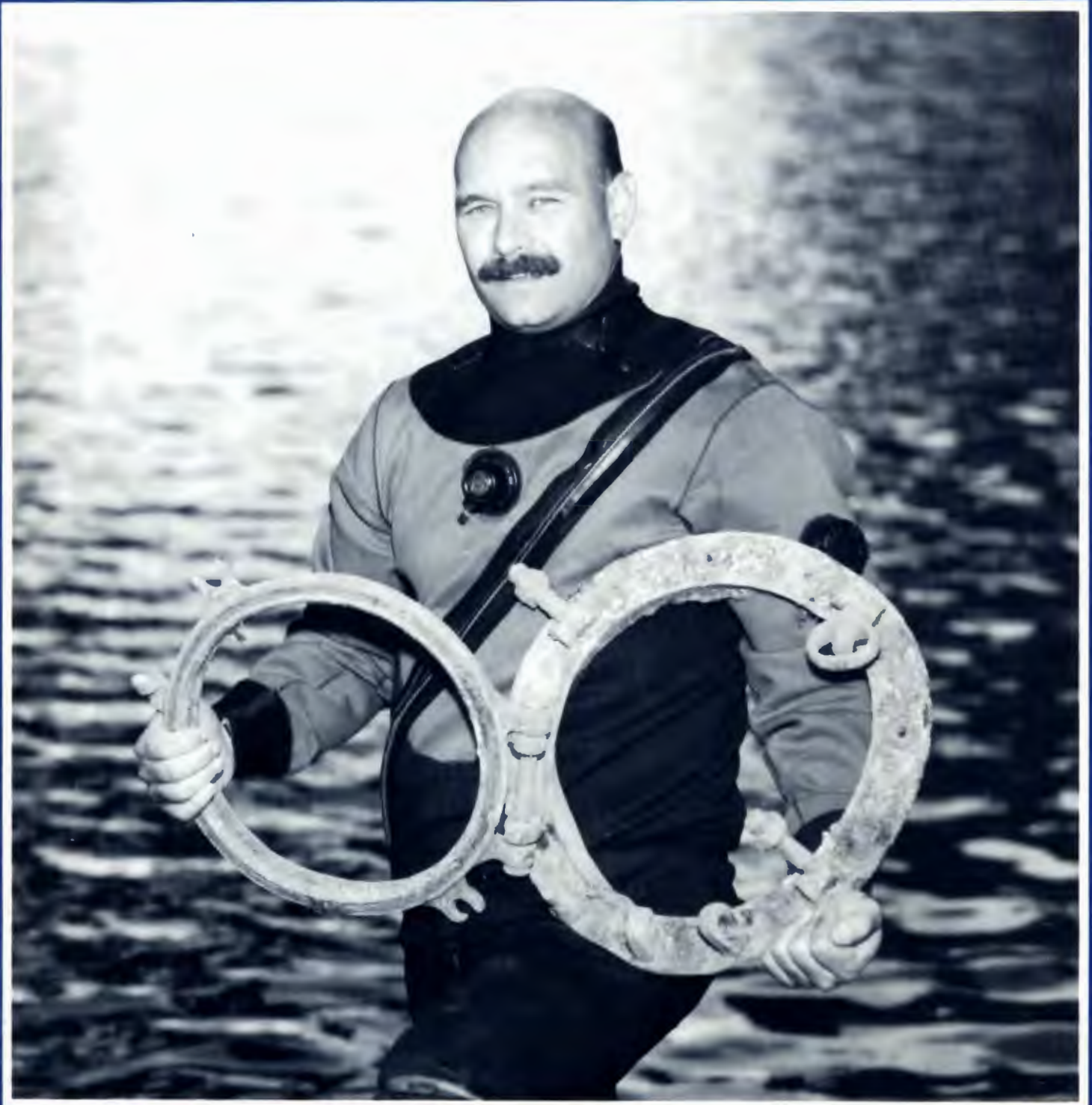


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JOURNAL

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Sub Aqua is published bi-monthly by SAJ Publishing Inc. Subscription rate for 1 year (6 issues) \$39.00. Subscription outside of U.S. add \$20.00 postage. Paid orders U.S. funds only. Send requests to the circulation department. Postage paid at Garden City, NY and other locations. POSTMASTER: send address changes to Sub Aqua, 175 Fordham Street City Island, NY 10464. All address changes are to be in writing.

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SHIPWRECKS

We were in Durham, North Carolina, on our way to an executive briefing at DAN, the Divers Alert Network, when the news came over CNN. The ferry Estonia had just sunk in the Baltic Sea, with over 800 people lost. It wasn't the turn of the century - there were no U-Boats torpedoing it, no icebergs or collisions - it was now. It brought home the chilling fact that no matter how modern the technology, we don't master the sea.

Those of us who explore the results of sea disasters have a fascination with the details of shipwrecks. This issue ranges from the most famous of wrecks, to those whose names we don't even know. We cover questions of diver health, training, and technique. The wrecks featured are all reminders of the risks people have taken to travel on our oceans. We remind you to dive safely, train to prevent accidents, and continue to refine your technique. The sea is much bigger than you are. We can enjoy it, but we don't master the sea.

Joel D. Silverstein, Editor

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ON THE COVER - NJ State Trooper, Steve McDougal with first porthole off the Big Wreck. Shot on location with a Hasselblad 500C, 150 mm Sonar lens at F5.6 on Kodak Tri-X pan film by Joel Silverstein. Dry suit by Diving Unlimited International.

R/V Wreck Valley Raises Anchor

The *Black Warrior* was built in 1852 and was owned by the New York and New Orleans Steamship Co. The wooden ship was 225 feet long and weighed in at 1,556 gross tons. Aside from being fully rigged with sails, the 37 foot beam ship was flanked by two steam driven side wheels. On February 20, 1859, while entering New York harbor in a dense fog, the captain of the *Black Warrior* ran his ship aground on the Rockaway Bar. Despite the frigid waters and harrowing weather, all passengers crew and cargo were brought safely to New York by assisting vessels.

At first, she was resting easy and no trouble was anticipated in towing her off. Unfortunately, the *Black Warrior* struck at high tide, and although during the next few days every effort was made to save her, she settled deeper and deeper into the sand. Finally four days later, as a result of a high tide, she had moved over 100 feet before grounding again. That same day a gale blew up and the once proud *Black Warrior* was pounded to pieces. She now rests in 35 feet of water and has become a popular shipwreck for novice divers for training dives, and advanced



Wreck Valley Collection

divers who search for artifacts.

Dan Berg and his team of divers have been diving, filming and recovering artifacts from the *Black Warrior* for years, mostly recovering silver and pewter ware, dead eyes, bottles and portholes. In early 1993 Dan set out to examine the *Warrior* once again after some serious storms. What he found was a completely new section had been uncovered by the shifting sands. The bow had been completely uncovered and with it the 2,000 pound fluted anchor.

With the shifting sands of Rockaway it was an easy decision to recover the anchor — it could once again be buried and lost forever. Dan set out to devise a plan to recover and restore the relic. Weather and other projects already planned pushed the recovery off until this past August when all the pieces were in place. Multiple recon dives were conducted over the year to maintain location of the anchor. Dan's team consulted with salvage expert Rick Fryburg of Sub Salve (a manufacturer of salvage lift bags). They determined that the anchor would need to be rigged so that it would only draw 5 feet of water, making it capable of being towed through several shallow waterways, using two 2,000 pound Sub Salve commercial lift bags.

The day of the lift was one out of a text book — flat calm seas and over 30 feet of visibility, making the rigging all that much easier. The Wreck Valley dive team led by Dan included Mike McMeekin, Jozef Koppelman, Rick Fryburg, Lou Schriener and Ed Jenny. Within three hours the team had safely and expertly removed the anchor from its resting place. The anchor is now undergoing an extensive restoration and preservation process before it will be placed on display for maritime enthusiasts. ■

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THE BIG WRECK

by Captain Hank Garvin



I've been close a few times. To the Big Dream, that is. You know, the wreck diver's Holy Grail - finding a virgin wreck and being the first to dive it.

Captain George Hoffman paved the way by spotting a mysterious wreck on his bottom recorder a few years ago. Quite a ways offshore, he called her the *Big Wreck*. Over the years she remained in obscurity, with no diving ever reported, and just fishermen to tell of her existence.

My heart quickened when Captain Steve Bielenda whispered this juicy fact to me. Steve had gotten the location from George, and we had many conversations about searching for the *Big Wreck*.

A year ago I put out feelers for a group of intrepid deep divers who'd be ready to "walk the walk" instead of just "talking the talk." Twelve hearty souls were up to the challenge - diving out there - 64 miles out of Fire Island Inlet.

The *Big Wreck* is someplace past the *Texas Tower* in 186 fsw, with the high point rising to 165 fsw. Vis was 60+ feet. We dove on what turned out to be the stern section which was over 200 feet long. Joe "Zero" Terzulo brought up the first artifact - a beer bottle. Steve McDougal sent up a porthole. The wreck itself appears to have been torpedoed or depth charged. Because of its condition we couldn't determine if she was a freighter or an oil tanker.

About 125 feet from the stern there's a section on both sides of the wreck that rises up 200 feet and looks like it might have been crew's quarters or work area over the Engine Room. Steve McDougal swam forward over 100 feet and at that point, the wreck disappears into the sand. Further expeditions may determine whether the bow is still there or broken off.

Much more isn't yet known about this beautiful wreck. Those of us who dove her felt like we were at the beginning of a detective story. For now, we'll just call her the *Big Wreck*, and look forward to the unfolding of her case. ■

HAPPENINGS

JANUARY

Underwater Intervention '95 - 16-18

The Association of Diving Contractors Inc. will hold their annual conference at the Westin Galleria Hotel, Houston, Texas. The symposium will feature the latest in commercial diving techniques, equipment and exploratory advances. Contact: ADC 713-893-8388

'95 tek - The Dive Technologies Conference & Exhibition - 21-24

This year there will be hot happenings at tek. Rebreathers - talk to the people from Cis-Lunar, Prism, Oceanic, Sea Pro, Dräger, Carlton Tech and the US Navy. Plus - Underwater Imaging - talk with U/W image specialists Chris Newbert, Marty Snyderman, Howard Hall and others. Discover laser imaging, the inner workings of the IMAX camera.

Other special highlights include the NEWTSUIT - a 100 meter suit that weighs under 100 pounds, the US Navy heads up display, Graham Hawk's 12 knot Deep Flight plus much more.

Moscone Center, San Francisco, CA call aquaCorps at 800-365-2655.

DEMA XIX - 26-29

The 19th Annual Diving Equipment and Marketing Association convention will be held at the Moscone Center in San Francisco. This event is open to manufacturers, retailers, travel destinations and dive professionals only.

Contact: 714-890-9915.

