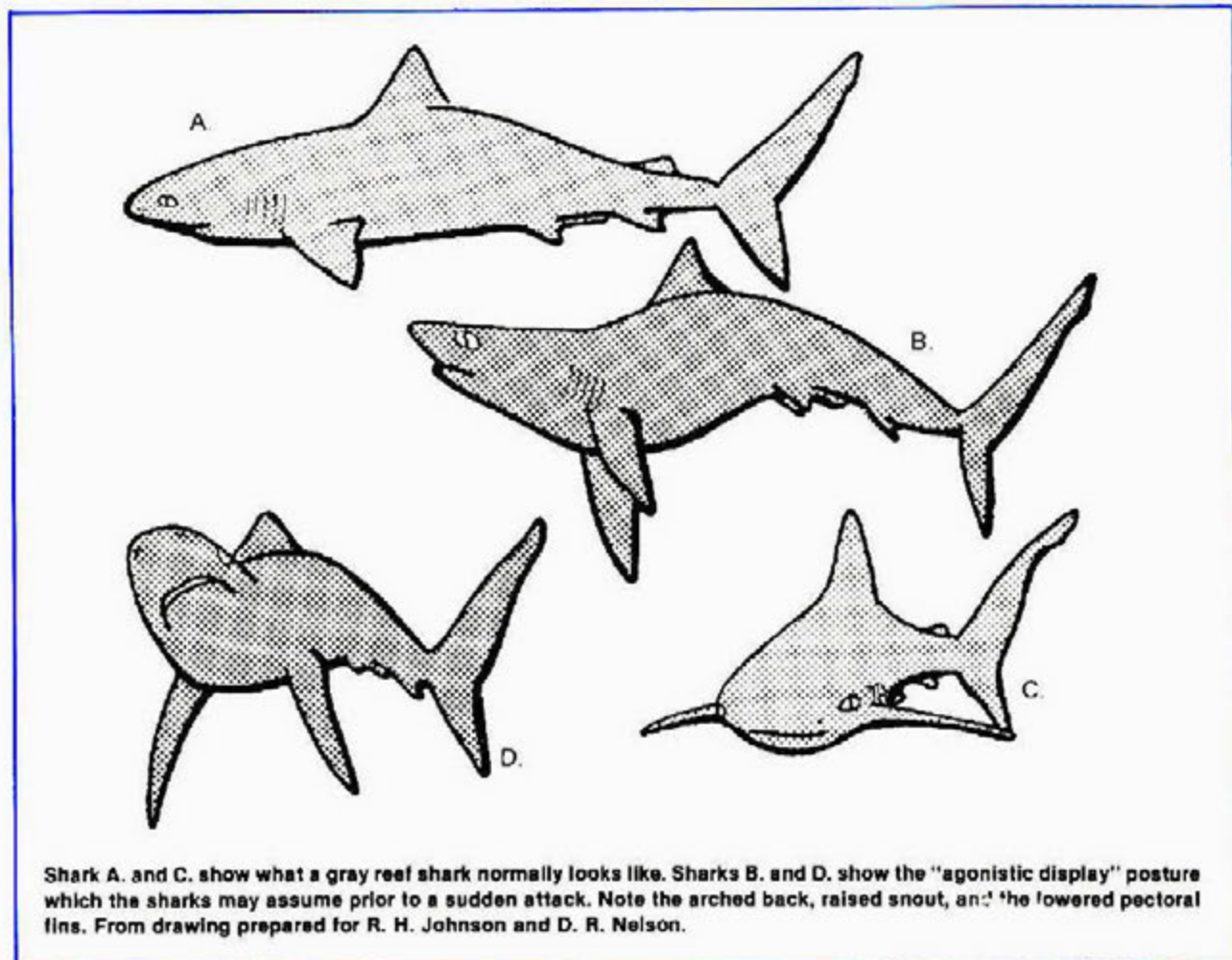
These ultrasonic trackings have shown gray reef sharks to be typically more active and wide-ranging at night, covering areas up to 50 km², while remaining in more restricted areas during the day. They often return to the same "core area" day after day. One experiment will use the observation vehicle to intercept and test approach these telemetered sharks at various places within their known home ranges. If they threaten or attack in one part of their home range, but not in another, then this will be evidence of some type of territorial motivation.

Another possibility is that the sharks are attacking because of an antipredatory motivation, i.e. regarding the DPV as an object dangerous to themselves. If so, then the exaggerated-swimming display has the same warning function as the buzz of a rattlesnake when approached by a man. One real mystery here is why the sharks don't just flee when pursued by the relatively slow observation vehicle. Other common reef sharks such as the reef blacktip, whitetip and silvertip always move away when chased, but the gray reef shark more often chooses to "stand and fight."

