ADVANCED DIVER MAGAZINE

ISSUE 28

- CURACAO
  ABC Islands
- Richard Harris Photography
- Virgins, Violence & Videotape
  Yucatan, Mexico
- Leigh Bishop's
  Shipwreck Photography
- Wreck of the RBJ
  Florida, USA
- NOOTKA SOUND
  Vancouver Island, BC
- DOC DEMILLE or Bust
  Florida Keys, USA
- MOZAMBIQUE
  Whalesharks, Mantas, & Wildlife
  Africa
- Wreck of the USSR GORDYI
  Gulf of Finland
- Gold Hound Treasure Divers
  Florida's Treasure Coast
- Wreck of the MARQUETTE
  Lake Superior

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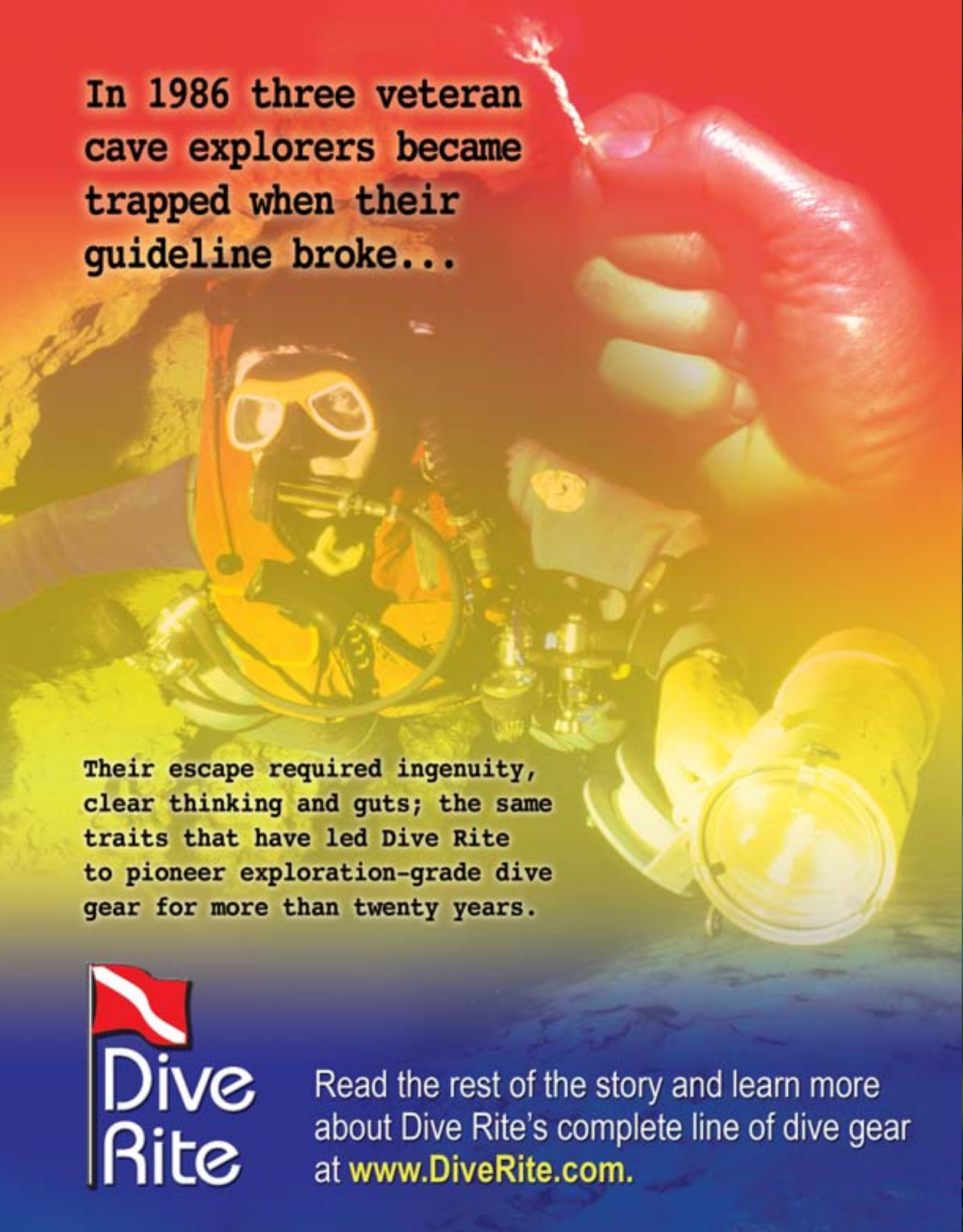
ADM FEATURES

Issue 28

Cover Issue 28

Pixnat producer and videographer Nathalie Lasselin documents ancient human remains discovered deep within a Yucatan cenote.

Photo by Curt Bowen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Publisher's Notes

2008 is barely out of the starting gate, and is already shaping up to be a year full of big plans for the staff of ADM. Our calendars are already filled for most of the year with new dive destinations, scuba events, and places that hold the hope of new discoveries and challenging explorations.

Advanced Diver Magazine continues to be the world's leading advanced open water to technical dive publication. The response to the new e-magazine has been terrific — ADM E-Zine has taken off with a jackrabbit start with over 36,000 downloads for the first two issues.

With all this action going on, you'd think that another new venture would be out of the question. Far from it! Sitting in one place for more than a few minutes is *not* my style. Creative activities must continue to evolve, and new out-of-the-box ideas must be brought forth. With this said, ADM has started a new HD video production company called **ADM Productions**. We are looking forward to collaborating with some of the best talent available. Teaming up with other video production professionals, there should be little we cannot accomplish — both above and below the water.

ADM's main desire is to support exploration, encourage documentation, and publish new discoveries. But the costs of exploration continue to skyrocket, creating a financial dilemma for those teams striving to be the first in discovery. With this in mind, ADM has taken the first steps toward the creation and development of the **ADM Foundation**. A not-for-profit organization that is designed to gather and assist with exploration resources, be it financial, equipment logistics, or dive team personnel.

So 2008 starts off with a full plate of exploration covered with black pepper gravy and mashed potatoes, a heaping side of collard greens, a slice of granny's apple pie, and a cool glass of southern sweet iced tea.

Don't be shy! Belly up and getcha some.

Dive...Explore...Discover!