MARCH

Boston Sea Rovers Clinic - 11-12

41st Annual Dive Show at the Copely Plaza Hotel, Boston. For tickets contact: Sea Rovers Hotline 617-424-9899

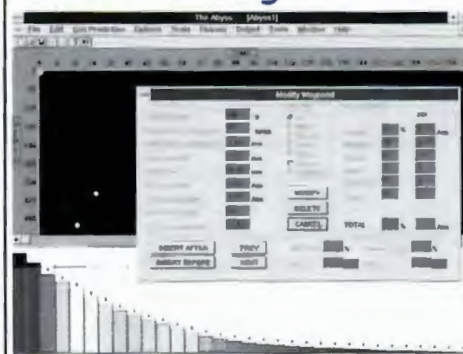
Beneath the Sea- 24-26

The country's largest consumer dive symposium will be held at the Westchester County Convention Center. Three days of workshops and seminars on everything from dry suit repair, to beach diving in the Caribbean, to wreck diving in the Atlantic, to accident prevention and safety. Over 200 exhibits from manufacturers, suppliers, training agencies and travel destinations. This is one show you don't want to miss.

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DIVING THE LUSITANIA

an exclusive story by Gary Gentile

Conjure the ideal virgin shipwreck: portholes scattered about like leaves fallen from a tree in autumn, navigational equipment lying loose on the seabed, the hull contiguous but the superstructure sloughed off and rusted away so that only the brass fixtures remain. Add a forty-five degree list to starboard and three quarters of a century of collapse, and you have a pretty good idea of what I saw on my first descent to what is the latest, perhaps the greatest adventure in deep-water wreck diving.

My initial surge of excitement came when I spotted the first porthole. My excitement grew to ecstasy when I saw a whole field of portholes. And ecstasy became Nirvana as I gazed upon the docking telegraph at the edge of the debris field. I had run out of superlatives by the time I beheld the wheelhouse annunciator and brass steering station. In twenty-five years of underwater exploration, this was without doubt the most thrilling shipwreck I had ever seen.

There is more to the *Lusitania* than meets the eye. At least, more than the eye can see in a fortnight of daily twenty-minute dives. That's because the 780-foot-

long wreck lies at a depth of 300 feet, in a zone of darkness where the sun rarely reaches, where visibility is limited by a soup of plankton swept back and forth by the never-ending tide, and where topside weather conditions are generally hostile, especially when diving off a 35-foot boat. If this imagery reminds you of your worst nightmare rather than a dream come true, then you must accept on faith that some people are driven by challenge rather than by convenience.

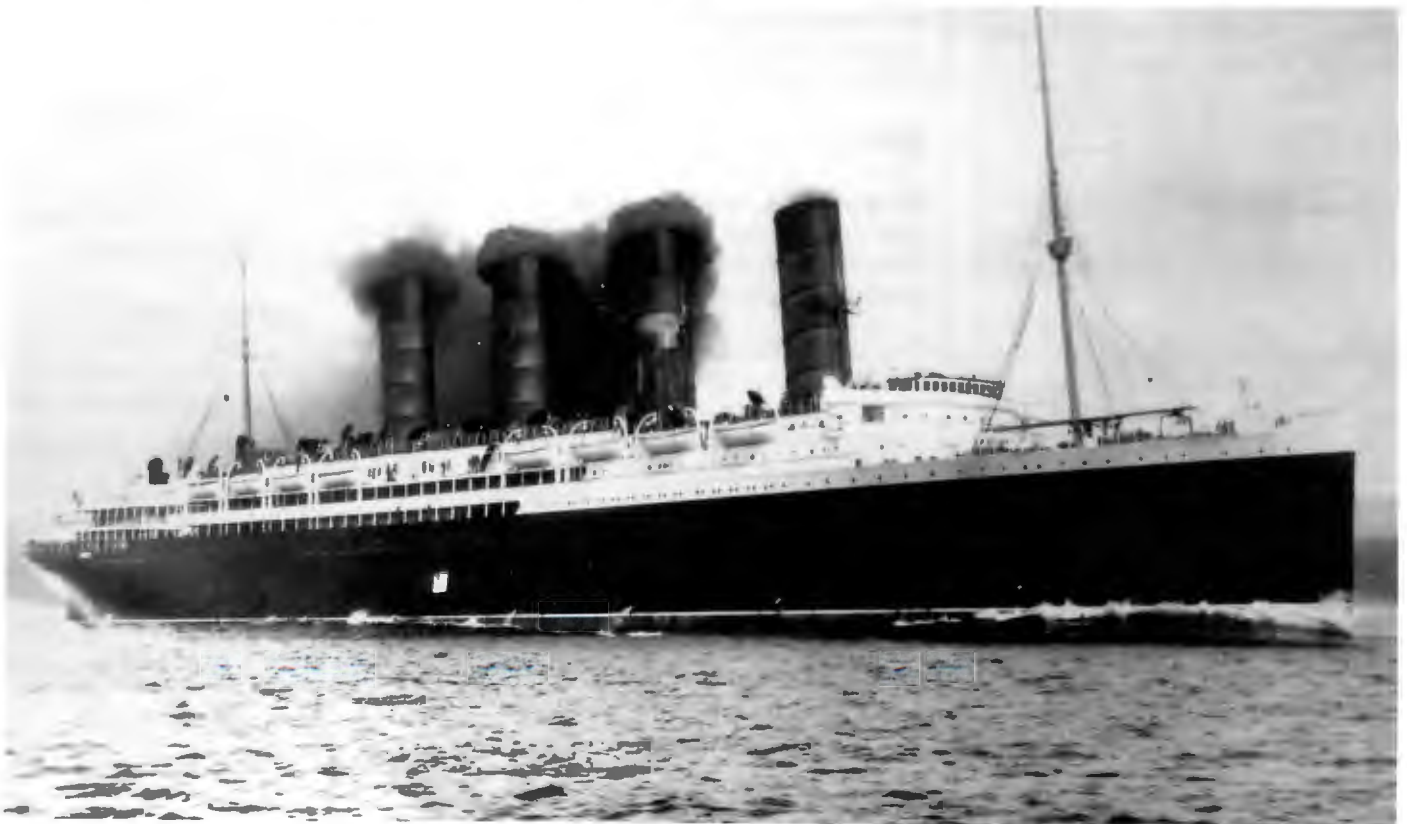
The *Lusitania* is not just another dive, it is an incomparable experience, made memorable by the difficulties in reaching the historic site and of conducting a highly complex operation in a somewhat remote location.

The team of twelve divers required thirty two K-bottles of premixed breathing gas, which had to be delivered by truck and unloaded by forklift in the parking lot of our hotel. Then a temporary wooden structure had to be built around the newly ordained storage facility. Also delivered was a low-pressure compressor needed to drive the two Haskel boosters brought from London. The compressor was gasoline driven, the size of a small car,

and came on its own trailer. And this was only sufficient gas for the first week of diving. After that, we had helium and oxygen delivered as needed and did our own mixing.

We also needed half a dozen K-bottles of oxygen for making nitrox blends for decompression purposes. Then we needed V-bottles of oxygen for in-water decompression - one bottle per diver per day. Plus there was argon for those unwilling to brave the 47° water - 52° above the thermocline, without the additional heat-retaining qualities afforded by the denser gas. With run times in the two hour range, warmth was a precious commodity.

Every day this mountain of equipment had to be loaded onto the boat, sometimes early in the morning after a cold breakfast of cereal and biscuits. This was because we could dive only during slack tide — a span of about 45 minutes. If the tide was early, we dived early. As the tide got progressively later, due to the phases of the moon, we could sleep later in the morning, have a hot breakfast, but then would be coming back late in the afternoon—with all those tanks to fill for the next day's diving. This meant a late





dinner, then arising early to finish filling the tanks we did not have time to fill the night before. There was no landside support — we had to do everything ourselves, except cook. Meals were superb and relaxing - dinner provided the only relief in an otherwise long and wearisome routine.

The expedition was a group effort. As expedition leader, Polly Tapson constantly dealt with difficulties and reorganized our agenda. Her husband Simon and Nick Hope did all the gas boosting. John Chatterton and John Yurga ran the compressor, often filling tanks late into the night. Dave Wilkens oversaw our in-water oxygen needs, and re-rigged the cylinders on a daily basis. He also ran new decompression schedules when gas mixes did not come out exactly right. Every day Richard Tully assembled the drifting decompression station for rapid deployment, ably assisted by Jamie Powell. Paul Owen was the driver and stowage master of the Peugeot van which transported all our tanks and personal equipment between the hotel and the boat. Barb Lander constantly wagged her pencil at people in order to keep a strict record of everyone's dive profile. Christine Campbell was our liaison with the hotel and restaurants, and made sure we had lunch everyday on the boat.

I was in charge of ship's plans and drawings, my primary responsibility being to record everyone's observations of the wreck. But there was usually so much more pressing work to do, and I filled in wherever help was needed.

The hardest work and the major difficulties occurred topside. The twenty minutes spent on the bottom seemed effortless by comparison. True, the stress of just being 300 feet deep, totally self contained, in utter blackness pierced only by a beam of artificial light, can be psychologically exhausting. However, the wreck has more than enough history and meaning to compensate.

In 1915, the *Lusitania* was eight years old, and was considered one of the premier ocean liners of the time. She

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plied the passenger route between New York and Liverpool with timetable regularity. On May 7, as she approached the Irish coast, she was spotted by Kapitanleutnant Walther Schweiger in the German submarine U-20. A single torpedo sent the massive vessel to the bottom in eighteen minutes. The loss of life was severe: 1,198 passengers and crew - men, women, and children. There had not been such a tragedy at sea since the sinking of the *Titanic* in 1912, and the *Empress of Ireland* in 1914.

Much has been written about this spectacular sinking. Conspiracy theories abound — was she carrying munitions and explosives? It has been speculated that she sunk so fast because the torpedo triggered internal explosions of secret wartime cargo. Many writers have claimed that she was "allowed to be sunk" as a ploy to lure the US into WW I. Forged cargo manifests, a patsy captain, lack of military escort, and conjectured high-level foreknowledge of the attack make this sound like an Oliver Stone movie. The politics, intrigue, and possible treachery involving the *Lusitania* make engrossing reading.

Despite her notoriety and all that has been written, the wreck of the *Lusitania* has been fairly well ignored. Partly this is due to the depth. In the late 60's and early 70's, John Light and a small group of divers explored the wreck on scuba, breathing air. In 1982, the Oceaneering Inc. team of saturation divers cut into the "secret" room, which proved to be empty. The team went on to recover three of the four propellers and some miscellaneous artifacts in the stern. In 1993, the National Geographic Society sponsored a two week expedition to film the wreck using remotely operated vehicles and a submersible — no divers were involved. Thus, from a wreck diver's perspective, the *Lusitania* can be considered a virgin wreck — a paradise where artifacts abound.

On one dive I swam along the high side of the bow, at 270 feet, and saw the entire name of the ship spelled out before me in large brass letters. On another dive

I cruised past open hatches beckoning me to enter. On yet another, I spotted exposed lavatories and ornate mosaic floor tiles. There were also some heart throbbing moments, such as the time I missed the shot line in eight feet of visibility and had to circle for several minutes before I reoriented. And the time my fin got entangled in monofilament; I broke free in a few seconds, but those seconds seemed like millennia. Nevertheless, when the dive was going smoothly and visibility exceeded twenty-five feet, I felt a euphoria which was definitely *not* induced by nitrogen narcosis. I left the wreck each time with a feeling of incompleteness, and a desperate desire to return.