Whatever the attack motivation turns out to be, the findings of these studies are of great importance to the safety of divers in tropical Pacific waters or in other areas where related dangerous sharks are found. Knowing how to recognize the body language of sharks and how to respond appropriately may well save lives.

The author of this article, Dr. Donald Nelson, is a professor of Biology at California State University Long Beach, and is a renowned expert on sharks. Dr. Nelson has conducted studies from Florida to French Polynesia. This article is reproduced with the kind permission of Dr. Nelson, the Office of Naval Research, and NAUI News. *Undercurrent* takes all responsibility for editorial changes.

Next Month: Two new developments in shark protection.



Shark A. and C. show what a gray reef shark normally looks like. Sharks B. and D. show the "agonistic display" posture which the sharks may assume prior to a sudden attack. Note the arched back, raised snout, and the lowered pectoral fins. From drawing prepared for R. H. Johnson and D. R. Nelson.

The Great White Waits

Though the chances of a scuba diver being attacked by a shark in North American waters are negligible, sharks still swim in our waters and off the coast of California and the Great White seems to hold court regularly. Estimates are that the Great White has been responsible for more than 50 attacks on humans in California waters since 1900, most of these involving swimmers in Southern California.

California Department of Fish and Game biologist, Ron Warner began studying shark behavior in 1976 and has since documented five attacks in Northern California in a little over four years—all against surfers. Warner has learned that all of these attacks have occurred in the autumn months near the mouths of rivers, which attract spawning salmon, seals and sealions, fine table fare for the Great White who now may congregate there too. Although the Great White seems to prefer warmer waters, these cold, 50°F California waters don't seem to bother him.

The latest California attack occurred in October. Nineteen-year-old Curt Vikan was thrown from his surfboard when a Great White grabbed it, thrashed it about, and then disappeared as quickly as he appeared. Vikan, who was uninjured, pulled himself up on the crushed board and paddled furiously for shore. From the teeth left in the board, experts determined the attacking animal was at least 15 feet long. Two weeks after this incident an Oregon surfer more than 100 miles farther north was seriously injured by a Great White.

Biologist Warner says Vikan was lucky. He believes the Great White attacked because Vikan had "invaded" his territory. If the shark was hungry he could have devoured Vikan in a couple of gulps. But, after he made his point, he disappeared.

The plight of a shark attack victim is not all trauma, as Vikan has learned. He gave more than fifty interviews to local and national media, turned down a deal to sensationalize his story for the *National Enquirer*, and made a free round trip to New York to appear on *To Tell The Truth*.



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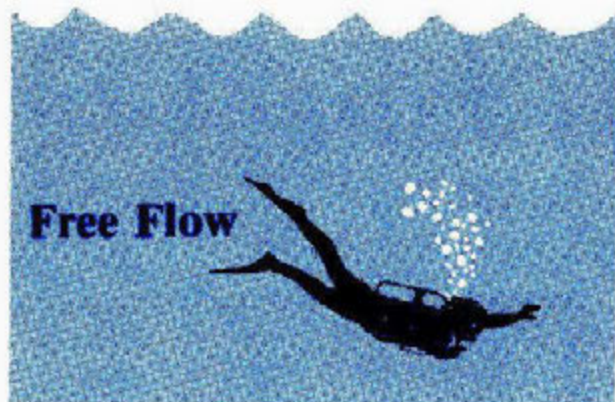
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If you haven't heard the so-called "Diver's Creed," you ought to. Kinda sums up our staff philosophy: *Take nothing but pictures, leave nothing but bubbles, kill nothing but time.*

"Don't take your eyes off it," the Captain yelled, but nevertheless one of the gloves Kristine Henderson had borrowed from her friend disappeared in a moving sea of foam and kelp. Kristine had just finished her last dive of the day and dressed down when one of the gloves caught the wind and, she thought, disappeared forever. Since her friend lived 200 miles away, near San Diego, she decided not to tell her about the loss until she bought her a new pair of gloves, but three weeks later her friend called to chide her about the missing glove. "Who," asked Kristine, "squealed?" As it turned out, no one. A local diver found the glove in a pile of beach litter 200 miles from its point of sea entry and knocked on the door of the owner, whose name and address were marked clearly on the glove. We'd like to report that the finder of the glove and the owner walked hand-in-hand into the sunset, but we can only comment that "it's incredible" that a glove can travel 200 miles in 24 days and show up on its owner's doorstep. Maybe it's really a cocker spaniel.

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