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Curt Bowen

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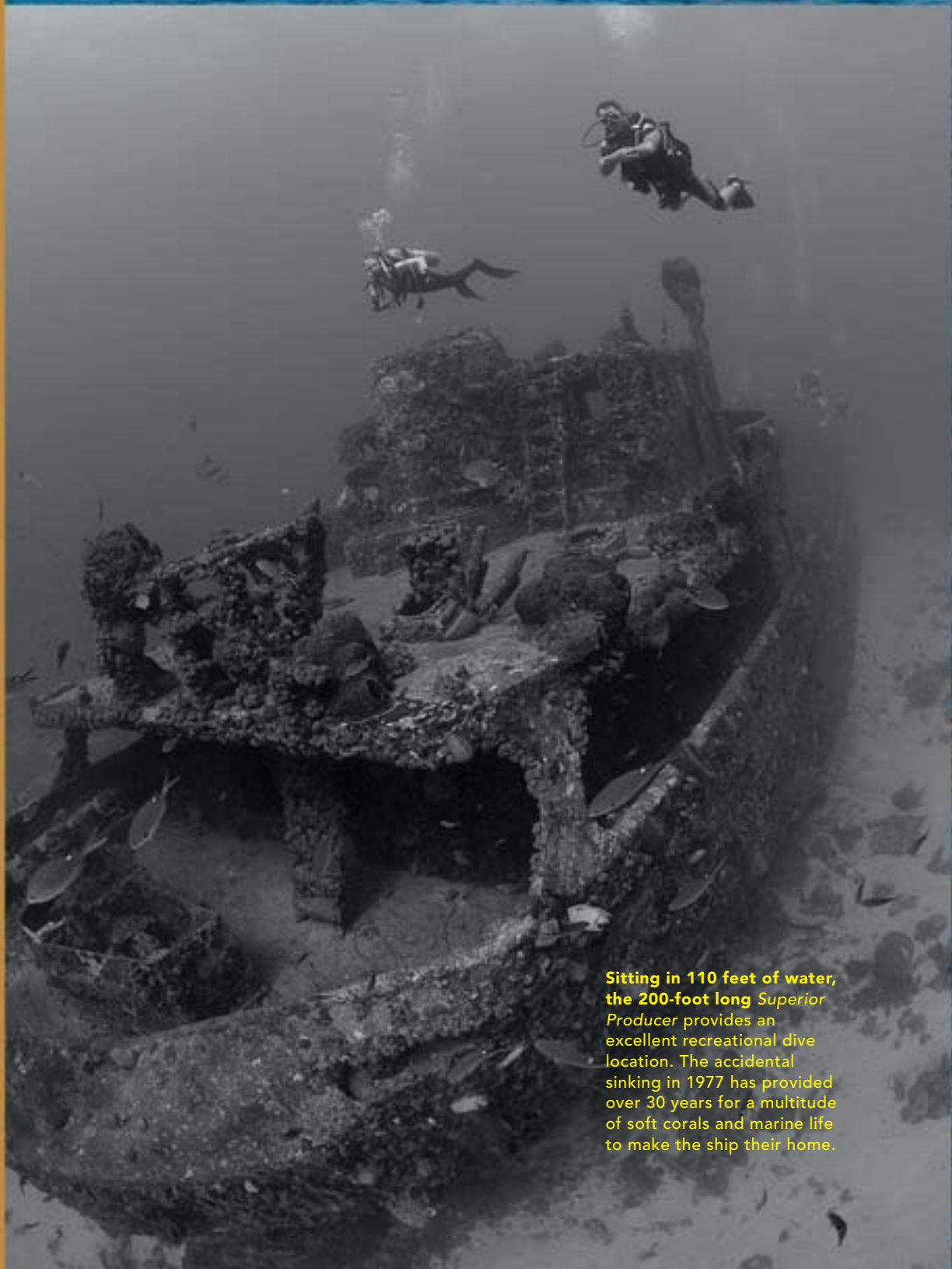
CURACAO



Sitting in 110 feet of water, the 200-foot long *Superior Producer* provides an excellent recreational dive location. The accidental sinking in 1977 has provided over 30 years for a multitude of soft corals and marine life to make the ship their home.

DEPTHS UNEXPLORED

Text and Photography by Curt Bowen

Since I was in Aruba conducting a photo shoot, I decided to take a few days to do the quick 45-minute flight over to Curacao. As my aircraft glided in for a landing, I watched from my small window as the island quickly approached. Gigantic beach resorts enclosed by long palms lined the shoreline, small houses dotted the interior landscape, and colorful city buildings surrounded a large protected inland bay. But what caught my eye more than all these man-made objects was that the light blue water along the shores faded quickly to dark blue within hundreds of yards.

This could mean only one thing to a deep diving freak like myself: depth and plenty of it just a snorkel from land. Along with depth comes new exploration, and I was here to see just what secrets Curacao might be hiding beyond the normal recreational limits of open water diving.

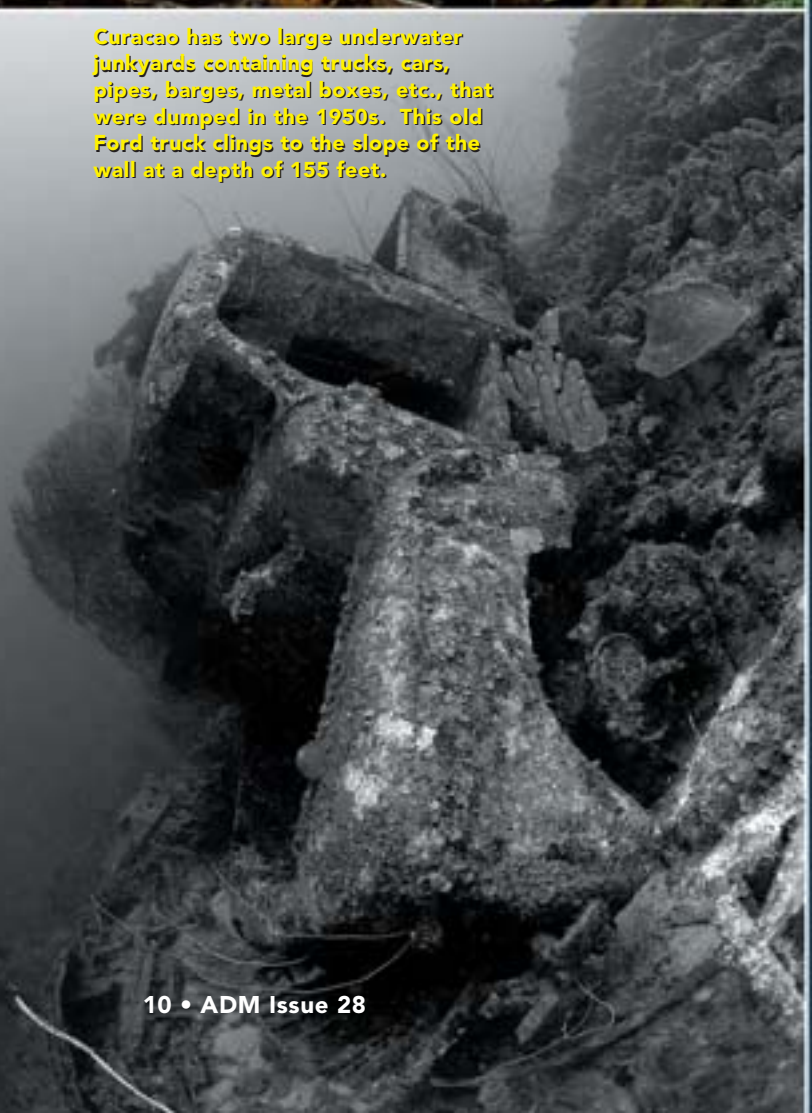
On any good recon trip, you first must contact some type of local resource for dive gas, tanks, dive boats, and local water knowledge. With a little pre-planning, the island tourism board had already hooked me up with a well-known local shop called Caribbean Sea Sports, owned by Tom Zeck.

Caribbean Sea Sports is conveniently located on the beach just outside the Marriott beach resort. This full dive training facility has all the equipment, staff, and dive vessels for any recreational dive group. But as in most recreational dive facilities, they are always cautious when some dive cowboy shows up using different gear, asking to conduct longer, deeper dives than normal, as they should be for the sake of safety.

Since this was just a recon trip, I did not bring along my rebreather but fell back on the trusty, easy-to-pack, lightweight, armadillo side-mount harness. And yes, God forbid, I might admit to diving that ancient dive gas called – AIR.

After introducing myself and going through the standard liability sign-your-life-away legal forms, the professional staff showed me around the shop and fill station. The shop leaves a stack of aluminum 80 cylinders conveniently on the deck for divers to grab for unlimited shore dives. Commandeering two cylinders, I set up my side-mount harness. And with a newfound dive buddy/model, Shani Shmueli, was off with a camera for a see-what's-there dive checkout.

Divemaster Brigitte Achterberg hovers above a carpet of hard corals. Curacao is known for its immense number of corals.



Curacao has two large underwater junkyards containing trucks, cars, pipes, barges, metal boxes, etc., that were dumped in the 1950s. This old Ford truck clings to the slope of the wall at a depth of 155 feet.

Just as I had suspected, within a five-minute swim from shore the coral-covered bottom dropped quickly to about 70 feet, then the wall appeared. Not a vertical wall here, but more of a steep sloping wall covered with large coral heads and colorful fish. Stopping at 200 feet, the wall continued to drop into the darkness -- a perfect location for beginner OC trimix and CCR diver instruction.

The next morning, I joined the dive facility on their PRO 42 dive boat, conveniently named *Explorador*, to dive some local wrecks. The first location was the wreck of the 200-foot *Superior Producer*. The Superior Producer sank by accident in 110 feet of water in 1977 immediately after leaving the harbor. Carrying a mixed cargo of liquor, clothing, and luggage, local divers quickly salvaged as much of her cargo as possible. The shipwreck is in surprisingly good condition, and contains a large variety of soft corals, sponges, and reef fishes.