Due to the wreck's uncertain legal position and nebulous claims of ownership, (about which we were amply apprised by local police, customs and excise officials, the Receiver of the Wreck, and American and Irish solici-



tors), our team decided on a policy of non-recovery of artifacts. We didn't want to jeopardize our opportunity to dive the *Lusitania* or that of future wreck divers. Even so, a commercial salvor has plans afoot to curtail future visits.

The application of deep diving techniques and mixed gas technology has opened up new vistas, making accessible wrecks which a few years ago were considered beyond reach. For those willing to pay the price in time, money, training, and initiative, the *Lusitania* has profound inner rewards. ■

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THE TROJAN

by Captain Eric J. Takakjian

As the end of the dive season draws near, there are certain wrecks that you never feel you have made enough dives on. Maybe it was one last bolt on a porthole, or one more room left unexplored. The freighter *Trojan* is one such wreck. Her 261' iron hull rests upright and largely intact at the entrance to Vineyard Sound in 100 fsw.

Built as a collier for the Boston Towboat Company, she was launched as the *Orion* at the Harlan and Hollingsworth Shipbuilding Corporation in Wilmington Delaware, in February of 1888. An unusual feature of the ship was a towing bit and buffalo rail set up on the stern. Forward of the towing bit was a large covered spool used to store a towing hawser. It is doubtful that the *Orion* did much towing; due to her size she would have been difficult to handle a tow with. The *Orion* served the Boston Towboat Company well for seventeen years, carrying coal from Newport News, Virginia to various east and gulf coast ports.

In May of 1905 the ship was sold to the Boston and Philadelphia Steamship Company of Boston, who in July of the same year renamed her the *Trojan*. The *Trojan's* new owners decided to enter the ship in general cargo service, and added tweendecks in her cargo holds. This increased the ship's cargo capacity, and tonnage from 1,786 to 2,632.

The *Trojan* departed Philadelphia in mid-January of 1906, bound for Boston. In her cargo holds were several tons of bronze ingots, 300 cases of medicine bottles and miscellaneous glass and porcelain items. Encountering dense fog upon arriving at the entrance to Vineyard Sound on the 21st of January, captain Peleg Thatcher decided to anchor his ship and wait for the fog to clear. A short while later the passenger ship *Nacoochee*, also bound from Philadelphia to Boston, loomed out of the fog on the *Trojan's* port side. The *Nacoochee* was travelling too fast to avoid the *Trojan* and crashed into the *Trojan's* port side just forward of amidships. The *Trojan* quickly filled with water and sank. Captain Thatcher and his crew of 27 men were rescued by the *Nacoochee*. The *Trojan* sank so quickly that the crew escaped with nothing more than the clothes on their backs. The captain of the *Nacoochee* belatedly anchored his ship and waited a day and a half for the fog to clear, before proceeding to Boston.

At a hearing held by the Seaboat Inspector's Office in Providence, Rhode Island, captain Thatcher was exonerated of all blame in the incident. The *Nacoochee's* captain was held at fault, and his license was

suspended for thirty days.

Although most of the bronze ingots were recovered by some local divers in 1972, much still remains. The wreck is easy to navigate on even in the frequently poor visibility. The hull is contiguous and can be followed from bow to stern. Aft of amidships the hull is completely intact, listing to starboard. Most of the fir decking has rotted away exposing the steel deck beams. It is in this part of the wreck that the majority of the bottles have been found. They are easily seen amongst the wreckage. By reaching down into the mud in the cargo area just aft of the engine room, a diver can feel the wooden crates that the bottles were shipped in, and find bottles in like-new condition.

The engine and boiler rooms on the *Trojan* were located amidships. This area is the highest point on the wreck, with the ship's 1,000 horsepower steam engine rising twenty feet off the bottom. Two large boilers lie side by side just forward of the engine. Numerous brass fittings have been found in this area. In August of 1994 a fully intact and operable brass grease gun was found here, a testament to the craftsmanship of another era. Continuing forward towards the bow, the hull is intact with the exception of the area on the port side where the collision occurred. The fir decking has also rotted away on the forward part of the hull, exposing the steel deck beams and various ship's fittings that have fallen down inside



Pete Reagan with bottles and handwheel.

the hull. The very bow of the wreck is fairly well broken up.

When diving the *Trojan* a diver should be prepared for low visibility and moderate currents. Visibility averages ten feet but can be as good as twenty five feet in the spring when the water is colder and draggers are not working in the area. Fishing nets are draped over portions of the wreck, and pose a threat to the unwary diver. Despite the somewhat challenging conditions, the wreck of the *Trojan* has unlimited possibilities for recovering artifacts. None of the ship's bridge equipment has been recovered, nor has the ship's bell! The *Trojan* is a rewarding dive that never fails to produce nice artifacts and a good time. ■

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- 2** Be aware of your body and equipment placement when diving.
- 3** Consider your impact on aquatic life through your interactions.
- 4** Keep your diving skills sharp with continuing education.
- 5** Understand and respect underwater life.
- 6** Resist the urge to collect souvenirs.
- 7** If you hunt and/or gather game, obey all fish and game laws.
- 8** Report environmental disturbances or destruction of your dive sites.
- 9** Be a role model for other divers in diving and non-diving interaction with the environment.
- 10** Get involved in local environmental activities and issues.

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THE CLARK

by Captain Roger Huffman

One fall morning in 1988 Ken Clayton approached me with his usual pre-departure plea — “If conditions are right, would you please take me to the *Clark*?” Conditions were finally right and after everyone agreed to donate the dive time, Ken and John Terry bounced the *Clark*. That was our first dive on her and we came away with mixed views. “Upside down.” said one “No, on her side.” said another. However, they did agree that they had seen portholes in the sand and that the wreck was intact and awesome in size.

The portholes are now in New York and New Jersey and the helm and the ship’s bell have relocated to Washington, DC, but she is anything but a picked-over wreck. The 240 foot depth and the guardian Gulf Stream current help reserve the *Clark* for just a handful of divers each season. Like most wrecks that are difficult to get to, a *Clark* dive can be highly rewarding. I made a dive this year on a slick calm, no current, high viz day where I began seeing the wreck at 100 feet. Twenty feet deeper the individual hull plates stood out and when I reached the hull at 195 fsw I was standing in the middle of a school of sandtigers admiring the view.

The *Clark* lies in 240 fsw with deeper wash-outs, resting on her port side with the stern pointing North West towards shore. The hull is totally intact and a beautiful sight from afar in the clear blue waters of the Gulf Stream. The bridge and stern structures have collapsed and form a debris field in the sand. The engine room can be entered through the large hatch opening on the deck. The deck itself still maintains its walkways and pumping systems, with the deck pumphouse amidships. The view from the sand of the twin props and rudder is spectacular. The *Clark* is easy to navigate on, considering her size and intact state.

Originally christened the *Victolite*,



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the *Clark* is a 500' long, 10,000 gross ton tanker that was torpedoed in 1942 by the German *U-124*. Identification was made official in July of 1993 when Karen Flynn and Doug Newlon recovered the ship’s bell. Inscribed was the name *Victolite*. As with many ships that have been taken by the sea, local fishing captains name wrecks by what they find on them. Back in the 70’s Capt. John Pierce was running a head boat and caught a 72 pound grouper. For some years the *Clark* was known as the 72 Pound Grouper Wreck. That poor

grouper was probably in transit caught in the Gulf Stream, since the *Clark* is devoid of growth due to her depth.

The *Clark* is not a “fishy” wreck, and the corals that grow on her are of the soft kind. If you want to see fish you can save the 24 mile ride and the long decompression stops for some of the more inshore wrecks off Hatteras. The *Clark* is a wreck diver’s dream. The opportunity to see a 50 year old wreck that hasn’t been blown up by depth charges or broken down by wire drags is a spectacular sight. ■

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seaQuest DSV Begins Second Tour of Duty

seaQuest is back on NBC, with more 2021 sci-fi underwater adventures. Since they blew up last year's "Deep Submersible Vehicle," they brought back a new set design, some nice cast revisions, and punched up the Spielberg plot lines.



Most important change: Roy Scheider now sports his "All That Jazz" beard. Coolest new characters: Don Deluise's sons Michael and Peter. . . one as a wisecracking street kid with gills, the other a "Benny Stallwitz-type" simpleton named Dagwood. They both steal the show. Last year's beautiful female doctor is out. This year's Rosalind Allen adds empath-like qualities to biophysicist Dr. Wendy Smith.



According to NBC, in its first season seaQuest "hit a ratings bulls-eye in key demographics, placing first in the competitive Sunday, 8-9 p.m. time period."

Early plots this season emphasized Star Wars-like satellite weaponry, psychic maelstroms and the return of the "aliens," the leader of whom speaks in the voice of last year's beautiful doctor. Darwin the Dolphin is still around, but we've missed Woods Hole's Dr. Bob Ballard doing his show wrap ups.

In general, the cast is really coming together, with someone pretty for everyone's taste. The stories were predictable but very well executed, and the show is good fun. But don't be surprised if not every story is underwater. We sense lots of 90210 and Baywatch-type influence. Stay tuned. ■



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MYSTERY TUG IDENTIFIED

by Captain Eric J. Takakjian

In September 1991, dive boat *Grey Eagle* located a wreck resting in 100' of water, west of the Buzzards Bay light tower. The wreck rose to within 75' of the surface. Due to time constraints it was not possible to dive the wreck that day. Subsequent attempts over the next three years were foiled by weather and logistical difficulties. The wreck remained silent until September 5, 1993, when it was discovered to be a canal type steel tugboat, approximately 90' long. The wreck appeared to have been down a long time due to the amount of growth on the hull and superstructure. The tug's name and official number were not visible anywhere on the hull. The tug's discovery prompted research as to its identity and history. A check of the US Coast Guard's records as well as those of NOAA in Washington, DC, revealed no information on the sinking of any tugboat in the mystery tug's location.

Attempts to trace the serial number on the rudder angle indicator were unsuccessful. Numerous phone calls were made to tugboat companies in New York and Boston, but no one knew of a tug being lost in this area. Interviews with various local tug crews also turned up no clues. Due to the tug's deck layout and the style of its fittings, it was surmised that she was built in New York, sometime prior to 1940.

The true identity was learned after speaking with Captain Donald Church of Fall River, Massachusetts. Captain Church identified the tug as the *P.T. Teti*, belonging to him in the late 1960's and early 1970's. He had purchased the tug in September of 1968, and used it for general towing work on Narragansett Bay. In 1972 Captain Church decided to refurbish the *P.T. Teti* for shipdocking work in Providence and Fall River. A new Fairbanks Morse diesel engine was installed and the steering system was improved. At the time the work was being done there was no space available in any of the local drydocks for hauling the tug out of the water. Captain Church decided to tow the *P.T. Teti* to nearby Port Judith to have the bottom cleaned and painted. During the tow she began to take on water. When Captain Church and his crew realized what was happening they went back alongside the and tried to pump her out. Their efforts were unsuccessful, and much to his dismay, his substantial investment sank to the bottom of Rhode Island Sound.

