

St. Eustatius, Netherlands Antilles

--Does A Special Island Have Special Diving?

Having dived just about every island in the Caribbean which has some sort of a professional operation, my fins start to flutter whenever a new operation pops up. In January I heard about exciting new diving being conducted off the little island of St. Eustatius and soon I received a package of material from the owners touting the diving.

"200 ships are lying undisturbed in the harbour of St. Eustatius. . . .The bottom is littered with bottles and artifacts dating from early 1600 through early 1800. We have discovered four separate wrecks in the first 45 days since our opening on November 8, 1985. . . .Sites have already yielded cannon balls, muskets, dishes, bottles, bone carved fishing hooks, clay pipes, clay frying pans. . . .The incredible flying gunnard is almost always on site along with turtles, rays, eels, trumpet fish, puffer fish and huge schools of jacks and snappers. . . .our shore diving is unlike anywhere else."

St. Eustatius, a.k.a. St. Eustacia, is between St. Maarten and Saba, about 100 miles southeast of the Virgin Islands. The government is Dutch, but the 1500 islanders prefer to speak English. St. Eustacia is a dry but beautiful island, roughly eight square miles, with mountains to the north, and a large inactive volcano to the south. Once a bustling seaport, it was the wealthiest island in the Caribbean, with more than 10,000 people. Its economy took a turn for the worse a century ago and St. Eustacia declined to an insignificant and largely forgotten community. Until the divers started coming.

My hotel for the week would be The Old Gin House, built with ship ballast bricks in the ruins of a 125-year-old cotton gin, across the street from the dive shop. The hotel is surrounded by hibiscus, bougainvillea, poinciana, frangipani, and palm trees; night-blooming jasmine floods the pub and dining room with its sweet scent each evening. It has 20 well-kept modern rooms, individually

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decorated with antiques. I enjoyed one of the six rooms facing the ocean (the others face the swimming pool) where I was lulled to sleep at night by the swells lapping on the rocks below. There is no air conditioning, but overhead fans kept my room acceptably cool during this mid-May visit.

Although you read Undercurrent to learn about the diving, I must dwell a moment on the Old Gin House. You see, its restaurant is considered one of the best on any tropical island by such stellar publications as Gourmet magazine. I must concur. The fixed price dinner at \$25 might begin with grapefruit soup or stuffed crab (accompanied with fresh almond rolls), move gracefully into a Caesar salad and a glass of chablis, followed with filet mignon, lobster or fresh fish artfully prepared (served with plenty of vegetables) and conclude with a pineapple cheese cake or a fruit strudel. With a drink or two at the Patio Bar or at the hotel's Mooshay Bay Publick House prior to dinner, a convivial evening passed easily. Lunches and breakfasts could be nearly as elaborate -- or simple, if so desired.

Three dinners here convinced me that I would soon need a cherry picker to lift me onto the dive boat, so I tried the excellent chinese restaurant (dinner, a couple of beers and a tip for \$10). The same price obtained for a fine local fish dinner at LeToile. The most unusual dining experience was at the four-tabled Talk of the Town. Upon sitting down I frightened two bats which apparently roost under that table. They zipped around for some time, entertaining me with their acrobatics, finally leaving through the open door. Bat isn't on the menu, but an excellent native cooked snapper was. Two beers, dinner and tip came to \$11.

The only dive operation, Surfside Statia, offers two tank morning and afternoon boat dives and the use of tanks for as much beach diving as desired. A modern facility in a 17th century building, it has about sixty aluminum tanks and some minor repair capability. Diving equipment can be left safely at the dive shop overnight. A 39-foot custom-built wide beam, large transom dive boat (Discovery) carries 20 divers comfortably, and a 17-foot Avon inflatable powered by 20 hp Johnson can carry up to 8 divers.

The high quality of this dive operation stems from the conviviality and professional service of its people. They're top rate. One owner, Joe Donahue, operates the booking office in Pennsylvania, while Mike Guderian, an experienced and cheery divemaster, provides professional on-site management. Australian Meridith Crisp, a former Grand Cayman divemaster, handles all the bookings and equipment rentals and checks C-cards. Experienced divemasters Jim, Bill, and Dave, (in these first-name cultures one never gets beyond informalities) are from Grand Cayman, where this operation has its initial shop.