One of the more important people to get to know and suck up to for recon trips is the local dive vessel captain, especially if they have been diving locally for many years. I struck gold when I met Captain Raul Granja who, after getting to know me better, spoke about some wrecks that others do not visit due to the deeper depths. Luck would have it that Raul was taking an open water trip to the reef just beside one of these deeper wrecks in the afternoon, and there was space on the boat for one more diver.

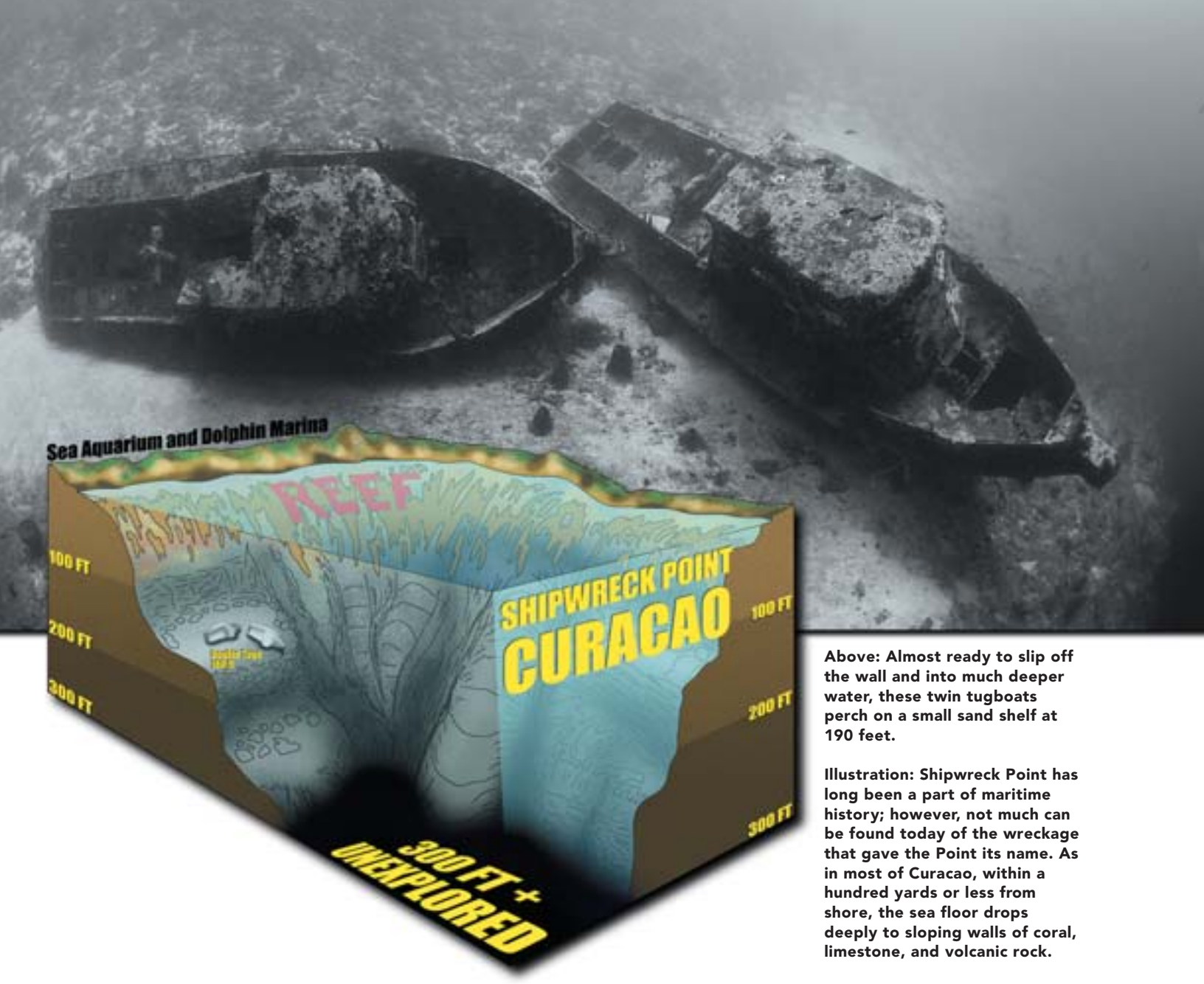
The shallow reef that the open water divers were enjoying was pristine, filled with large corals and thousands of small fish. Beyond the shallow limits of the recreational reef lay a wonderland of man-made objects strewn around like matchbox toys on a mountainside. An underwater junkyard of trucks, cars, boats, metal hoppers, beams, and poles covered with years of marine growth and inhabited by millions of tiny reef critters. Let the new divers keep the reef -- take me to the junkyard any day! And, just like the captain had said, at the deeper sections of the junk pile there was a nice 70-foot long tugboat lying on her port side in about 180 feet of water. Encrusted with long strands of soft corals, this small tug produced some excellent photo opportunities, as did many of the old trucks and objects in the junkyard.

When in Rome, take Caesar and some of his staff out drinking, if possible, in the evenings. If you're lucky, you might pry some more dive secrets from their pockets, and a better ranking on their vessel. The evening beers paid off as I gained knowledge of another deep junk pile containing a large barge, and the possibly fabled twin tugs on a deep ledge.

Amazingly, it just so happened the next morning that the dive vessel had some destination changes, and they just so happened to be going to some shallow reefs in the two areas we had spoken about over several cocktails the night before.

Caribbean Sea Sports open water instructor Shani Shmueli poses above a giant orange sponge.

At the deepest section of junkyard number one, this 80-foot tugboat lies covered with long strands of corals and sponges. The small tug makes an excellent wreck photo opportunity.



Above: Almost ready to slip off the wall and into much deeper water, these twin tugboats perch on a small sand shelf at 190 feet.

Illustration: Shipwreck Point has long been a part of maritime history; however, not much can be found today of the wreckage that gave the Point its name. As in most of Curacao, within a hundred yards or less from shore, the sea floor drops deeply to sloping walls of coral, limestone, and volcanic rock.

I was joined by Divemaster Brigitte Achterberg who had graciously offered to be a dive model for my camera. Just as the day before, the recreational divers enjoyed their dives amongst the shallow reef corals. Brigitte and I, however, ventured in the opposite direction…down the walls and into a large valley of oil pipes, metal boxes, unknown type truck frames, metal platforms, and a large 100-foot long barge sitting upright at 160 feet on the sloping sea floor.