The *P.T. Teti* began her life in New York Harbor. Built at the Ira S. Bushey &



Sons shipyard in Brooklyn, her keel was laid in February of 1937 and she was launched on September 3 of the same year. Originally named the *Chemung* and owned by Mr. William T. Rung of Brooklyn, she had an overall length of 85' and displaced 84.6 gross tons. The *Chemung* spent the next twenty two years working out of the port of New York for Mr. Rung. Her duties included towing barges up and down the Hudson River and across the New York State barge canal system. Her low profile wheelhouse, smokestack and fold-down mast made her especially well suited for these tasks. The numerous low bridges on the barge canal system are difficult, if not impossible to pass under with a conventionally designed tugboat. The *Chemung* also towed barges up and down the East Coast to ports such as Norfolk, Philadelphia, New Haven, and Boston. In February of 1959, Mr. Rung sold the *Chemung* to Mr. Harold T. Teti of Boston, who renamed her the *P.T. Teti*. Mr. Teti operated the tug in New England waters, doing general barge towing, marine construction, and dredging projects. The tug's home port was changed from Boston to New Haven in August 1964. Mr. Teti sold her to Captain Church in September 1968.

On September 5, 1993 the *Grey Eagle* was scheduled to dive the wreck of the *Suffolk*, 35 miles south of Point Judith, RI. Due to a tropical storm passing offshore two days before, a large ground swell had built up. The crew of the *Grey Eagle* decided not to go to the *Suffolk* and to dive the unknown wreck west of the tower instead. On the ride out, speculation ran wild as to the wreck's

identity and possibilities for artifacts. Divers descending the anchor line were greeted with the rare sight of a fully intact and virgin shipwreck sitting upright on the bottom. The wheelhouse roof was reached at 80 fsw and the maximum depth to the sand was 100 fsw. Artifacts were visible everywhere, such as portholes, cage, and running lights. A large foghorn was bolted to the front of the smokestack. The helm stand and rudder angle indicator were visible inside the wheelhouse.

The tug appeared to be in good condition, if not for a heavy covering of marine growth. Various fittings were easily recognized inside the tug, such as the stove and table in the galley, bunk frames, and a sink in the berthing areas. In the engine room, machinery and a large gauge panel were easily recognized. Several doors on both sides of the deckhouse provided easy access to the wreck's interior.

The first group of divers to visit the wreck that day were: Paul Gacek, Joe Hamm, John Heimann, Dave Morton, Dave Reiger, Patricia Williams, Robert Yeagle, and Eric and Lori Takakjian. The artifacts recovered that day included: the rudder angle indicator, cage lamps, the stern lights, portholes, the whistle handle, and the tug's fog horn. Visibility is usually excellent at 20-30 feet; little if any current is ever present at the site.

Subsequent trips to the wreck have continued to produce many nice artifacts, such as the helm stand, portholes, cage lamps, running lights and a large searchlight. For sightseeing or artifacts, the *P.T. Teti* is a truly enjoyable dive. ■

Wreckers and Cavers

by Shannon Sikes

“When I first dove Little River, the thing that struck me was that this was an absolute work of art,” said Captain Billy Deans of Key West Divers. A top instructor in the wreck and technical diving community with experience in many different and strenuous environments, Deans is considered someone not easily impressed. While cave diving, he felt “amazed by the absolute clarity of the water, and with the blackness” of the cave environment. As he continued training and diving in North Florida’s springs, “I would try to go through an area and not touch anything, because I didn’t want to ruin anything for the next guy. I wanted to leave it as I found it.”

For anyone who has ever dove North Florida’s springs, the awe expressed by Deans may sound familiar. Cave diving is becoming increasingly popular in the diving community, and with wreck divers in particular. Yet with this booming interest, cave divers and instructors continue to worry about the heavy decline in the quality of the cave environment. Some are also expressing concern over what they see as a shifting in the motivation of those seeking cave training. Wes Skiles, owner and operator of Karst Environmental Services and Karst Productions in High Springs, Florida, recently articulated these concerns and fears. With over twenty years of cave diving experience and a breadth of perspective shared by few, Skiles notes that the real issue involves “the increased use of [cave diving] sites” by divers of every kind. Yet with the most recent surge for cave training, Skiles points to what many see as a “new and abnormal use of the caves by wreck divers.”

While cave divers and instructors lament this “new and abnormal use,” seasoned wreck divers identify and complain about the lack of preparedness and of respect demonstrated by cave divers diving the wrecks off the Atlantic coast. “It’s the ones who think they’re hot shots that we have the problem with,” Captain Steve Bielenda of the *R/V Wahoo* in New York comments. “Their attitude is that since they have so much time in the water and are so comfortable in the water, they are indestructible. In many cases, these cavers have been proven wrong.”

The potential for animosity and resentment on both sides suggests the need for dialogue between cave and wreck divers. “We’re all in this together,” says Deans, “and when something in the family starts to



© Wes Skiles / Karst Productions Inc.

show a little rift we need to address it immediately.” The largest impediments to this open exchange and discussion, according to many wreck and cave divers, are attitude and ego.

Attitude is variously identified as just one part of the problem and the entire problem. Invariably the ugly specter of ego arises. Established and experienced divers of both groups who think their skills are automatically transferable without refinement to the other environment may be the source of the problem but, as Skiles observes, “add [to that] the ego of your average cave or wreck diver and what you have is a formula for disaster. While there are lots of common denominators, it’s the non-common aspects of both sports that will flat-out kill you.” A bad attitude or an inflated ego obfuscate these differences. Skiles speaks from experience. Of his first deep wreck dive in the North Atlantic, he comments: “I was not prepared at all for wreck diving. I was not prepared at all for the coldness. I was not prepared at all for the edges of the environment. I was definitely not prepared to bounce around in rough seas with lighter-weight equipment and a lack of familiarity in dealing with that environment.” All these things combined represent a classic example of a dangerously task-loaded situation. Despite his extensive cave diving experience, Skiles observes, “Two thousand plus cave dives didn’t do a thing for me in preparation. I survived

because I had a little bit of common sense and a lot of experience.”

Among the cavers and wreckers interviewed, nearly all agreed that wreck diving is the more difficult of the two. Tom Morris, Conservation Coordinator for the National Speleological Society — Cave Diving Section states, “Personally I think wreck diving is more dangerous and harder than cave diving.” Ed Daty, a wreck diver who recently moved to North Florida, agrees: “You don’t really know what it takes to dive the *Doria*, for example, until you do it. It’s a lot more exhausting than a cave dive.” Currents, rough seas, dynamic conditions, cold water, bouncy decompression stops—all these and more provide some explanation as to why wreck diving can be considered more strenuous and dynamic than cave diving. This list also enumerates the circumstances many cave divers are unaware of on their initial deep wreck dives.

“It’s the hardest diving I’ve ever done,” says Steve Berman of his wreck diving experience. A cave diving instructor with Ginnie Springs Resort in Florida, Berman speaks of the problem from both perspectives: “Most cave divers have a tendency to be overly arrogant by thinking that their training in cave diving” qualifies them for any and everything, including the unique and often hostile conditions of wreck diving off the North Atlantic coast. On the other hand Berman adds that some wreck divers think that because “the kind of environment

they dive in is really abrasive, they don't need to go through cavern and intro cave courses." While clearly many factors differentiate a wreck diver from the average open water diver, neither group should consider themselves beyond the single most-important rule of cave diving at any level: Be Trained.

Warm water, almost year-round accessibility of cave diving sites, and the relative expense of a day at Madison Blue or Ginnie Springs as opposed to a day on a dive boat in the North Atlantic all point to an exponential increase in the number of wreck divers diving caves. Yet while wreck diving requires the ability to adapt to a number of harsh and changing conditions, the "deceptively easy" cave diving environment requires a set of skills many wreck divers have not yet refined.

Although the many benefits of cave training for wreck diving, such as the importance of streamlining, anti-silt techniques, proper gas management and buoyancy control, have been outlined by Gary Gentile and others, by far the single most important skill cave training can teach any diver is finesse in underwater movement. With cave diving, Deans explains, "it's not so much handling the line or proper equipment stowage. It's the way you swim in the water. The way you hold yourself. To go through an area and the only thing you get is percolation from your bubbles—that's where it's at."

While the continual refinement of movement and technique in cave diving provides a never-ending challenge, for many cave diving is a very personal, aesthetic experience closely aligned with conservation and respect for the natural environment. Morris likes to draw an analogy with rock climbers: "Climbers are very into the grace of their activity. Good rock climbers glide up the rock—it looks effortless." Others, however, blunder their way to the top, damaging the rock face with unnecessary spikes in the process. In cave diving, Morris comments, "everyone wants to measure their progress by distance. But distance ain't it. You may get 3000 feet in but did you slam the ceiling? Did you crash the floor? Did you claw your way through? If you did any of those things then you're no cave diver."

Suggestions for how to get the most from your cave training abound. Berman recommends that obtaining training in cavern diver through full cave diver in one visit "isn't very efficient because you don't get as much out of it as you do if you break it down into individual components." Also, diving beyond your level of training is never a good idea. Skiles elaborates: "If you are here for the purposes of training for wreck diving then your goal should be to do short swimming penetrations in a variety of cave

systems. Your goals should be never to be touching anything in that environment. And you should limit your penetrations to no more than the distance you can go in any given wreck and you'll get the greatest benefit of using a cave as a training site. Things like stage diving, scooter diving and deep penetration should be strictly off the list." Skiles adds, "For all intents and purposes I believe that about the whole community. Way too much emphasis is placed on deep penetration, large volume of air and the use of scooters to go in caves."

Finally, Skiles offers, "Come and cave dive for the purpose of becoming a better diver and apply that increased knowledge to wreck diving. There's a difference there. If you do you're going to enjoy the caves more and get more from cave diving. Cave diving is going to give back to you." ■

For Information on Cave Diving Contact:

The National Association of Cave Diving
P.O. Box 14492 Gainesville, FL 32604

The National Speleological Society-Cave Diving Section P.O. Box 950
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Shannon Sikes is a freelance journalist who cave dives in North Florida.

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STEVE LOMBARDO, M.D. - DIVE DOC

an exclusive interview by Jeffrey Silverstein

His beeper went off again. Stephen J. Lombardo, internist, deep wreck diver, and Medical Director of the newly reopened City Island Chamber, scooted to the phone. "DAN's referring another possible bends case." During our interview Steve popped up to check on a patient under pressure in the multiplace hyperbaric chamber... "Symptoms seem to be improving." With more underwater hours than many of his diving patients, Steve speaks with the calm authority few dive physicians can claim. His enthusiasm for diving is always tempered with his seriousness about safety.

When did you start diving? I've had an internal medicine practice for over 16 years. I was certified ten years ago. When I was in med school - there was a diving course I wanted to take but there wasn't enough time. Finally, I said, "I will make time for this." and I did it.