The staff briefed us thoroughly before each dive, carefully checked the current and explained the allowable bottom times. If anyone needed a buddy or felt apprehensive (and there was a group of Houston divers who behaved as if they got all of their training from a book -- a novel and not a training manual) the divemasters willingly accompanied him. They helped divers suit-up, checked their

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air, and handed down cameras. The return procedure is to hand up cameras and weight belts, take off the tank (which they lifted onto the boat), and then board. The divemasters disassembled the gear and stowed it. Novices should feel quite comfortable here. They made the diving easy.

Getting organized to go diving is cumbersome because the boat is not located at the shop. So divers meet at the shop at 8:50 a.m. (return about 1 pm); load gear onto a pickup; ride three minutes to a pier; unload the gear onto the pier; load it onto the Avon for a short ride to the Discovery (which already has the tanks aboard); load the gear and divers aboard the boat. The divemasters will handle all the gear if you don't want to help, but I'd feel too much like a schlemiel not to pitch in. If there are more than 10 divers, two full trips are required. The routine is reversed after the two dives.

The diving: It's important to be fair to these first-rate people, yet give our readers an honest view. The owners launched a major P. R. campaign in Skin Diver in April, before they had enough time to scout the area for all the sites. The masses are pouring in, leaving the staff with no time to find the best diving. So, we tourists get to participate in the search. We occasionally spent rather long hunks of time circling around looking for the dive site, and then after finding it, spent more time trying to find a place to drop the anchor to assure that the coral would not be damaged. (Some day, I hope, buoys marking the dive sites will save much time and coral.) Nearly all of the sites we dived, by the way, were no further than 15 minutes away.

Since the claim is that here is that great new spot for wrecks and artifacts, I arrived, as did everyone else, hoping for great treasures -- or at

Goofs And Gaffes

Our editor, the unflappable Ben Davison, was so annoyed with an error he made in the last issue that he asked me to monitor the publication more closely. As our good readers know, we've had a running battle with the typo gremlins and while we've had some improvement, last issue we got caught with our backs turned.

I abhor these little goofs and gaffes so I told him I would help, but only if I could act as ombudsman for readers' complaints as well. If someone felt wronged by our writing, a correction might be called for. We're quick to point out flaws in the industry, I said, but not so quick to point out flaws in ourselves.

Ben agreed, so from time to time in this little corner I'll correct those items that need correction.

In the last issue we placed Canada in the Caribbean by giving the wrong area code for services: Here are the correct numbers in Tobermory.

Fathom Five Provincial Park: 519/596-2503
G&S Watersports: 519/596-2200
Big Tub Harbour Resort: 519/596-2219

In the issue before our proofreader transposed travel prices: round trip to Micronesia for the

Thorfinn trip is \$1050, not \$1500. That can make a difference.

A while back our Bonaire reviewer reported that he had stood in ankle deep water to feast on sea urchin roe. Joe Dorsey of Baltimore wrote to scold him. "The taking of short spined sea urchins for any reason -- including supping on their roe -- is forbidden. The water surrounding Bonaire is an underwater park and its inhabitants are protected by the government, thanks in large part to pressure by Captain Don Stewart." And Dorsey's right. The Marine Preserve extends 200 feet deep and nothing dead or alive can be removed. Bonaire has a citizen's arrest program which has been invoked. Had our usually cautious writer been nabbed, his story surely would have arrived much later.

And several readers jumped on our travel editor, C.C. for what they thought was horribly sexist writing in his review of the Clubs Med. The sheepish look on his churlish face lead me to believe that he heard what he needed to. I don't know that we'll ever get him out of the locker room, but he's promised to watch his prose more carefully.

Jane Porter

least a great old bottle. Surely wrecks abound, but these are old wooden wrecks with nothing left save the ballast stones. This isn't wreck diving. It's poking through the sand to find what one can find. The most interesting wreck I dived is called the Supermarket (flea market might be better). At 60 feet, marked only by its ballast stones, it's now overgrown with coral, fans, sponges and gorgonia. All the wooden parts vanished long ago. Large schools of cottonwicks make their home here, so I combined fishwatching with underwater photography and artifact hunting. I fanned the sand for a while, finding only barrel staves and old broken bottles, and then swam 50 yards to Wreck #2, which was hardly worth the effort as there were very few ballast stones visible. Here is supposedly a "bottom crawling with flying gurnards," but only five were spotted by all the divers on all the dives! The two magnificent creatures I found were so content that it was difficult to make them spread their pectoral fins. I used my remaining air watching them feed and walk across the sea floor on their ventral fins.