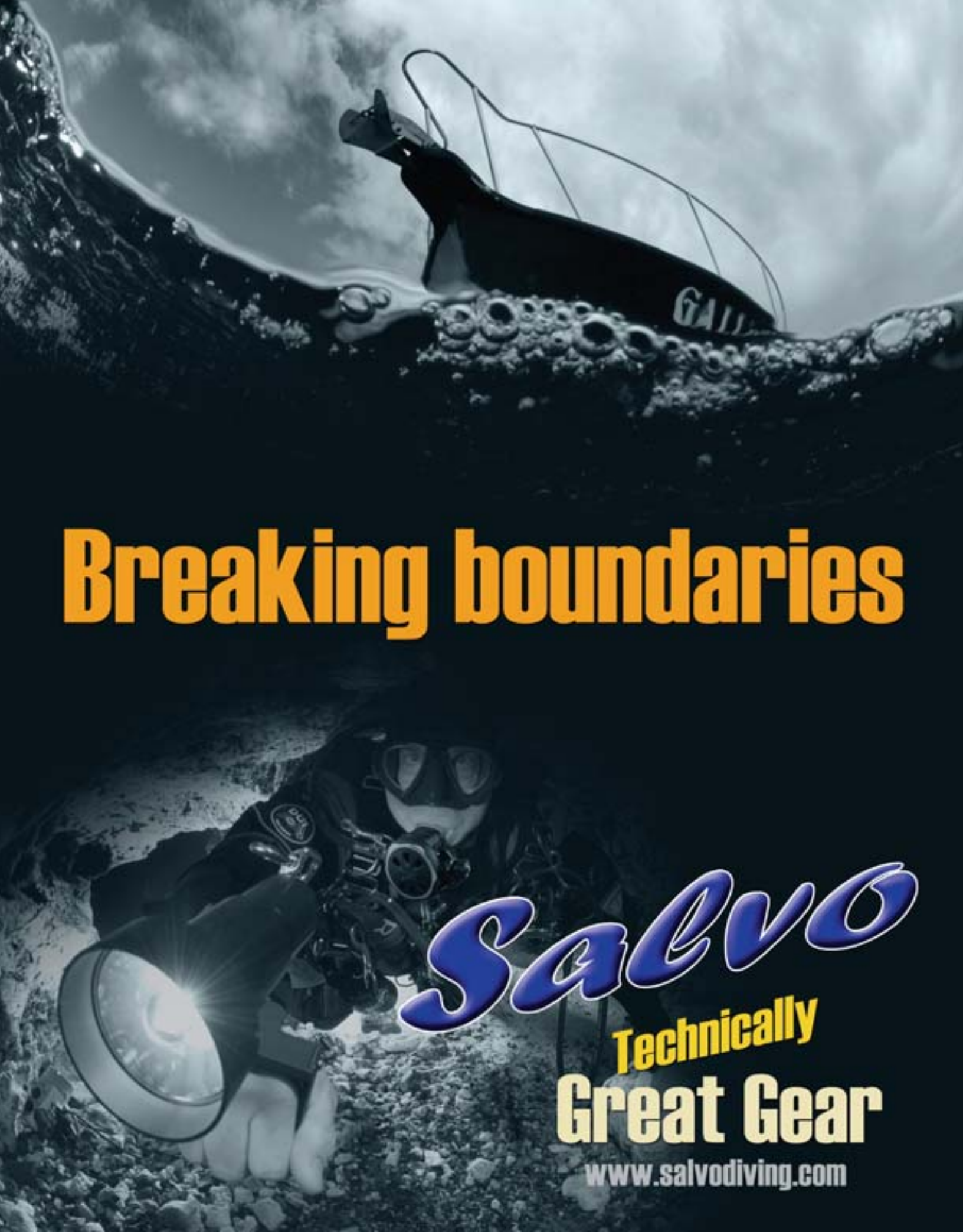
After a hundred shots or so in the junkyard, Brigitte led me over the next coral finger and pointed down the sloping wall. There in the distance I could make out the shapes of two tugboats sitting on a small sand ledge. Descending to 200 feet, I gathered as much natural sunlight as possible, bumped up the ASA on my Nikon, and fired away. In a short period of time, I had managed to shoot about fifty images from all different angles.

Ending the shoot, I found myself hovering out over the wall in front of the tugs. Looking down, the deep blue depths tempted me to explore, but my dive computer and pressure gauge quickly encouraged me to terminate the dive and head up for decompression.

Back in the shallows, I found myself a soft, white sand patch to relax in as my thirty minutes of remaining decompression ticked away. During my slumbers, I was stared at by numerous recreational divers who wondered what the hell I was doing sleeping on the ocean floor.

My stay in Curacao was short, but provided enough time to complete a general overview of the excellent recreational wreck and reef diving. More important is the fact that ships have been visiting Curacao for over 400 years, and it seems that everything below 150 feet is virgin territory. Now all I need to do is return with my rebreather, find a little helium and oxygen, and the walls are mine to claim.

Junkyard number two contains this giant truck, metal boxes, a 100-foot long barge, pipes, and a plethora of miscellaneous unrecognizable metal items. This is truly a unique dive, an excellent location for macro and wide-angle photography.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Richard "Harry" Harris

ADM Featured Photographer

Why do I take photographs underwater? Initially, it was to share what I was seeing with my non-diving friends. Later, I got caught up in the impossible quest to take a shot that I was truly 100% satisfied with. More recently, I have had this urge to take photos in places that many people simply can't get to, let alone take photos in — like deep wrecks and remote caves! Then again, maybe I just like gadgets and UW photography offers endless scope for those!

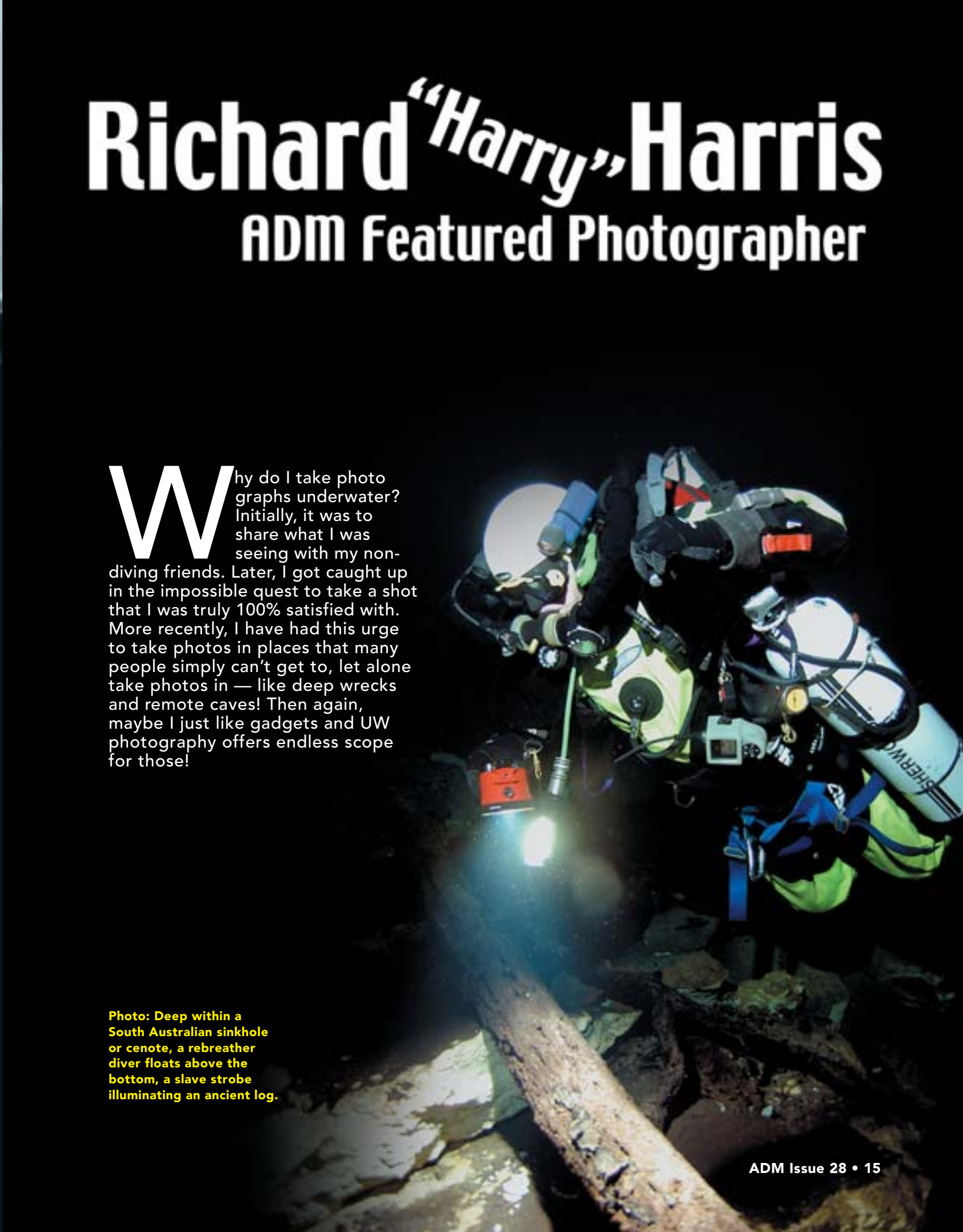

Photo: Deep within a South Australian sinkhole or cenote, a rebreather diver floats above the bottom, a slave strobe illuminating an ancient log.

Whatever the reason, one thing for certain is that photography has helped me maintain a near lifelong passion for diving. I started diving in my early teens, and soon after shared the cost of a Nikonos II with a school friend. Black and white photos of the local reef fish, developed and printed at home in dad's wine cellar, soon left me frustrated because of the lack of expensive strobes. So I gave it up for a few years and carried on diving regardless. But the thought was always in the back of my mind, so when I finally got a "real" job I treated myself to a second-hand Nikonos V, complete with a strobe. From that time on, I have had numerous camera systems. I am currently loving the digital revolution with a Nikon D200.