You had been a practicing internist at the time you started diving. When you have a medical background some of the aspects like the first aid treatment of shock, things like that. . . are very clear because you do them on a daily basis. But the whole idea about divers and the special problems of divers were brand new to me. They do not handle that at all in medical school.

You are known for technical diving. Is that the way you started? In the northeast, you do a lot of wreck diving. As you get to a point where you want to do something deeper, let's say for instance you want to work towards doing the *Andrea Doria*, you find that you will not only adjust your equipment, but you will start to adjust the mixes. That opened my eyes to the whole world of technical diving.

What are some of your favorite wrecks? My favorite wreck is the *USS San Diego* and I love to do that. I could probably do the *San Diego* every day for the rest of my life and not get bored, because there are so many different parts to it. On a given day, it will be a different dive from the dive that you did yesterday. But, man does not live by bread alone, I guess, so you have to do other wrecks. The *Andrea Doria* is a good wreck too, that's definitely one of my favorites. The *Kendrick*, which is in 320 feet of water and a particular challenge for the trimix diver, is also up there.

Now is that deeper than most doctors would go? I would say it is deeper than most *people* would go. I guess of the doctors I know, very few are divers to begin with, and most of the doctors I know are very conservative, they don't go deep. Diving is definitely a year round thing for me, I adjust my schedule so I can take advantage of good weather. I have my own

boat and I dive many commercial boats and have dived as many as seven days a week. It's hard to gauge, I mean it could be 300, but I would certainly do 100 to 200 dives in any given year.

Is internal medicine a good specialty for focusing on dive medicine? Internal medicine is good background for dive medicine. In internal medicine, you treat everything. If there is a case that you get as a primary care physician, or as a gatekeeper, and if you can't treat it, then you refer to the appropriate specialist.

When was the first time you dove deep? I remember very clearly, it was several years ago. . . we had just discovered a U-Boat. The *U-Who* was my first northeast deep dive. . . in 230 feet of water. I really had to prepare myself for the dive, as to what was the best way to handle nitrogen narcosis and in terms of knowing the wreck.

When did you see your first dive accident case? It was the same day when I came up, the mood on the boat was very different, it was very somber — the person in charge of the boat said there had been an accident and there was a diver who had a problem. The captain was interviewing the buddy to find out what exactly happened. It seemed that the diver had some kind of a problem at depth and was not responding to the buddy, the buddy tried his best to help the guy and get him to surface, but at that depth, he decided that if he tried any additional efforts to raise the body to the surface, that there would be a double accident and he was not able to raise the diver. Several others did a search for the body but were unsuccessful. The body was found several months later, many months later. Even though in internal medicine you certainly see patients that die of cancer or heart attacks, it was very, very different to be on a dive boat with a dive fatality. It was a very oppressive kind of thing, which really brought home to me the meaning of dive safety.

Was this the first time you started thinking about treating dive accidents?

That was the first time, because up until then, there had never been any dive serious accidents that I was aware of. I knew from my training that it could happen and everyone did everything they could to prevent it. . . it seemed like everything was successful and there had not been any dive accidents that I had witnessed until that point.

A lot of the dive accidents that we see are people who just pop to the surface, they are put on 100 % oxygen, you look for bends, they don't have it, you treat them prophylactically, watch their progress and determine whether further treatment is necessary.

Have you ever gotten the bends?

I never did.

To what do you attribute not getting the bends? I understand that it is a statistical inevitability. You could do everything completely right and still get bends. But, the focus is to plan for the inevitable, use the right equipment and gases and build in the contingency plan. It is with this extra planning that you don't get bends. For instance, you could put yourself on oxygen at 20 feet, knowing that it would absolutely wash out as much nitrogen as you can. Other things like calling up Dr. Bill Hamilton and saying cut me a table for this dive and he says, "How safe to you want it?" and you say "Make it as safe as you can." You know you are going to be in the water long, but it's worth it. So, I would attribute it to planning plus, staying in good shape.

Does your experience as a technical diver make you more qualified to treat dive accidents? There are a lot of people much more experienced than I am in technical diving. Technical diving is such a massive task. . . to dive to 300 feet. It takes many, many years to get comfortable with it. In a way it is good that you don't get too comfortable because it is so easy to get complacent. Complacency is frequently what kills people. I guess my diving experience helps me identify with the patient.

Does the fact that you are a diver treating divers helps in their comfort level? It is so true, when you can use language that we use on dive boats and you can appreciate when they say that there were four to six foot seas, and when they say it took them a while to hook in — you can see how these events can contribute to a diving accident. I also realize that most divers are very, very conscious of wanting to be recognized for their efforts and being safe. Many times I see a diver who is bent and he is totally frustrated because he tried to hard not to get bent and did everything by the book and his computer said he was fine and the tables said he was fine.

We want to treat people as early as possible. It's clear from all the data the Divers Alert Network has accumulated that the earlier a bends victim is treated the better the outcome.

Why is there a better chance for resolution if it's caught earlier? Bends is thought to represent a bubble phenomenon. Secondary to the bubble phenomenon is tissue phenomenon. If we can work on the nitrogen bubble before it has compromised circulation to a great extent then we will effect an improvement. If that bubble can be recompressed in a rapid or minimal amount of time, then you can decrease the amount of tissue damage and you can decrease the amount of disability that a diver has to suffer. Sometimes a diver waits around and says, "Well I think it's a sprain" or it could be the next day when the diver wakes up and says, "Oh my God, this is worse, I guess it is not going to go away, maybe I should call DAN." We want to educate to call DAN right away.

What are the different types of bends? There was an attempt to break the bends down into Type I and Type II over the last 100 years since bends was first described and treated. The first cases of bends were on the Brooklyn Bridge, it was called cassion disease. The bridge workers would come up bent-over and crippled from digging. It was a fashionable walk of the ladies of the time and the victims started to adopt that kind of walk because of pain. People who were experiencing pain were



Type I. Those who were developing neurological symptoms were considered Type II.

Isn't pain a neurological symptom? Well, pain only was not thought to be as severe *in those days*. But what they are finding out recently is that at least 30% of people with "pain-only" will have neurological findings. They just maybe neurological findings that are somewhat subtle and can't be picked up unless a thorough neurological examination is done. It's been a trend over the last several years to treat a Type I bends as if it were a Type II, because the person will get more comprehensive treatment.

What about skin bends? A skin hit had been thought to be an innocent hit, traditionally, it has always been thought, "Well it's just a skin hit. It's not going to kill you, it's not going to paralyze you, it's going to pass, and if you give the person some oxygen, then they will be fine." But someone who has the skin bends should be checked out thoroughly to see if there is any neurological deficit and, although a skin hit in and of itself is not indication to be treated, if there is any accompanying neurological deficit, then the patient absolutely should be treated.

What would be an example of a neurological deficit, what symptoms? Let's say their reflexes were deficient in some way, or they were not symmetrical. Let's say there was some weakness that the person did not realize that they had, but on careful testing there was weakness. Let's say the person, as they say down in Duke University, couldn't walk a straight line from heel to toe, they may not notice that, but if you can't walk a straight line from heel to toe,

that's a neurological deficit and that should definitely be treated.

Walk us through the process from the time I come out of the water to the time I am being treated. Now-a-days, when a person comes up from a dive and they have any symptom, whether it is pain, an itch, a rash, they should be put on 100% oxygen. I know cases myself that have been made much less serious by the immediate institution of 100% oxygen.

What does the oxygen do that reduces the symptoms? 100% oxygen is very effective in washing out nitrogen. Unfortunately, you can't shrink a bubble without pressure. If there is a bubble that is blocking circulation, 100% oxygen can't shrink that, it can help to give more oxygen to the tissues that are being deprived of oxygen.

However, if we stop the oxygen, then many times all these symptoms will come back and they will continue to be as bad as they were before the oxygen started.

What's next? Call DAN, describe what happened and let the physicians at DAN evaluate the situation and decide what needs to be done. If DAN can be called from the boat the patient could be quickly directed to the proper next step. Typically many wait until the boat gets back to the dock. In an extreme emergency the US Coast Guard is contacted via marine radio and an evacuation is initiated.

Let's say DAN refers a patient to you. This happens a lot. A patient will call me and say, "this is what happened, what should I do?" I want to know the dive profile.

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If the dive profile seems like it suggests the bends, then that would point us in one direction, and if the dive profile was extremely conservative and it does not seem like they got enough nitrogen to form a bubble, then that might lead us in the other direction. If something sounds like it is clearly not the bends, then I advise the person to have it checked out by their own doctor and to do some basic first aid type of treatment as best they can and to keep in touch if anything changes.

If there is a possibility that they may have the bends, then we immediately get them to a recompression chamber as quickly as possible where we can find out with a trial by pressure how this bubble, which we are presuming is the cause of the problem is going to respond. If for instance the patient's symptoms go away within ten minutes under pressure at 60 feet, breathing 100% oxygen, then that is a very positive sign that the patient is indeed bent and it directs us toward a certain course of treatment.

If a patient is stable, we do a complete physical, including a complete neurological exam before they go into the chamber. A paramedic, EMT or DMT can perform this kind of evaluation. Ideally, the patient gets this evaluation either in my office or at the hyperbaric chamber. If it's an unstable patient, we recommend that the patient go to a hospital-based facility.

What directs you towards a particular choice of treatment? A trial by pressure is a test where we will put a patient under pressure initially for five, six, seven, maybe ten minutes. If the pain may goes away completely, then the patient is bent and the pressure allowed the bubble to be compressed down to the point where it could now get filtered by the lungs and removed by the circulation. All of the tissue that was being blocked by the bubble now is no longer blocked and it can be perfused. The oxygen will perfuse that tissue that was compromised. 100% oxygen, breathed under pressure will effectuate a high partial pressure of oxygen equivalent to 2.8 times normal. This will now be supplied to the tissue and if there was any injury caused by the lack of oxygen, then that injury can be reversed to whatever extent it is able to. This initial treatment can run about five hours.

If the bubble moves can they can feel the pain? Yes, that can happen. If the bubble moves and the pain gets worse, then we use that as information to extend the treatment, or under certain circumstances, we would potentially go deeper, change to a different mix, try to tailor the treatment to the patient.

There are different kinds of chambers. A diver and doctor given the choice of



any possible chamber would want to have a multi-place chamber capable of whatever depth or treatment protocol was necessary.

What happens to a patient in the chamber? An EMT or paramedic accompanies the patient during the treatment. This technician will monitor the patient's vital signs and his physical signs, conduct neurological examinations and can provide basic life support, advanced life support, whatever is necessary at the level the patient needs. The technician also communicates all this information to the physician outside the chamber. The nice part about a multi-place chamber is when I need to examine a patient under pressure - I can be locked in and out without depressurizing the patient.

The patient is placed in such a way that his legs are not crossed; you do not want to do anything to compromise circulation. They just veg out, and relax. They usually read, sometimes they fall asleep. Sometimes, they play cards with the tenders, but there is nothing about a hyperbaric treatment other than the initial anxiety of worrying about it that is frightening. We call it a dive.