At Glory Hole, around the long pier in Gallows Bay, the tugboats, for some reason, put their bows against the pier and then increase their engine RPM, churning up large areas of the sea

bottom. Mike anchors on one side of the pier and has a guarantee that no ships will come there. We were given an hour to browse and fan the gravel bottom at 15 to 20 feet. During two descents, divers found some interesting artifacts: pewter shoe buckles, belt buckles, Dutch clay pipes (all with broken stems), a very ornate top to a bottle, a bone-handled knife still in the scabbard, shards of old china and bottles, silverware, barrel staves, and several unidentified objects. One or two dives can be interesting here,

but a third became a bore since none of the artifacts were particularly exciting finds.

Star Chart:

Diving for Experienced Divers	★ ★ ★
Diving for Beginners	★ ★ ★ ½
Beach Diving	★ ★ ½
Beach Snorkeling	★ ★ ★
Sightseeing	★ ★ ★ ★ ½
Hotel	★ ★ ★ ★ ★
Food	★ ★ ★ ★ ★
Moneysworth	★ ★ ★ ★

★ poor, ★★ fair, ★★★ average, ★★★★ good, ★★★★★ excellent

But, artifact hunting can be exciting. And I'll bet that this dive crew finds a few new wrecks and makes many superb discoveries. But these discoveries become the property of St. Eustatius. Local authorities require Mike to claim anything of value and he enforces that role. Unless you sneak something aboard the boat, you'll be required to leave all but the common finds for display in the St. Eustatius museum. Nonetheless, I still have quite a bit of pride in the little clay pipe with the broken stem I brought home. No one wanted it but me.

So what about the coral reefs? Carolyn's Reef is a beautiful reef at 45-50 feet: here are lovely azure vase sponges, very large basket sponges; large fans, castle-like stands of pillar coral, and healthy brain, star, whip, and soft corals. Pink, blue, green and beige anemones were everywhere. I stopped occasionally to allow cleaner shrimp to tidy my fingernails and to watch the small yellow fish swimming inside the anemone arms. Banded coral shrimp, some unusually large, inhabited the underside of many coral overhangs, as did green and spotted morays. The normal but not unusual tropical fish were abundant and seemed inquisitive about me. That this was a new dive area was clearly evident by the friendliness of several large lobsters. I extended my bare hand toward one family of four. The largest of the group played his antenna over my fingers, then slowly started advancing. His mate quickly laid one large antenna directly across his face, preventing him from coming any closer. After a few minutes they decided there was no threat and both advanced to within a few inches. Only my decreasing air supply prevented me from letting them crawl all over me.

Alongside the reef the large sandy area looked like stingray city -- they were everywhere. Beyond were large patches of garden eels and even these creatures were less skittish than normal, permitting me to get quite close before they retreated into their holes.

I dived several other coral reefs at 40 to 70 feet, but none was as pleasant as this. We were taken to Crook's Reef to see a large, old anchor; it was hardly worth an entire dive. The marine life was sparse and the reef was not the least bit interesting. Still, a friendly turtle got his kicks out of swimming in circles around me. Most of the time the visibility varied from a high of 90 feet to a low of 30-40 feet around Crooks Reef. The turbid water created problems for photographers. In fact, I took only two rolls of film underwater in eight days. I normally average a 36-exposure roll per dive.

Although the diving at Statia was inferior to much of the Caribbean, I can only hope that given the time Mike and his crew will find other areas just as good as Carolyn's reef, a first rate representation of reef diving. Around some of the reefs, the marine life was abundant (in checking my fish book, I noted that I saw about 60 varieties of marine life), but at other places it was very sparse. Perhaps the two 1985 hurricanes took their toll. Will walls or ledges be found? Will big fish be discovered? Saba, only eleven miles away, has some excellent diving. Will Statia compare?

The Surfside brochure implies that a day trip to Saba is part of every dive package. That just ain't so. Mike told me that it was not a part of the dive package and it would cost something more than \$450 to charter the boat for a day trip to Saba. Besides, the trip was not available during my visit. Notwithstanding, their brochure calls the trip "a must."