Most photographers start with macro shots underwater because it seems pretty easy to get good exposures and framing. I recall getting those early slides back and being astonished at the colour and detail that film like Velvia would give me. But then I would look at work by guys like Roger Steene and think that I

Top: The Leafy Seadragon is the marine emblem of South Australia, and is highly prized by underwater photographers.

Middle: Backlit with a slave strobe, a diver carries radiolocation devices into Engelbrechts West cave in South Australia. After placement in the cave, they will be located from the surface, and then used to better survey the site.

Bottom: The Australian Sealions that frequent the temperate southern oceans make delightful subjects and even better playmates! The only worry for the photographer is that they are the top of the menu for the Great Whites that also frequent the area. Nikon F80, natural light, 16mm fisheye.

would never be in their league. So I bought a wide-angle lens and tried to emulate other great photographers with shots of divers curved gracefully around gorgonian fans, or schools of jacks and barracudas encircling the sun. But thanks to the Doubilets of this world, I felt my shots never measured up and again I moved on. Finally, as my interests in diving led me into caves and onto deeper wrecks, I found an area of photography that I could really get my teeth into. Not that I am yet completely pleased with my results, but at least I feel I am photographing subjects that few or no other divers have taken photos of before, in places that only a minority of divers are visiting.

Inspired by guys like Leigh Bishop, Martyn Farr, and Neil Vincent, the ultimate photographic thrill for me now is to capture previously un-photo-

Top: Rebreather divers at the Poor Knights Island, New Zealand. The lads are obviously looking forward to the dive! This was taken during a day that was too rough for the real target of the expedition...the RMS *Niagara*.

Middle: At over 130m depth in rough seas and strong currents, photographing the Liberty ship *William Dawes* off the New South Wales coast was particularly challenging. Bringing home any usable images from a dive like this is really satisfying. Nikon D200 in Nexus housing, 10.5mm fisheye, Inon strobes.

Bottom: A one-meter diameter hole in a cow paddock conceals a 125m deep cenote that has the dimensions of a football stadium! When the sun shines overhead, a laser-like beam of light penetrates the water column and illuminates the site known as The Shaft.

graphed wrecks and caves. Modifying camera equipment to get good images in the complete darkness of a cave, or at double the rated depth of the camera housing, are especially satisfying to me.

My diving addiction is subsidized by my job as an anesthesiologist and physician in diving medicine. It is supported by my wife and children who seem to understand my compulsion to dive in weird, deep, or dark places! I hope the next 30 years of diving will be as interesting as the last, and that when I'm in my 70s I'll still be about under a pier somewhere with my 100 mega pixel camera!

Richard Harris lives in Adelaide, South Australia. He has published articles and images in numerous diving magazines and books worldwide. His informative website on technical diving, caves, and photography can be seen at

www.divedoc.net.

Top: I enjoy taking split-level shots like this one of Leigh Bishop in New Zealand. Digital cameras have given photographers the opportunity to be bolder with situations involving difficult exposures. No expensive film to waste!

Middle: Fellow photographer Dean Chamberlain lines up two moray eels, presumably with me in the background of his shot!

Bottom: In the spirit of David Doubilet...I was happy to copy his idea when a school of tiny catfish literally rolled over my macro port. Many of my images have been inspired by the masters of underwater photography.

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Virgins, Violence & Videotape

ADM Productions on Location in the Yucatan

Text by ADM Photojournalist Jeff Toorish
Photography by Curt Bowen and Jeff Toorish

When most people think of flying into Cancun, Mexico, images of skimpy bikinis, sandy beaches, and fruity rum drinks come to mind. But for a team of intrepid ADM explorers, writers, photographers, and videographers, Cancun Airport is merely a waypoint on a journey into the harsh scrub jungle of the Yucatan.

Forget what you know about Mexico

The Yucatan, and much of Mexico, remains mostly undiscovered and undeveloped, filled with places most tourists will never see. There are mysteries, hidden Mayan relics, and human remains awaiting discovery. Advanced Diver Magazine publisher Curt Bowen and other ADM explorers have made a decade-long commitment to return to Yucatan each year in an effort to help archaeologists and government researchers learn more about the area. It is a commitment to preserve the history of the Maya, who dominated this part of Central America for thousands of years and then nearly vanished. Much of the legacy of the Mayan culture remains, but much of it is hidden, waiting to be discovered.

Photo: 2008 Yucatan Expedition's Director of Photography, Nathalie Lasselin, shoots HD footage of ancient human remains discovered deep inside Cenote San Antonia Excucul

Exploring and documenting the Yucatan underground requires a massive amount of climbing and rappelling equipment. As explorer Brett Hemphill is searching the underground, videographer Nathalie Lasselin is lowered into the cave entrance to capture the possible excitement of new discoveries.

This expedition brings a new and complicating twist: in addition to exploration and discovery, a team from ADM Productions will videotape the entire expedition. Director of Photography Nathalie Lasselin, and videographer Olivia Aravecchia, from Pixnat Productions recorded the team's activities for a future joint ADM/Pixnat video production. They worked on land and deep within Yucatan's mysterious underwater caves.

Other team members are veteran cave divers and explorers Brett Hemphill and Jon Bojar; cave diver Kim Smith, whose company Jetsam, manufacturers the KISS rebreather; Mexican archaeologist Norma Garcia; ADM Chief Photojournalist and explorer Jeff Toorish; long time guides Enrique Soberanes and Elmer joined the team in Homun, Mexico.

'It's a cigarette lighter, 007 – but not just a cigarette lighter.'

You know that scene in every James Bond movie when equipment-meister Q shows 007 his new and nifty gear…like the cigarette lighter that is also a welding torch? It means Bond always has exactly the gear he needs for his espionage escapades. Every piece of gear is used, and there is never a crucial piece of equipment not at hand.

Unfortunately, that's not exactly how it goes on an expedition. Each explorer and diver gears up in a different location. That makes communication very important. For example, the team needs a good tool kit for in the field fixes. But the team does not need half a dozen tool kits taking up space and weight. One person brings the tool kit. The same rule applies to anything the team can reasonably share, but it requires strict coordination.

For this trip there were also additional questions about exactly what kind of videotape cameras and which underwater housing would best suit the needs of the production team. Nathalie chose two Sony HVR-Z1U high-definition video cameras, one in a Seacam housing to record the expedition. Underwater lighting came from a pair of high intensity Solus LEDs. For the most part, we would employ natural light with bounce modifiers for above water videotaping.

Other photo equipment included Nikon and Canon cameras in Aquatica housings, Inon Z-240 strobes, and Underwater Light System (ULCS) strobe arms, the choice of most ADM photographers. Additional scuba equipment came from Dive Rite, and climbing gear from CMI Climbing and Rescue Gear.

Most of the team uses Armadillo side-mount harnesses as their BCD. Aluminum 80 tanks filled with air are pretty much all you can find for breathing gas in rural Mexico. Each member also uses a climbing harness and other gear of his or her choice.

There was a bit of a wrinkle at Mexican customs in Cancun. Customs officers were very interested in the team's equipment, specifically cameras and scuba gear. Any divers planning to travel to Mexico for a scuba/photo trip should check with Mexican customs for the latest policy on bringing your gear into the country – a concern that never seems to affect James Bond.