You have said that you treat decompression illness aggressively. What does that mean? It means that when you get a phone call from a diver, frequently, they will say, "I am not really sure about the symptoms and I am not really sure if I need to be treated, and if so, possibly tomorrow or the next day." We let them know that if these symptoms can possibly represent the bends, they should be treated *immediately*. Plus, we will treat at the level that we think is appropriate to the severity of the hit. In the instance of a person who has a severe spinal hit, but is not an unstable patient, then we may elect not to use a standard US Navy Treatment Table 6 (60 foot, oxygen) but may use a COMEX 30 (100 foot, heliox) table which is a deeper more aggressive table which facilitates greater bubble size reduction and we have the potential for a better outcome.

Many people have the impression that the only people who get the bends are divers who dive very deep. Is that just a myth? The statistics from DAN indicate two-thirds of the divers that were treated for bends were diving shallower than 60 feet. That was an eye-opening statistic because

shallower than 60 feet may indicate a dive that you would think at first glance is not a dangerous dive. That indicates to people that no matter what the depth of the dive, they certainly can get the bends.

What are the risk factors that increase the probability of getting the bends? One of the most important risk factors is fatigue. You work all week and then you hop in the car and you drive somewhere and you may not get that much sleep and you might have a rough trip out there, it could be exhausting. Dehydration, fluid depletion. . . sometimes, people are seasick and vomiting and they are not taking anything down because they are afraid that it is going to come right up. Then they go and they make the dive and they are in a state where dehydration absolutely predisposes to DCS. The older you are. . . that can be a predisposition to DCS. The level of fitness. . . people who are not physically fit are prone to DCS.

There has also been a lot of talk about alcohol. Alcohol can be very dehydrating. You know what they say, "You don't buy beer, you just rent it." It just goes right through you and when you have dehydration due to having too many beers or other kinds of alcohol, then you are definitely predisposed to the bends.

Why did you re-open the City Island Chamber facility? Over the last several years, as the regional DAN referral physician, I had many occasions when people would call me with symptoms of the bends and the only multi-place chamber in the tri-state area was very often not available. They were busy treating for carbon monoxide or treating other patients and it was very difficult, sometimes impossible to get people in there. The other hyperbaric chambers in the area were only monoplace tubes which are not conducive to treating bends cases. We were left with only two options, send them down to the chambers in Philadelphia, or if available, the Navy chambers in Groton, Connecticut.

It was a dream, a doctor's dream to have a facility that would spring to life in an hour if it was needed and that we could have ready by the time the diver got there. It would be right in the Metropolitan area, accessible to Long Island, Staten Island, Manhattan, all the boroughs, New Jersey, Connecticut, Rhode Island. . . it was absolutely what I wanted and I think any doctor who treats divers would want the same thing. The opportunity to re-open the North American Hyperbaric Center at City Island was presented to us by André Galerne, and at that point the opportunity was too good to miss.

What kinds of cases you have seen on City Island? We opened the facility June 18th. It wasn't long after that we got our



first call and it was a diver who had been diving down in North Carolina and we ended up treating him successfully. Then a few days later, there was another diver, then we got calls from a couple of Caribbean vacation divers. Their symptoms were bends and they responded well to treatment.

Not long after that we had a local diver who had a serious spinal hit with inability to urinate. We chose to treat him very aggressively with the Comex 30, when the Navy treatment Table 6 failed to resolve his urinary problem. He did extremely well, and after a series of treatments ended up with no residual symptoms.

Should a patient who had that kind of urinary disfunction have been in a hospital? He started out in a hospital and they sent him to us. They stabilized him,


they put in a Foley Catheter and got 1600 cc's of urine, they called and asked if we would treat him, they had been in touch with DAN; we elected to treat him. If the diver was unstable, we would have made other arrangements, but because the hospital had stabilized him, we felt he was appropriate to treat.

What else do you want to tell divers about decompression illness? It has become obvious that our biggest enemy

is diver denial. Many of the things that we are dealing with here are bigger than you would actually think based on how subtly the symptoms can start. When people ask "Can it wait until tomorrow?" I always tell them we are dealing with, a process here that has put people in wheel chairs. At that point, when I am able to get across the seriousness we are dealing with I usually get no argument after that. I just get a request of how to get to the facility the fastest way. We need to educate the public and we have to let them know that if there is a chance it could be bends, call DAN and to discuss it with the diving doctor. Don't let a lot of time pass because, as the time is passing, there is less of a chance to complete resolution and more and more of a chance for serious problems. ■

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TEXAS TOWER

by Daniel Berg

Texas Tower No. 4 was a triangular shaped Air Force Radar Tower, or D.E.W. (Distant Early Warning Station) built in Portland, Maine, back in 1957. The Air Force had three such stations, named for their resemblance to oil drilling rigs. Tower No. 4 was a three deck platform that weighed 500 tons and stood 67 feet above sea level. That is, until a severe winter storm toppled the structure taking it and twenty eight men.

The fate of Tower No. 4 was actually sealed while still under construction. In June of 1957 while being transported in pieces to be assembled on site, a storm hit the tugs while they were at sea. After the storm, engineers learned that two huge braces had torn off the huge tripod. The engineers at the scene had a conference and decided rather than tow the tower back to shore for full repair they would erect the tower as is and then have divers repair the damage. Divers were dispatched and did install a collar brace, but Tower No. 4 right from the start was not nearly as structurally sound as she was designed to be. On August 29, 1958, Daisy, the first of two hurricanes, severely damaged the radar station. Hurricane Donna hit in September of 1960. This powerful storm with 130 mile an hour winds and 50 foot waves, inflicted even more damage to the Tower's already weakened underwater legs. By this time, the crew had nicknamed the tower "Old Shaky." The Tower was so unstable that visitors were warned not to shave with a straight razor lest a sudden lurch cause them to cut their throats. In November, 1960 all but 14 crew and 14 repairmen were evacuated for safety reasons. By early January, conditions on board had worsened, but the Air Force would not evacuate for fear that nearby Russian trawlers would capture the abandoned tower and the electronics within her. As Commander Sheppard later wrote, "You don't just walk off and leave millions of dollars of radar equipment lying around untended."

By the second week of January, with

50 knot winds and 30 foot seas enveloping the tower, the crew on Old Shaky feared for their lives. Even after divers discovered a broken brace on January 7, evacuation orders were still not received. It seems that no one in the Navy's chain of command wanted to take the responsibility for evacuating such an expensive site. On January 14 weather forecasts called for 40 to 60 knot winds. At 10:30 AM personnel aboard the Tower reported a very loud

image blurs and is gone." Mangual frantically tried to radio Tower No. 4 but there was no reply. At 7:33 PM, Sunday, January 15, 1961, Texas Tower No. 4 slid into the ocean, taking all 28 men.

Only one body was recovered. Hopes were raised when the Navy picked up knocking sounds on its sonar. The opinion was that some men could possibly still be alive, trapped in an air space. Unfortunately, none of these men were ever found. Colonel Banks, top regional commanding officer in charge of Texas Towers was charged with dereliction of duty in a court martial, for not keeping a closer watch on Tower No. 4. A Senate subcommittee investigating the disaster concluded that "an unbroken chain of error and mistakes in judgment had ended in stark tragedy."

Today the Tower rests in 180 feet of water 58 miles out off Fire Island Inlet. Although this huge structure doesn't classify as a ship wreck, her broken bones which rise to within 70 feet of the surface host an incredible amount and variety of marine life. The uppermost portion of the Tower is one of the corners of her huge deck tripod. Visibility is usually excellent and at times can be spectacular. Even though the Tower's structure rises to a relatively shallow depth, this is definitely an advanced dive for experienced wreck divers only. The Tower's triangular deck now rests on a steep downward

angle. Her radar domes are now lying close to the bottom with their outer shells deteriorating away. Divers can penetrate fairly easily into many of the Tower's interior rooms. Tower No. 4 once housed over 75 crew with sleeping quarters, hobby shops, a galley, infirmary, as well as control and generator rooms. Divers who frequent the Tower's remains report seeing sharks, dolphins, turtles, pilot whales, and giant ocean sunfish. Divers should be aware that a powerful current is usually present, but for those who brave the sometimes harsh offshore environment of the North Atlantic, a unique and exciting dive experience will certainly be found. ■



noise. The structure then began to move with a new, sickening motion. Obviously another underwater brace had broken away. Not until nearly 4:00 PM was it finally decided to evacuate the remaining crew but by this time the Air Force commanders had waited too long. Air Force and Coast Guard Helicopters were alerted to take off at the first lull in the storm. At 6:45 PM the aircraft carrier, *Wasp*, reports that it's racing towards the Tower. The Tower radioed "we are breaking up." At 7:20 PM Captain Mangual in a rescue craft, only a few miles from the site, has his eyes fastened on the Tower's radar image "Suddenly the

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Forums

Held in the main conference auditorium, tek.Forums are designed to address topics and issues that impact a wide range of diving applications and user groups. Dive in and explore the underwater frontier with some of the leading underwater thinkers and practitioners of our time.

F1: Dive Into The Future Sat. 21JAN

Welcome to the 1995 tek.Conference. Diving is in the midst of a technological revolution that is redefining the underwater world. Find out how it may effect your diving application and just how deep it all may go.

F2: Imaging The Future Sun. 22JAN)

Explore the cutting edge of U/W imaging technologies including; IMAX, sonar systems, digital imaging, and emerging diver interfaces. What kind of imaging systems will be available to the 21st century diver? Will your heads-up sonar mask be able to lead you out of a silted cave? The future may be sooner than you imagine.

F3: Ideas In U/W Research Mon. 23JAN

Investigate new ideas in hyperbaric research ranging from applying statistical methods to the problems of toxicity and decompression to investigating the use of hyperbaric treatments for persons with AIDS (PWA).

F4: Future Rap Mon. 23JAN

Join the Corps in a open townhall style meeting to discuss where we go from here. Come and invent a piece of the future.

Evening SHOW

(8p Sunday 22JAN):

Exploring The Underwater Frontier
Explore the frontier with some of leading U/W visionaries on the planet; film wildlife with rebreathers, explore shipwrecks under pack ice, patrol the remote frontiers 1000 meters down, and swim in "a sea of dreams." Featuring the 1995 tekkie awards, and some surprises. The future is down below. (;->).

tek.ADS Banquet

Climb in and boot up with Graham Hawkes, founder, Deep Ocean. Are Atmospheric Diving Systems (ADS) The Wave of the Future? Climb in and boot up. Sponsored by PADI.

Legal Narcosis 2.0

You are hereby summoned to the tek.Conference cocktail party, Legal Narcosis 2.0, sponsored by Hruska & Lesser, featuring Dr. Bill's Special Mix (We won't hold you liable!)

Exhibition

(Sat. 21JAN-Mon.23JAN)

Over 130 exhibits open to the diving public. Come and see the latest in diving technology.