Nonetheless, Statia is an island of other delights. Many of the 12 well-marked nature trails to the volcano are exceptional. Inside the crater is a huge rain forest with many wild orchards. One can take several good walks around Oranjestad town to roam the battlements of Fort Oranje; to inspect the weathered walls of the second-oldest synagogue in the New World; to stroll through quiet graveyards where epitaphs carry the names of rogues and heroes, pirates and patriots who played their parts in Statia's colorful history, to climb the tower of the Dutch Reformed Church from which Statian lookouts in 1781 sighted the fleet of a British Admiral bent on attack.

On weekend nights, the local Community Center has a band from St. Maarten for a big dance and barbecue; the singer is superb and the party a real kick. An interesting Killy Killy band plays a couple of times a week at the Old Gin House and at the Golden Era Hotel, just across the street. And most memorable, are the Statians themselves. Friendly, helpful and cheery people, I felt right at home. When I got a flat tire more people offered a hand than I knew lived on the island. Their hands were out for help, not for tips. Crime here is virtually unknown. Few of the locals bother to lock their doors and no keys were issued at the Old Gin House.

And people at Surfside Statia Watersports fit right into this warm and friendly island. I do hope they can locate better dive sites. It would be a shame for such a special island to be without them.

DIVERS COMPASS: My 9 day 8 night dive package of two boat dives per day and accommodations at the Old Gin House was \$636, including taxes and gratuities, meals are extra. . . .Reservations and information available from 1/800/468-1708 (717/346-6382 in Pennsylvania); Cathy Stolts very capably put together my trip; when making reservations specify your preferred room location and whether you

want twin, double, or queen-sized bed. . . .The hotel beach was washed away by last year's hurricanes, but there are sandy beaches, only a few minutes' walk; rather good snorkeling (and a pretty beach dive) is available in front of the hotel. . . .Confirm your return flight on Windward Airlines as soon as you arrive. . . .Electricity is 110 volts, 60 cycle and dependable. . . .I rented a 4-door Daihatsu (telephone 2311) for 7 days for \$252, including insurance. . . . In May, I found no need for bug spray.

Treasure, Shipwrecks, Artifacts

--And The Law Of Salvage

When it comes to treasure diving, the chances are fairly good that you can't keep what you've spent a lifetime -- or a long weekend -- hoping to find. If you like to putt around looking for valuable artifacts -- or if you like to get downright serious about it -- there are a few things you ought to know.

Outside the territorial waters of any nation, the treasure beneath the sea belongs to whomever claims it. This is the universal law of maritime salvage and is restricted only by the limits put by the various nations upon their control of the sea and their claimed boundaries. This doesn't mean that one is free to pillage any property that is located beyond the three-mile limit. Even though few zealous salvors were ever hanged for piracy, it ill behooves even the most ardent treasure hunter to claim a shipwreck -- or a sunken Boston whaler -- before she is abandoned.

When Property Is Abandoned

Abandonment is probably the most important concept to understand in a diver's attempt to keep handcuffs from leaving a permanent mark on his wet suit. In almost every jurisdiction there is a criminal statute which makes it a crime to withhold unlawfully "lost" property. In fact, to avoid charges of larceny, many states require that the "finder" take reasonable measures to return the property to its owner.

Something that is abandoned is not lost, mislaid or left by someone who intends to come back for it. A good legal definition of abandonment is: "The surrender, relinquishment, disclaimer or cession of a thing absolutely without reference to any particular person or purpose, as throwing a jewel on the highway or leaving a thing to itself, as a vessel at sea."

Something abandoned in extra-territorial waters is in the public domain and open season for salvors and treasure seekers alike. Controversy arises, however, when the treasure is brought into port and the particular nation expropriates it, say, for its historic value, disregarding the possessor's right under international law, such as the Bahamas government is wont to do.

A nation may also expropriate the find for taxes, as the United States frequently does. In either case there is not much the diver can do except pay the high recovery costs, hire legal counsel (another type of treasure hunter) and sit back and wait. Five or ten years later you're sure to get something out of your find. The National Geographic, in the meantime, may pay you for the telling of your sad tale.

Within the boundaries of U.S. territorial water, including inland waters, the applicable law is determined by whether the body of water is navigable or non-navigable. Navigability was originally determined when a state joined the union; it means that the body of water can be negotiated by a canoe or other vessel.

The U.S. Government generally controls operations on, or under, navigable waters. The states, however, own the waters and their submerged beds, and have authority over finds.