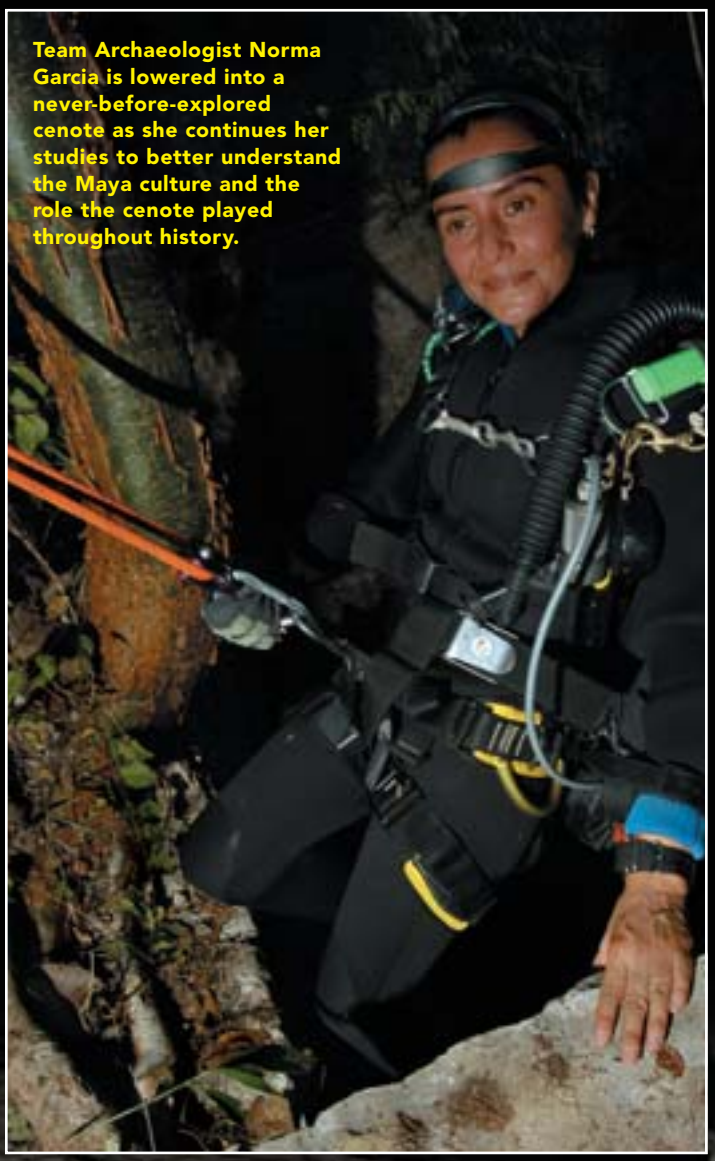
Dry Cave and Vampires

Traditionally, the first day of an expedition is primarily to check out gear, what sailors call a shake-down cruise. Travel can be tough on critical, life-support equipment so the team uses the first day for thorough checks of climbing, diving, and photo/video equipment. That was the idea at least.

This is a team of explorers and it is pretty much impossible for them to stop exploring, even for a short period of time. In Huhi, Yucatan, while Jon Bojar was testing his gear in a cenote, Brett Hemphill wandered off and discovered a large dry virgin cave nearby. It contained several deep passages. It was a perfect opportunity to explore and ensure the video gear had not been damaged in transit. The cave itself supported a large colony of bats, including vampires.

As team members crawled deeper into the cave, the bats quickly became curious, and within minutes they were literally whizzing past our faces. There were large deposits of vampire bat droppings, oozing with parasites and glistening a deep azure color. Vampire bat guano is extremely toxic so everyone did his or her best to stay clear.

This cave also sported something even more fascinating than flying rodents: elaborate cave markings, including handprints, most likely from Mayan times. The Mayans revered caves and often used them in ceremonies and for rituals. These markings are significant to archaeologists because they provide important clues to Mayan culture and daily life.



Team Archaeologist Norma Garcia is lowered into a never-before-explored cenote as she continues her studies to better understand the Maya culture and the role the cenote played throughout history.

Team explorer Jillian Morris poses beside an old Mayan hand-made wall we discovered deep inside a dry cave passage. Note the small door entrance located in the wall leading to an inner chamber. Another man-made wall was discovered beyond this, leading into an even deeper chamber.

Getting Wet

With the team out of the caves and cenotes, and the gear eventually all checked out, it was time to move on to our real mission: discovering, diving, and documenting cenotes.

Three cenotes stand out as memorable: San Antonia Excucul, San Miguel, and Cenote Carril. All three are the final resting place of human remains, but each has its own remarkable geological personality that can be even more fascinating.

San Antonia Excucul

As our two extended vans bounce along a narrow, uneven path through the jungle, the branches of trees, pricker bushes, and other plants scrape along the sides creating a tense, grating sound. The noise tells us we are deep in the bowels of Yucatan, and paved roads are only an occasional luxury. Atop distant trees there is ominous movement. A wake of vultures has perched to watch our progress. Their presence lends a sinister pall as we drive past. Seeing birds like that always makes me wonder what they waiting for…?

More than a dozen human remains are hidden beneath the waters of San Antonia Excucul (abbreviated to San Antonia). To enter, we must rappel through a narrow well shaft and drop about 40 feet to the water, after which it is a relatively straightforward dive.

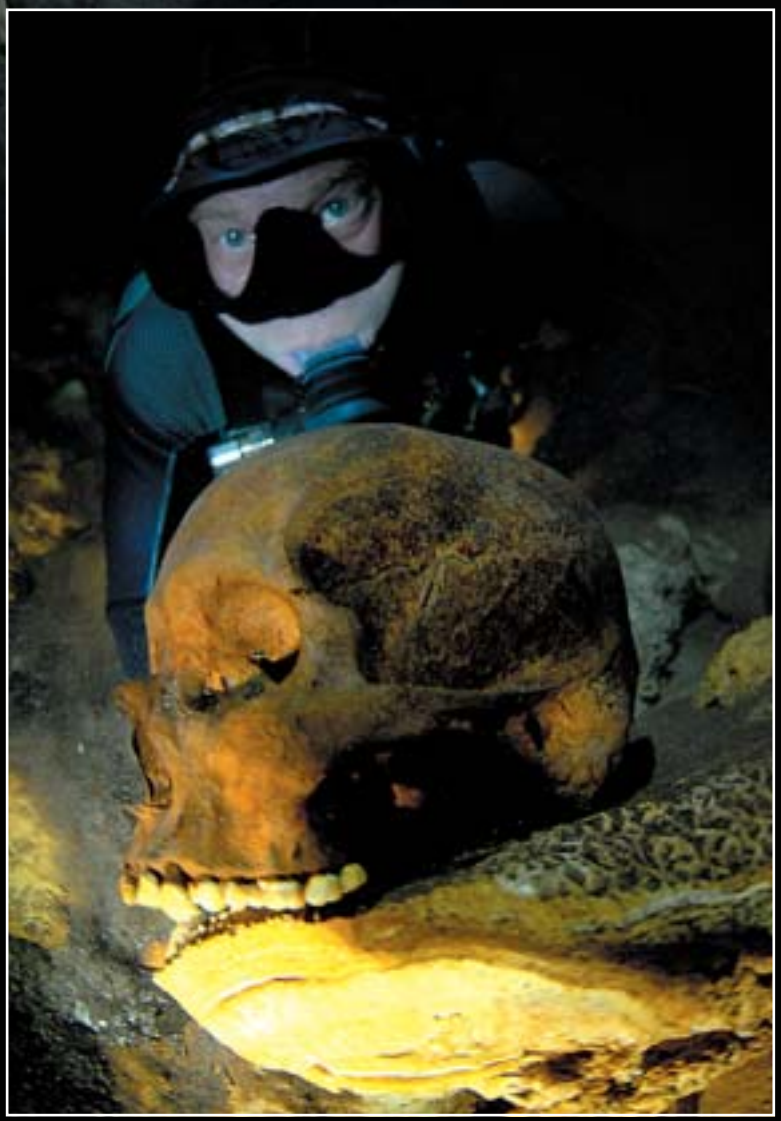
This would be a major video operation, with videographer Nathalie Lasselin in the water for about three hours. Lasselin was first into the water, and I dropped in immediately after for support.

While our emphasis was clearly on the video work, we would also need still photos. This presented a problem; normally, we would use strobes on the digital still camera. But the flash of the strobe lights would flare-out the video camera. The best option was to use the video lights only, with no strobes. This would mean the still photographers, Curt and myself, would have to work with the available light, which would be tricky at best.

Left: Explorer Brett Hemphill assists Curt Bowen's camera as he illuminates newly discovered underwater human remains.

Above: Searching for an alternative to replace underwater camera strobes, cave photographer Curt Bowen incorporates twin Solus SV1 video light heads capable of delivering over 2500 beam lumens. This technique allows the cave photographer to place multiple high-intensity lights and meter the camera as if shooting outside.

Right: Ending result from the shoot above.