Exhibition Talks:

Becoming A Professional Instructor
What Is Technical Diving
Improving Diving Performance With Nitrox
Are Rebreathers The Wave of the Future?
Becoming A Working Diver

Special features:

Back To The Future
(The Diving Historical Society)
Iron Men
Schilling Robotics—squeeze hard.
USN HUD Mask Prototype
Internet live
Virtual Diving

GET WET (Tuesday 24JAN)

C'mon and make a splash at the Hilton Hotel Pool and see some of the latest tekkie toys. HUD Mask demos. Rebreather demos (see CL9 above). Full Face Mask/COMM demos.

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Technical Sessions

Conducted by leading individuals in their fields, technical sessions organized into "tracks" are designed to provide you with realtime information from those in the know. Tracks and sessions include:

computing

Over the last three years, we've seen a boom in dive computing software and hardware products. Find out where it's all going.

- C1: Desktop Decompression Software Review
- C2: Dive into Internet
- C3: Data Collection & Logging
- C4: Decompression Physiology & Practice
- C4: The Future of Dive Computing

diving business

Aimed at manufacturers, dive store owners, and instructors, diving business will explore the "bottom line" on technical diving and discuss the risks and opportunities for building your business in this growing market niche. Conference "business pass" required.

- DB1: Getting Started in The Technical Diving Business
- DB2: Increasing Your Instructor Income
- DB3: Choosing A Gas Blending System
- DB4: Sport Diving Risk Management
- DB5: Insuring Technical Diving

diver safety

"Safety is the key consideration in diving; it entirely controls depth capability." Imbert, Ciesielski, & Fructus.

- DS1: Improving Technical Diving Safety
- DS2: Treating Mix Divers
- DS3: Inwater Recompression
- DS4: Accident Reporting: Who's On First. What's On Second.
- DS5: High Pressure Nervous Syndrome (HPNS)

getting started in technical diving

Though it is clearly not for everyone, technical diving appears to have captured the interest and imagination of sport divers around the world. Sponsored by Scuba Times, this track is designed to provide information about this emerging activity including training, equipment and experience requirements.

- GS1: What Is Technical Diving
- GS2: Mix Diving
- GS3: Technical Training—How To Get Started
- GS4: Gearing Up

history & special interest

- H1: Carlos Eyles' Blue Water Hunter
- H2: Combat Swimmer
- H3: What Are Your Legal Rights As A Diver?

imaging

Conducted by some of the pros of UW imaging, these sessions will provide you with the information you need to improve your image, technically speaking of course.

- I1: Stalking Mr. Big
- I2: The Working Film Maker
- I3: Wildlife Stills
- I4: The Future Of Desktop Video & CD-ROM
- I5: Breaking Into Broadcast
- I6: UAW Surveying & Mapping

Underwater imaging will be a special focus at the 95tek.Conference. Some special guests include: Howard Hall, Amos Nachoum, Chris Newbert, Marty Snyderman, Dan Walsh and more...

projects & exploration

Get a hands-on review of some of the most intriguing underwater projects on the planet by the individuals out there doing it. Over 20 project presentations from the technical, film and photographic, scientific and working diving communities. Special features; the CSS Alabama, and the Lusitania.

PE1-7 (call for final schedule).

rebreathers

Many people believe that rebreathers represent the next wave in diving. Sponsored by OC LUGO, these sessions are designed to get you into the loop.

- R1: Rebreather Primer
- R2: Rebreather Operations
- R3: Closed Circuit Bailout Systems
- R4: Rebreather Training
- R5: Where Is Rebreather Technology Going?

Vendor presentations:

Beuchat Rebreather Program (60 min.)

tools & methods

Diving is a technology-based activity. These "hands-on" sessions will present some of the latest in underwater tools.

- TM1: Acoustical Diver Navigation & Tracking
- TM2: DPV Workshop
- TM3: Full Face Mask Review
- TM4: Helmets: The Next Generation
- TM5: Think Hard: A Primer On Atmospheric Diving Systems (ADS)
- TM6: Portable Chambers
- TM7: Adding An ROV To Your Team
- TM8: Getting Into A Surface Supplied System

TM9: O2 Cleaning

- TM10: Improving Your Thermal Protection
- TM11: USN Heads Up Display Mask
- TM12: Wireless Communications Systems

underwater archaeology & treasure hunting

- UA1: In The Field: A look At Some Surface-breaking Finds
- UA2: Government Wrecks (?) and the Public's Right of Access
- UA3: Shipwreck Law & Salvage Rights

user group forums

- UG1: What Are The Technical Training Standards?
- UG2: Public Safety Diving: The Move To Standardized Training

working diver

Aimed at dive contractors, working divers and diving professionals these sessions are designed to improve your "bottom line."

- WD1: Hazmat Diving: Opportunities and Requirements
- WD2: Inland Nitrox: A Method To Improve your Bottom Line?
- WD3: Job Opportunities In The Commercial Market
- WD4: Putting Rebreathers To Work
- WD5: Training & Equipping Your PS Diving Team

Meetings

- Accident Reporting Luncheon
- Déjà Vu: Organizational meeting for a diving technologies association. Contact: Tracy Robinette f:714.773.0471]. West Coast Technical Divers Assoc. Contact: Brian Libby. f:310.364.5270

Clinics

(Tuesday, 24JAN) tek.Clinics will be conducted at the Hilton Hotel

CL1: Nitrox Instructor (All Day)
Conducted by IANTD president, Tom Mount. Prereq. Open water instructor/divemaster, nitrox certification. Cost: \$295. Text & certification \$125

CL2: Technical Diving Instructor (All Day)
Conducted by Technical Diving Int'l. president Bret Gilliam. Prereq: TDI, ANDI or IANTD nitrox instructor. Cost: \$200

CL3: Nitrox User (Half Day)
Conducted by Wings Stocks, Ocean Odyssey. Classroom training and IANTD certification. Course: \$125 Text \$30.

CL4: Gas Blending & Mixing Technician (Half Day)
Conducted by IANTD founder, Dick Rutkowski. This clinic will teach interested individuals how to blend nitrox and trimixes. Prereq. Nitrox certification. Cost: \$175 Text not included.

CL5: How Technical Diving Can Increase Store Profits (Half Day)
Program demonstrates the sales/profit potential for technical programs in retail and resort operations. Conducted by TDI directors and store owners; Mitch Skaggs, John Comly, Steve Pearson. Cost: \$100

CL6: Doppler Primer (Half Day)
A basic primer on doppler technology and techniques conducted by hyperbaric researcher, Mike Emmerman, Karl Huggins, Catalina Chamber, and Patricia Stockhausen, EMT. Cost: \$75.

CL7: The Working Photographer (All Day)
Conducted by wildlife photographer and film maker, Marty Snyderman, this "hands-on" clinic will begin with fundamentals, and cover macro, wide angle, system selection, matching equipment and expectations, composition and problem solving. Cost: \$175.

CL8: Deep Air (Half Day)
Conducted by Hal Watts, Professional Scuba Association. Classroom lecture and PSA certification. Cost: \$99 Text \$25

CL9: Rebreather Experience (Half Day)
Classroom lecture and pool session with the Prism semi-closed rebreather. Conducted by Peter Readey, Prism Life Support and Hal Watts, PSA. Cost: \$99 Text \$25.

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Ceremony Marks Sinking of USS Turner

by Bill Bleyer

California air traffic controller Bart Avery was flipping through a family genealogy a year ago when he came upon a January 4, 1944, New York Times front-page article about the sinking of the U.S.S. *Turner*.

About all Avery knew about the *Turner* was that the destroyer had been commanded by his grandfather, Cmdr. Henry Sollett Wyant Jr., who had died when the vessel blew up outside New York Harbor.

"I thought, Oh my God, the 50th anniversary is coming up," Avery said. "At that point I went on a mission to find out all I could."

That mission culminated in September when Avery flew to New York to participate in a ceremony commemorating the *Turner*. With one survivor of the sinking in attendance, a Coast Guard patrol boat and two helicopters joined six dive boats 7 miles southwest of East Rockaway Inlet, 55 feet above the wreck. A prayer was read by Captain Al Golden of the *Golden Dream*, his son Bradley played taps, a wreath was lowered into the waves, and a memorial plaque unveiled. The plaque will be photographed later on the wreck and then sent along with the wreath for display at the museum at the State University of New York Maritime College in the Bronx.

The ceremony was an outgrowth of Avery's discovery of Daniel Berg's *Dive Wreck Valley* book. He noticed reference to Captain Stephen Bielenda, president of the Eastern Dive Boat Association. Avery called Bielenda, who offered him a shell casing recovered from the ship many years ago, and Captain Bill Reddan of the *Jeanne II* sent a compass binnacle too. Al Golden arranged the ceremony.

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Meanwhile, Avery contacted the Navy and eight of the 18 living *Turner* survivors. He read more than 200 clippings and books. He learned that the 348-foot-long destroyer launched in 1943 was named after a naval hero of the War of 1812, Capt. Daniel Turner of New York.

The ship had arrived at the entrance to New York Harbor late on January 2, 1944, after a convoy run from Casablanca, according to Long Island maritime historian, Henry Keatts.

"We were proud to come into the

watch and suddenly they told us to abandon ship. It was hard because we thought we could still save her."

Other ships nearby rushed to the stricken destroyer but abandoned fire fighting when second explosion blew the number-two turret off the ship. Coast Guard cutters took survivors off the listing *Turner*. They were joined by a Coast Guard helicopter, the first time one had participated in a rescue at sea.

"The fire hit another magazine and she was gone," says Eichen. The *Turner* went to the bottom with 138 men, including 15 of the 17 officers. There were 163 survivors.

That last explosion at 7:50 a.m. was heard 30 miles away. The captain's daughter, Marjorie, who lived in Jackson Heights, Queens, was among those who heard it. "She went to school that day and that's all the kids were talking about," Avery says. "When she went home for lunch, she found out it was her daddy's ship."

Because the twisted wreckage of the *Turner* posed a hazard to other

vessels, a Navy crane ship removed some of the structure in the summer of 1944, Keatts says. Four years later Navy divers blasted the remaining structure to reduce its profile on the bottom further. Nonetheless, a loaded supertanker, *Aeolis*, drawing 48 feet of water, hit the wreck and sank in 1976 but was re-floated. Now all that's left of the *Turner* is steel hull plates and some wreckage that rises about 15 feet above the sand.

But that's enough to attract Avery. He's been thinking of getting certified so he can dive down to "see the ship myself." ■

Bill Bleyer is a columnist for New York Newsday. His column On The Water focuses on diving, fishing and environmental matters of Long Island.



Bart Avery, left and Larry Eichen at *Turner* ceremony. Photo by J. Silverstein

[Brooklyn] Navy Yard," recalls Larry Eichen, a retired mechanical engineer from Rockaway Park, New York, the only survivor to make it to the ceremony. "Because the submarine nets were closed we had to anchor out and go in the next morning." That meant the weapons systems including the "hedgehogs," 24 rocket-launched antisubmarine projectiles mounted on the bow remained armed.