Non-navigable waters are generally controlled by local authorities or are privately owned. In these cases the diver must obtain permission from the landholder or owner of the particular body of water to explore and to recover anything he finds. The owner has a proprietary right to whatever is found on his property. A person entering private property and removing artifacts without permission could be prosecuted for trespass and larceny.

The general rules of abandonment apply to inland waters. It's still not finders, keepers. One shouldn't think that a brand-new sailing sloop, sunk in last week's storm, is up for grabs as soon as the wind dies down. The right of ownership still rests with the titled party until the vessel or other property is determined to be abandoned. That can either be inferred from affirmative conduct on the part of the owner or insurer, or by constructive conduct and the passage of time.

New York law, for example, makes it a crime for anyone to take goods or other property from "a wrecked or stranded vessel or to take goods or property cast by the sea upon the land." This includes property found in any bay or creek. Anyone who finds such property is required to deliver it within 48

hours to local authorities. Such statutes were originally enacted when salvors and wreckers earned their living by causing great ships to wreck, for example, upon the reefs off the Carolina coast and then gathering in the cargoes that would be cast upon the beach.

"Ignorance of these laws has caused many hapless divers to end up in the custody of local officials."

Even where there is an apparent abandonment of wrecked property, there is a procedure in almost every jurisdiction for delivery of the recovered property to local authorities for disposition under the provisions of law. Ignorance of these laws has caused many hapless divers to end up in the custody of local officials. Most times there is a happy ending if the arrest occurs in the United States. Some governments, notably in Mexico and Latin America, are rather hard-nosed about this.

In all cases there are usually provisions for authorities to appraise, investigate and dispose of wrecked property, so you can be sure that there is a provision for their claiming expenses and sharing in the proceeds of the disposition. As a salvor you have certain rights to the property either as a claim for salvage service and expenses or a proprietary right of ownership if the property is otherwise free of legal claims. One must, however, follow the law. A salvor cannot simply keep the salvaged property. In the U.S., the Internal Revenue Service is noted for its great efficiency so don't forget to give them proper credit when tax time comes around.

Cases Of Salvage

Some interesting cases have developed dealing with salvage. Salvage under the United States Code is the "service which those who recover property from loss or danger at sea rendered to the owners with the responsibility of making restitution, and have a lien for their reward." Salvage service entitles the wrecker to recovery. He has a lien against the salvaged property. The salvor cannot simply keep the property. The amount of award is not determined as mere compensation, but is in the nature of a bounty.

To collect a recovery, the service must be both voluntary and, to some extent effective. If there is a failure of either to exist, there is no allowable recovery. Seamen are not allowed to become salvors, whatever may have been the perils or hardships or gallantry of their services in saving the ship or cargo, unless their connection with the ship is dissolved.

Some examples of recoveries for salvage services are:

A body of a person drowned after his small boat

had capsized was found in the navigable waters of a bay. The court held that the person who recovered the body and turned it over to authorities was entitled to recover salvage when \$2,133 was found in the dead man's pocket.

In another case, the salvors recovered a sunken ship. They raised her, pumped her out and anchored the recovered ship in deep water. This service was considered salvage service for which a recovery was allowed.

Don't Flaunt It

For those of us who don't engage in serious salvage work, we're just thankful if we can find a bottle from the 1800s, a clay pipe, or even an oxidized cannonball. What happens if we do? Are we going to lose it?

As our writer about St. Eustatius points out, in most cases the country will claim whatever it wants.

Suppose you find a nice Spanish olive jar off the shore of Bermuda. Some people do. Your legal responsibility is to offer the government the right of first refusal. If they want it, they're required to pay what it's worth. But the government of Bermuda and most of the islands in the Caribbean have plenty of jars and common artifacts and generally allow the diver to keep what he finds.

For the most part, the regulations described in this story don't apply to the casually found item -- especially in the United States. They would apply, however, to the military person we learned of who over time found 1500 hand-blown bottles along the reefs of Bermuda and brought them back to the states.

The rule for the vacation diver who finds an item of interest is not to flaunt it. Tuck it safely in your suitcase upon departure, wrap it securely if it is fragile, and take it home. If you find something truly of historic value, you have a responsibility to offer it to local authorities. Not everyone does, as you can imagine.