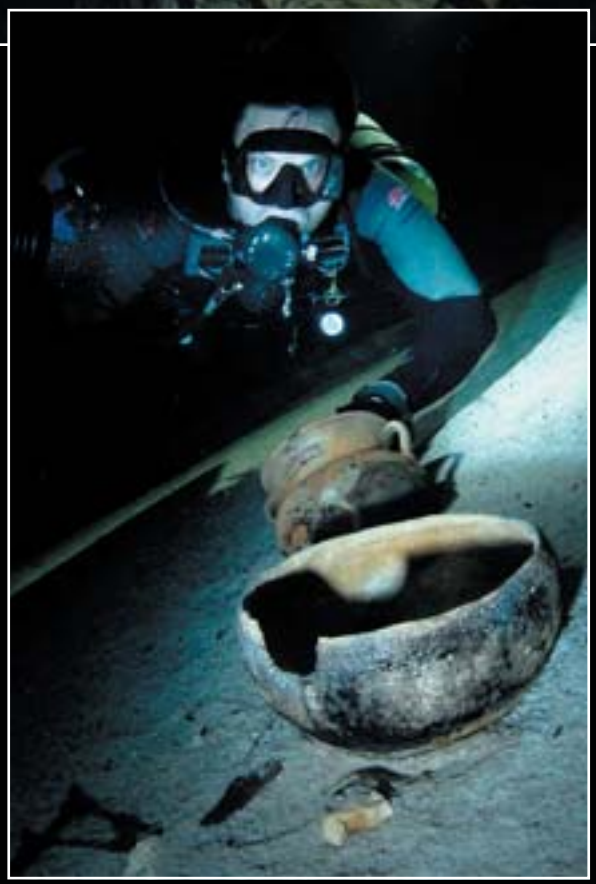
As we waited for the topside team to lower tanks and cameras, I noticed something moving across the surface of the water. As I shined my 24-watt Salvo HID light in the direction of the movement, I could clearly see what was headed our way: spiders. Lots of spiders. They looked like large, aggressive daddy long legs' rapidly skimming along the top layer of water toward Nathalie and me. The scene was vaguely surrealistic, reminiscent of a B-grade horror movie. A few gentle splashes and the concentric circle of waves sent the skimmers back to their respective lairs. We didn't see them again.

Diving San Antonia is breathtaking. As we corkscrew to depth around large rock outcroppings and debris and into the cave area, we come upon the remains of humans and animals. There is also evidence of the long-ago Mayan culture that made Central America home. We discover tools, shards of pottery, intact pots and other ceramics, which we carefully photograph and videotape.

Top: Team coordinator and explorer Curt Bowen rappels into Cenote San Miguel as the Director of Photography Nathalie Lasselin captures the event on HD video.

Middle: Jon Bojar examines a giant curtain of flowstones located high on the outer walls of Cenote San Miguel.

Bottom: Brett Hemphill discovers ancient Maya pottery nestled in calcite crystals inside Cenote San Miguel.



San Miguel

This is a true cave, with a deep passage that drops to more than 200 feet. It will be the deepest dive of the expedition, barring a significant new find. Curt Bowen and Jon Bojar will lead the team, diving to the deepest depth of 200 feet. Videographer Nathalie Lasselin and I will hang back a bit, with a maximum depth of about 150 feet and explorer Brett Hemphill will act as safety diver and spotter.

The team has a limited number of aluminum 80 tanks. This is exploration diving, so there is very little margin for error. Bottom time will be short, and we will begin racking up a decompression obligation very quickly. This will also prove to be a challenging dive for Nathalie because she is not used to side-mounting, and she must control the large video camera housing.

The geology of San Miguel affects its dive characteristics. The water is clear and blue with a depth of about 90 feet. But there is a thin layer of calcite that covers the top of the water in most places. Exhaust bubbles eventually break the calcite, causing it to float to the bottom of the cenote. The calcite causes the water to take on a milky look. But first, while the calcite is still in larger chunks, it looks like snow gently floating to ground.

The drop from the surface into the cenote at San Miguel is about 60 feet, and relatively simple. In all, five divers, ten tanks, two high-power Solus LED lights, one digital still camera, and one high-definition video camera went into the cenote. Making matters slightly easier, there is a large debris mound under the well opening, and while everyone had to be careful not to begin a cascade of silt down the side of the mound, it did provide a convenient place for staging air tanks.

This is a beautiful cave; and while there was serious work to be done, there was also a sense of great adventure. The dive team made a circuit about half way around the silt mound and then began swimming into the cave. Each diver had rehearsed his or her specific job, but timing was critically important. Video lights made it impossible for videographer Nathalie Lasselin to use hand signals. To further complicate the dive, Curt and Jon could not point their hand-held lights anywhere near the video camera because the housing's 180-degree dome port would completely flare the camera lens, ruining the video.

Hemphill used his light to illuminate Lasselin's hands; or, in some cases, gave the signals himself while staying above and behind Lasselin. In this manner, Curt and Jon could see the signals but Brett Hemphill's light did not affect the video camera.

The swim into the cave went smoothly, and generally as planned. Curt and Jon made their entry and Nathalie videotaped it. We immediately turned and started our return trip.

With a growing decompression obligation, the team began a slow ascent through a series of stops. It was then that one of my second stage regulators experienced a partial failure. It had been breathing wet for the past few minutes; eventually the wetness became a free flow with every inhalation. However, I could use my tongue to stop the flow.

Back at the church in Homun that evening, I could see the problem was a ripped outer cover on the diaphragm, essentially allowing water to seep into the inner chamber. For the next day of diving, I would switch to a back-up second stage.

Cenote Carril

This cenote presented the most daunting physical challenges of the dive because of the difficulty getting equipment to the small opening, and then getting explorers and photographers into and out of the hole.

Cenote Carril is a spectacular dive with a large, ballroom type cavern. Because of the extremely small surface opening, there is virtually no light penetration. It is a cave, for all intents and purposes. ADM teams have attempted to videotape Carril on two separate occasions, and both times the complications of geography and equipment failures ended the mission.

There are two features in Carril that together make it unique among cenotes in this part of Yucatan, one geological and the other archaeological. The first is a giant stalagmite, indicating that this cave was once dry. Hoping the third time is a charm, the plan was to videotape the stalagmite and also attempt to measure it for documentary purposes. Carril's second feature is a completely intact skeleton. Based on forensic evidence and the position of the remains, the victim was most likely murdered and disposed of in the cenote some time ago.

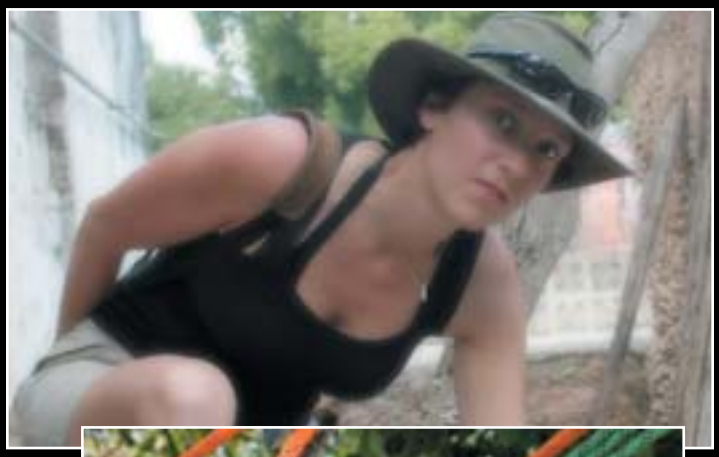
Because of the difficulty entering and exiting this cave, team leader Curt Bowen decided that the team would be divided into two. The first divers in would be Nathalie on video, followed by Norma, Brett and Curt. Everyone else would remain topside to assist. Once they had finished their work, team one would climb out and team two, consisting of Jon, Kim Smith, and myself would enter the cave for additional still photos. Only explorers with their full cave ticket would be going into Carril.

The team's video lights illuminate a complete human skeleton lying on her side. Undisturbed for possibly hundreds of years, her skeletal position tells a tale of accidental mishap...or maybe a premeditated murder.

The stalagmite in Carril is magnificent – huge and very difficult to photograph. Its size is hard to determine. It dominates this large cave and also makes for a handy reference point.