A gunner's mate was disarming the hedgehogs the next morning, when at 6:18 a.m. an explosion rocked the ship. Eichen, a machinist first-class, was in the engine room. "The whole ship kind of shuddered and lifted up. Sure, we were all afraid. But the damage-control people went about their business. We stayed on

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New Books

The Sports Diving Medical

The Sports Diving Medical provides a very accessible, readable and yet comprehensive guide to medical conditions relevant to recreational scuba diving. Dr. John Parker shares the experience

he has come by from performing more than 10,000 recreational diving medical examinations, combined with his knowledge of the diving industry gained from being a master scuba instructor.

This is not a look-up-and-there-is-the-answer cookbook approach. The author has chosen a thinking person's approach to the problems of the diving medical. First he lists the things that make recreational scuba diving different from other sports. Then there is a quick summary of basic diving physics followed by a list of good reasons for having a diving medical, one of the most important of which is the opportunity to be given medical advice on how to dive safely. This is followed by a simple questionnaire used by the author and advice about the questions to ask after the form has been filled in.

This book is a valuable tool for doctors performing dive medicals, as well as diving instructors and diving professionals. Available from Best Publishing Co. 800-468-1055



How To Photograph Underwater

An advanced book about the techniques and skills needed to make unique underwater photos. It covers equipment, film, and procedures used by professionals.

Norbert Wu, in his new book *How to Photograph Underwater*, says "This is an exciting time to be an underwater photographer. With the new and easier-to-use equipment and the new electronic, autofocus cameras, underwater photography



is almost foolproof."

Almost foolproof, but not quite. This book is filled with tips and hints for amateurs, divers and pros on techniques and tricks that are not covered in any other book. The ideas have been compiled through years of experimentation and work with other professional photographers.

More than 125 color underwater photographs illustrate the success that is possible with underwater photography. Examples of close-up and wide-angle photography are inserted throughout the book to make the descriptions more useful to the reader.

Advanced topics including pushing film, flash techniques, under/over shots and making green water look blue. Finally, a special chapter is included for individuals interested in marketing their images. Available from Best Publishing Co. 800-468-1055

HYPERBARIC MEDICINE PRACTICE

Hyperbaric Medicine Practice, edited by Dr. Eric P. Kindwall, M.D. is the definitive text on hyperbaric medicine. With the information available on HBO so voluminous today, it is no longer possible for a single person to be an expert in all areas of hyperbaric medicine. Thus, each of the 36 chapters in the 665-page book was written by an expert in one of the many aspects of hyperbaric medicine. An international body of more than 40 scientists, clinicians, and physicians provided the material on practical information on the application of HBO in the treatment of patients.

The book describes and clarifies known mechanisms of action and treatment protocols for both newcomers and experienced practitioners of the field. Available from Best Publishing Co. 800-468-1055.

My Personal Laser Beam

Product review by Capt. Eric Takakjian

Back in the mid 1970's the most popular dive light among wreck divers was the D/A Bug Diver, a rugged light with a heavy duty aluminum housing. Although a very bright light for its time, it would consume its load of ten "D" cell batteries at an alarming rate. You could always spot the veteran wreck divers on the boat, because most if not all the yellow paint was worn off of their lights. At the time, dive lights came in three colors, yellow, black, and clear. The number of lights on the market could be counted on one hand. My Bug Diver gave me years of good service.

All this has changed. Today there is an overwhelming variety of lights on the market to choose from. Lights come in a myriad of colors, styles, sizes, and degrees of brightness. Fortunately for the serious wreck diver shopping for a primary light source, the field is narrowed considerably. Many of the lights on the market are unsuitable for the task. They either don't provide enough light, or are not durable enough for serious wreck diving.

A light needs to have some basic ingredients for wreck diving. First it needs to be bright enough to cut through dark, and sometimes silty water, second it needs to have a long burn time, since most of the time the light is on the *entire* dive, and third it needs to be able to take a beating. For the past year I have been putting a light through just that kind of beating and have found it to be the best all around primary light for wreck diving — the Blue Water Technology Dive Light.

The light's rugged marine grade



aluminum housing is reminiscent of the Bug Diver, but that's where the similarity ends. Utilizing modern materials and technology, this light provides over an hour of burn time at a full 55 watts. That's over three times brighter than most 8 "D" cell lights are, and almost twice most hand-held rechargeables. A locking on/off switch prevents the light from accidentally turning on in your gear bag or box, and also is used to adjust the beam spread from spot to flood.

The light comes with a charger, capable of recharging the battery pack overnight. The cushioned handle provides a well balanced grip, and a strong location for attaching a lanyard or clip. The handle is welded to the housing, so there is no possibility of the light being lost due to a loose handle. A special military spec coating on the exterior prevents corrosion, and is highly scratch resistant. My Blue Water light has withstood day in and day out abuse and has performed flawlessly for over 200 dives, under a variety of conditions. I've nicknamed it "My Personal Laser Beam."

Available from Blue Water Technology Inc. - Succasunna, NJ, 908-234-9264

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New Products

Diver-Held Camera



J.W. Fishers Mfg, a longtime manufacturer of underwater video and search equipment, has just added a new diver-held camera to their line. The DHC-1 was designed for commercial and technical diving applications. It can be used as a diver-held camera or the handle can be removed for fixed-mount applications.

The system was specifically designed for inspection work in down to 500 foot depths. The case is constructed with high impact corrosion proof PVC for years of trouble-free operation. The very low light black and white (std) camera, or color

(optional) camera, produces sharp high resolution video images which are sent to the surface for viewing on either a video monitor or recorded on a VCR for repeat viewing. Powerful lighting is provided by two 100 watt tungsten halogen lamps. The system is powered by 120 vac. Options include: monitors, 12 vdc (inverter) or 220 vac operation, up to a 1000 ft cable, carrying case, and a spare parts kit.

The DHC-1 is an ideal tool for hull inspection, bridge inspection, or any of the numerous underwater inspections needed today by commercial and technical divers. The camera is slightly negative and weighs less than 6 oz. in the water. The system comes standard with 150 ft. of cable and an underwater connector at the case. Contact: J.W. Fishers Mfg. Inc. 800-822-4744

Traser "Night Diver" Watch

The U.S. Navy Seals have recently selected the Traser "Night Diver" watch for use in their ops. We checked out this well-made Swiss-quartz ticker, and it brought us back to the simple, solid dive watches of the sixties. Water resistant to 660 feet, with a unidirectional bezel, the Traser boasts that it's the "world's brightest watch." While we couldn't technically test that claim, it is very bright in the dark. The illumination system



requires no external light to "charge," and continually glowing light sources are placed in the dial, bezel and all watch hands.

Meeting lots of mil specs, the Traser is also in use by the Army, Air Force, Berets, Secret Service, and the Navy's E.O.D. (Explosive Ordinance Disposal) division. We found it to be attractive, light, well-designed, and economically priced. Next time we need to dispose of explosive ordinance, we know what watch we'll be wearing. For more information: Envirotech Industries Ltd. Ted Dalmazio 718 256-8092

Pocket Mask



Laerdal has announced new enhancements to its popular airway adjunct, the Laerdal Pocket Mask. In keeping with Laerdal's tradition of updating rather than out dating, these enhancements are compatible with all existing Laerdal Pocket Masks.

Laerdal's new Pocket Mask offers double barrier protection by way of a new disposable filter and an improved one-way valve with lower inspiratory and expiratory resistance. The filter, which fits on the underside of the mask, is positioned to protect the valve from blockage by vomit while allowing free passage of expiratory gas away from both the rescuer and victim. The one-way valve is also easier to attach, has a larger mouthpiece and can be cleaned for reuse during training.

Contact: Laerdal at 800-431-1055.

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Diving the Relief Ship

by Kirby Kurkomelis

It was a beautiful July morning when we reached the water's edge of Rockaway Beach, New York. I sat down on the sand rubbing my shoulder which had been broken in a car accident. Next to me, my dive partner Frank sipped his coffee in the early morning sun. A cool breeze washed white water onto the beach; a group of seagulls searched the water for small shrimp dancing through the waves. In the distance we could see the Lightship, commonly referred to as The Ambrose Tower, guarding the entrance to New York Harbor. One week earlier we dove 1 mile southeast of the Ambrose Tower on the *Relief Ship* (WAL- 505).

New York Harbor is one of the most traveled channels in the world. Anchor in place, 9 miles off shore, the U.S.C.G. *Relief Ship* had two 60 foot long masts, a 60,000 candle power oscillating light and a large foghorn. A friendly beacon to help navigation and aid seaman in bad weather or dense fog.

During the early morning hours of June 24, 1960, while standing guard in the middle of Ambrose Channel in dense fog, the *Relief Ship* with her beacon flashing brightly and foghorn screaming at regular intervals, was struck by the *Green Bay*.

The freighter *Green Bay* was cautiously steaming through Ambrose Channel on route to Ethiopia when it struck the lightship on her starboard side just aft of amidships.

Luckily the lightship's crew abandoned ship and made it into their life rafts to be picked up later.

We boarded the charter boat *Jeanne II* with 6 advanced, and 5 dive master students. The boat took a slow ride out of the Rockaway Beach inlet towards Ambrose Channel. Every student knew his job. They were all going to have a great day of diving and fun. With beach dives, night dives, underwater navigation, and search and recovery under their shorts, the final dive would be a dive on the *Relief Ship* in 70 fsw to 110 fsw to the bottom. I briefed them one more time. I had my students check their gear, reels, lift bags, lights, pony bottles, computers, and their dive tables.

The crew anchored the boat, the captain shouted "Show time." In groups of three, divers descended down the anchor line, each checking his gauges. At 45 fsw I could see

the deck of the lightship. Swimming on the deck was a group of porgies chasing small bait fish swimming in and out of her deck ribs. Once on the bottom, I could tell where the freighter hit the lightship — twisted wreckage. But the rest of the ship was intact. I signaled to my students to be back at the line in 18 minutes.

Swimming along the deck at 73 fsw, I could see a large opening in the hull. We saw areas where a diver could easier penetrate, but that was not in our dive plan today. Plenty of sediment and mud, if disturbed, would cut down on our visibility, which was about 20 fsw.

Peering into one of the square holes I saw a stairway going down. Staring me right in the face was a pair red tentacles belonging to a 4 pound lobster who couldn't make it down the dark stairs. Heading towards the stern we could see one of the long masts hanging over the side with heavy cables touching the sand. I looked down at my computer — it was time to head amidships where the anchor line was tied in. Judging by the numbers of bug bags filled with lobsters, all the divers had a great time. One by one each diver swam up the line, each checking his gauge and rate of ascent. At 15 fsw each diver took his safety stop. I took one last look down and said to myself: "I should have gotten another lobster." ■

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- | | | |
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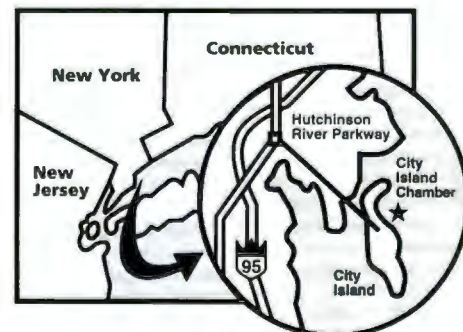
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