Occasionally we get reports of officious customs people in the Caribbean grabbing found artifacts, but most islands don't even search upon departure. However, if local authorities learn you have something they want -- or that you tried to remove something they might want from their country without permission -- they'll find a way to get it before you leave, whether you like it or not.

The same result was reached where a steamer sunk and was found lying on the bottom of a navigable river. The ship was raised and restored to commerce.

The court held that the salvors were entitled to recover salvage for the services rendered whether such service was voluntary or under contract.

In another situation, an explosion on a yacht caused it to sink. An enterprising salvor removed the motors from the wreck, cleaned and reassembled them. The court held that this was salvage service, entitling the claimant to recover.

Fish traps, nets and other objects may also be the subject of salvage as would be downed aircraft. The same rules applicable to vessels apply to these and other objects as well.

Federal law makes special reference to wreckers operating on the Florida coast. "All property, of any description whatsoever, which shall be taken from any wreck, from the sea, or from any of the keys or shoals, within the jurisdiction of the United States, on the coast of Florida, shall be brought to some port of entry within the jurisdiction of the United States." Failure to obey this law will result in the confiscation of the offending party's boat. In fact, a special license is required for those engaged as wreckers on the Florida coast. You won't get away from taxes by bringing your Spanish galleon to a tax-free Bahamas port. You must bring your treasure to a United States port.

Historical or archaeological discoveries are a different matter altogether. Obviously, items of an archaeological or historical value have long since been abandoned. The problem, therefore, is not resolved on the basis of whether or not the artifact has been "abandoned." The Macedonian Merchant will be nowhere near claiming his merchandise at a sheriff's sale of wrecked property. The same is true for the owner of that fine flintlock musket recovered from Lake Champlain. You'll find, however, that in either case, both the Continental Army and the Greek merchant will be adequately represented in contesting your right to possess, for your very own, a remnant of yesteryear.

Knowing The Law

Before you embark on an underwater archaeological expedition, it is wise to know what the law is in the area where you are diving. Often a state permit is required before trespassing on the submerged beds of waters for the purposes of underwater archaeology. In fact, in New York state it is a crime for anyone, without written permission from two separate agencies to appropriate, excavate, injure or destroy any object of archaeological or paleontological interest situated on or *under* lands owned by the State of New York.

Laws such as these exist in almost every jurisdiction and in virtually every foreign country. Italy, Turkey and Greece have strict regulations forbidding the removal of artifacts from those countries without

special permission. Recent reports of the pillage of valued art treasures from these countries make it clear that the respective governments have every intention of strictly enforcing these provisions of their law.

Cases have been reported of the startled divers in a Southern state, happily engaged in recovering old civil war cannons and relics from a river, only to be taken into custody by the local sheriff for violation of state law. They came out fine when the state museum graciously accepted the relics, giving proper credit to the finders.

Divers in Martinique recovered from the sea an ancient cannon from an old fort. A government aircraft and a "suspicious" fishing craft had been watching the divers for some time. It was reported that when

Speargun, Weight Belt Recall

Scubapro is recalling all models of its Magnum Pneumatic Speargun because the spear may be shot inadvertently and without warning, possibly impaling anyone standing in a direct line of fire. It's a serious problem. The gun, which can be distinguished from other guns by its thick aluminum barrel and lack of slings, should be returned immediately to any Scubapro dealer or directly to Scubapro at 3105 E. Harcourt St., Rancho Dominguez, CA 90211.

Diver Design Equipment is recalling its Ergonomic Weight Belt after two divers had their belts, which carry up to 28 pounds of shot, come apart during a dive. Neither diver was injured. Spokesman Robert Wald told *Undercurrent* that the belts should be returned directly to the company along with a signed statement of the purchase price; the price of the belt and postage will be refunded. Diver Design Equipment, 1770 Green Street, San Francisco, CA 94123.

the cannon was brought up, a government representative called to say, "sorry, this is the property of the national museum." In this instance the Club Mediterranee was designated a branch of the national museum and allowed to keep the cannon on display.

Laws covering underwater relics of the past are often scoffed at by divers. Helter-skelter collection of relics make them virtually worthless for scientific study. For the find to be of educational value, it must be carefully surveyed and researched in position and careful records made and kept. Skilled care must also be exercised in preserving the relic so that it is not destroyed. Destruction of such a find or failure to note carefully its context will lose forever a piece of history linking us with our past.

The Adirondack Museum has on display early French Bateaux recovered from Lake George, New York. The gondola *Philadelphia*, recovered from Lake Champlain, a ship from Benedict Arnold's fifteen-vessel fleet is displayed today in the Smithsonian Institute in Washington as a permanent memorial to the skill of divers who found a real underwater treasure and in keeping with the law, caused it to be preserved forever for all to see, enjoy and profit by.

Laws applicable to virtually every situation exist in every country. A diver who is interested in salvaging or collecting must be aware of them and appreciate

their importance. One must appreciate the great historical value that relics of archaeological significance have. To take a beautiful artifact from the past and selfishly covet it for oneself ignores the right of our fellow divers and our fellow citizens to maintain their bond with history.

The author of this article is John Fine, a master dive instructor and an attorney in the state of New York. He has testified on topics related to treasure and archaeological finds at the hearings of various government bodies, including the United States Congress. Fine is the author of Exploring the Sea; an introduction to marine biology and ocean science, published by Plexus Publishing, Inc.

Unspeakable Issues In Diving

--Time For A Little Candor

For sometime, we've been curious about two seldomly discussed issues in diving. The first is what effect bends may have on sexual activity. A lot of people who push the tables believe they can overcome minor bends problems, but can decompression sickness inhibit sex?

The second issue concerns infection and diving and became an issue when divers began to wonder whether they might contract AIDS by using rental gear that hadn't been properly sterilized. That seemed a bit farfetched, but there are other issues regarding infection that need to be addressed.

We sought a medical source to help us out, and received this report from Hugh M. Greer, M.D., who is with the Neurology Department at Santa Barbara Medical Foundation Clinic. Dr. Greer started diving in 1954 when he served with the U.S. Navy Underwater Demolition Team.

Sex And Diving:

Ordinarily, I wouldn't touch this with a ten-foot pole-spear, but the editor twisted my arm. To this date, there is no scientific basis to believe that diving improves one's sex-life. Of course, I have heard some sea stories around the bar, but if you believe those....

Diving doesn't hurt your sex-life either, unless you get bent. Although it doesn't happen very often, it can be a grim story.

The spinal cord is the principal target of serious decompression sickness, and it usually happens in the lumbar region, about at the belt-line or below. Higher levels are sometimes affected. In any case, injury to the spinal cord causes paralysis (paraplegia) below the level of injury.

A lesser degree of injury, partial weakness, is called paraparesis. This means varying degrees of weakness and loss of sensation in both legs and in the

trunk up to the area of injury. The salient point here is that bowel and bladder control, as well as sexual function, are served by the spinal cord. Serious injury to the spinal cord produces spastic paralysis of both legs, complete loss of bowel and bladder control, and loss of sexual function. Lesser injuries produce lesser, and not necessarily uniform, deficits. One leg may be weaker than the other, the bladder may be spared, etc. In general, if bladder function is impaired, sexual function is lost as well.

Treatment won't necessarily fix this, even if the chamber is nearby and treatment is prolonged and intensive. Nerve tissue has no tolerance for injury, and once the nerve cells are really gone, hyperbaric treatment won't bring them back.

Some recovery takes place after most spinal cord injuries from decompression sickness. The outlook is far better, for instance, than that for spinal cord injury from fracture.

However, persistent disability is common. Rehabilitation often enables the patient to walk, with or without a cane or braces. All of us know bends victims in wheelchairs. There are techniques for improving bowel and bladder control, and most patients who regain the use of their legs also learn to handle these sphincter functions.

Unhappily, sexual function is less likely to return. Males are often unable to achieve an erection, or to sustain one, or finally, to have an orgasm. Female victims of spinal DCS are similarly affected.

The good news is that you don't have to get bent. Nearly all serious DCS involves definite violation of the tables, and most "undeserved" hits occur right at the top-end of the tables. Observing a redundant decompression stop, even in the most benign dive schedule, makes good sense.

Even better, adopt the "no bubble tables" from the University of Michigan (see *Undercurrent*, May,

1986). Although the most common errors reported are deep repetitive dives and deep dives after shallow dives, spinal cord hits occur from prolonged shallow exposures, as well.

Some readers may wish to refer to a description of the rehabilitation process, from the standpoint of the paralyzed diver, in a recent UMS workshop on that subject. Reference: Swanberg, N.R., *The View from the Stretcher*, 30th Undersea Medical Society, 9650 Rockville Pike, Bethesda, Maryland 20814.

Infection From Diving Gear:

To date, there is little data to support the notion that infections are transmitted from diving gear. In the late '50's, an apparent "epidemic" occurred at the United States Navy Underwater Swimmers' School, in Key West, Florida. This was studied quite thoroughly, and no offending bacteria or virus was discovered. It was concluded that the respiratory symptoms, which included cough and fever, lasting 48-72 hours, were the result of salt-water ingestion in student divers.

The potential for infection exists, particularly in buoyancy compensators, which may be blown up by mouth and stored damp in a moderate temperature. In practice, it seems not to be a major problem.

There is particular concern today about the transmission of dangerous viruses, particularly hepatitis and AIDS. The track record again is reassuring: no such transmission has been reported in the diving community.

Both viruses and bacteria require moisture and nutrients for prolonged survival. Therefore, a surface which is dry and free of cells or other protein material will eventually kill the organisms or greatly reduce their number. Simply rinsing in water and drying in air does a good deal to cut down the number of organisms and to reduce their potential for infection. This is probably why infection from diving gear has not been a problem. Proper drying

and maintenance, particularly of buoyancy compensators, could be expected to improve hygiene.

A good deal more can be accomplished with ordinary dishwashing detergents. Scrubbing with a sudsy concentration of detergent will wash off most mucous and protein material, and kill most organisms. This is the level of protection we get with cooking utensils and tableware. It is also the level of protection expected of hospital personnel caring for AIDS and hepatitis patients. They wash their hands after contact with a detergent soap or solution. Incidentally, such detergents work very nicely in salt water.

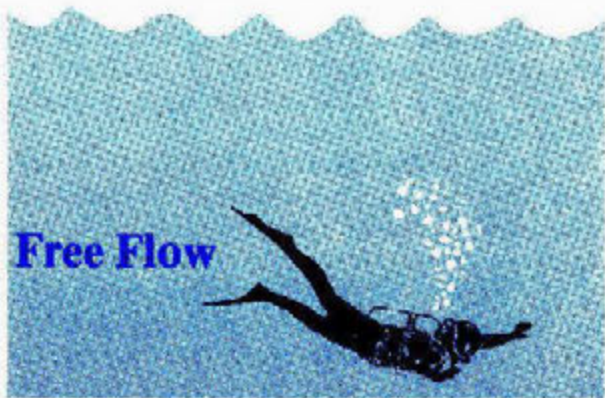
More complete protection can be accomplished by soaking for 30 minutes in 10% Clorox or Sidex. These solutions are both viricidal. The latter is considerably more expensive. The former is hard on rubber gear.

For my own part, I would feel quite safe with rental equipment that had been washed in detergent, rinsed, and air-dried.

The editor asked me to address the possible transmission of AIDS and other infections by sharing air and CPR. That one is tougher! AIDS is a terribly dangerous infection, but at the same time it is a fragile virus. Although it occurs in various body fluids, it is not transmitted easily. It is reassuring that no hospital personnel have been infected in ordinary contact with AIDS patients, nor has there been report of AIDS transmitted via CPR.

Many emergency medical services are emphasizing the use of bag-respirators for CPR, and most all training is done today with mannequins. When the need really arises in the field, I think we all have to take our chances.

There are other infections more easily transmitted by mouth-to-mouth contact, and these include notoriously, mononucleosis, meningococcus, and streptococcus. Most people with those illnesses won't be diving, and neither, for that matter, will most people with AIDS.



Each year a number of divers die from unknown causes. Most frustrating are those deaths which occur on or near the surface. The victim is often an ex-

perienced diver who, for some reason, is found drowned. Sometimes the victim disappears at the surface while returning to his boat. One possible explanation for such deaths was suggested recently in the *Journal of Clinical Immunology*. Researchers reported the near-death of a 59 year old woman who became comatose and pulseless within five minutes of being stung by a jellyfish in the Mediterranean. It was a small sting, but the woman reacted as if she had been stung by "relatively massive contact with jellyfish tentacles." In a word, she was severely allergic to the venom. One of the researchers, Dr. Lawrence Lichtensten, said that since being alerted to these findings, emergency rooms in southern Maryland near the ocean have noted more people coming in with this reaction which previously would have been attributed to other causes.