It is clear that Carril has never been visited by recreational divers. It is about 60 feet from the entrance to the water, but the drop is hindered by a small opening that is extremely difficult to navigate. There is no visible damage from human intrusion, and the light walls and silt are pristine. Delicate, thin stalactites drop from the ceiling, looking like long soda straws.

The remains of Carril's only apparent victim are intact. The form of the skeleton is clearly visible. The skull is slightly turned, as if sleeping. The color of the bones indicates this skeleton is probably not from the Mayan era, and one can only wonder how it came to its end in such a remote place. Based on the visible evidence, the victim was probably already dead prior to landing in this final resting place.



Above: Kim Smith, owner of Kiss Rebreathers and a sponsor of the ADM's exploration team, assists with lowering needed equipment into Cenote Miguel.

Middle: ADM Explorer Erik Foreman returns from the subterranean passages with new discoveries of virgin cave and ancient artifacts.

Below: Explorer Brett Hemphill poses under 25-foot tall giant bacon flowstone curtains located inside Cenote Carril, one of the Yucatan's most beautiful and well decorated caves discovered by the ADM teams.

The plan was successful, and the team captured unique video and photographs of Cenote Carril. Some of the photos you can see here, and there are more on the web at www.advanceddivermagazine.com. Watch for additional information on the release of the video.

The true purpose of any ADM expedition is discovery and exploration. In the case of Yucatan, it is also to pursue as much knowledge as possible about this fascinating part of the world. This trip proved a bit different than Yucatan adventures of the recent past. Normally, the explorers will split into two, three, or even four smaller teams, often to pursue different objectives, such as biological or archaeological research. This year, all members stayed as a single unit because of the video production.

This trip also saw greater exploration of fewer cenotes, allowing the archaeologists longer investigation at each location. Archaeologist Norma Garcia has made important observations about Mayan cultural practices, specifically related to human sacrifice.

Often people assume the human bones and skulls are from some sacrificial victim thousands of years ago. But even over the vastness of time, body positions often remain remarkably in place, which can tell trained investigators a great deal. Someone falling, or being pushed, into a cenote while alive will wind up in a very different position than someone who was already dead. Because of the longer time spent at each cenote, we were able to gather more evidence, including photographs and video, to help further unwrap the mysteries of the Mayan civilization.

Jeff Toorish is the Chief Photojournalist for Advanced Diver Magazine. He lives in Maine with his wife and children.

Advanced Diver Magazine will be embarking on more video production expeditions in the coming months and years. Watch for details in Advanced Diver Magazine, ADM E-zine, and AdvancedDiverMagazine.com

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Below: The 2008 ADM Yucatan Expedition Team members.
Left to right bottom row: Jeff Toorish, Enrique Soberanes, Elmer Echeverria, Nathalie Lasselin, Brett Hemphill, Olivia Aravecchia, Jillian Morris, Jon Bojar.
Left to right top row: Curt Bowen, Erik Foreman, Norma Garcia, Kim Smith

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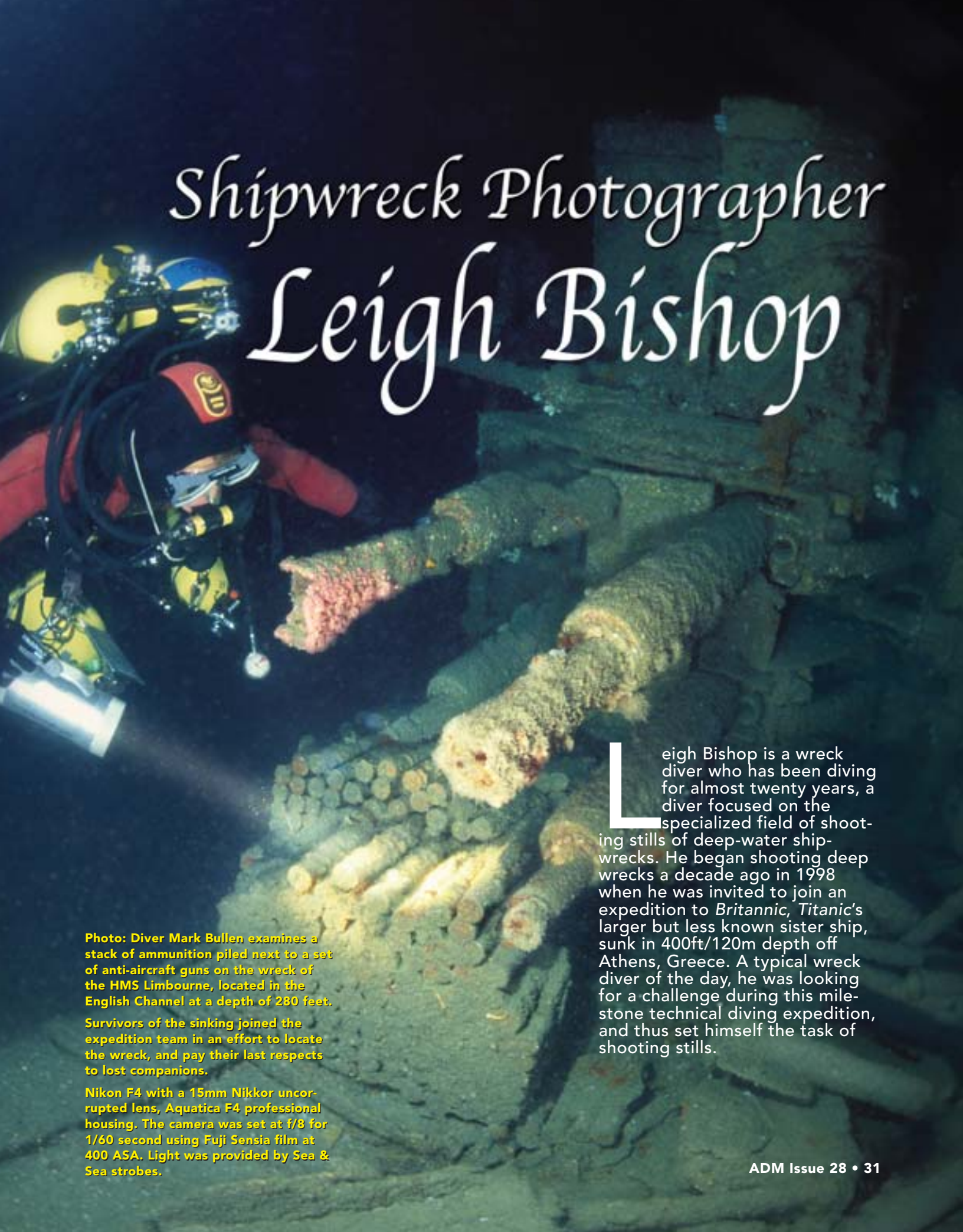
Shipwreck Photographer Leigh Bishop



Leigh Bishop is a wreck diver who has been diving for almost twenty years, a diver focused on the specialized field of shooting stills of deep-water shipwrecks. He began shooting deep wrecks a decade ago in 1998 when he was invited to join an expedition to *Britannic*, *Titanic*'s larger but less known sister ship, sunk in 400ft/120m depth off Athens, Greece. A typical wreck diver of the day, he was looking for a challenge during this milestone technical diving expedition, and thus set himself the task of shooting stills.

Photo: Diver Mark Bullen examines a stack of ammunition piled next to a set of anti-aircraft guns on the wreck of the HMS Limbourne, located in the English Channel at a depth of 280 feet.

Survivors of the sinking joined the expedition team in an effort to locate the wreck, and pay their last respects to lost companions.

Nikon F4 with a 15mm Nikkor uncorrupted lens, Aquatica F4 professional housing. The camera was set at f/8 for 1/60 second using Fuji Sensia film at 400 ASA. Light was provided by Sea & Sea strobes.

By the end of 1998, he invested in a Nikon F90x and Aquatica housing with some big Sea & Sea strobes. The housing was rated to 330ft/100m and the strobes to 200ft/60m, which was sufficient to see out the end of the 1990's diving the *Lusitania* and other wrecks. But then the projects with his team went deeper, as did his equipment. The next step was the famous ocean liner and gold ship *Egypt* lost off of France in 126m/415ft depth. The Aquatica housing stood up to all expectations, going well beyond its operating depth and, of course, brought the images to the surface.

It was on a five-week expedition to shoot the wrecks of the North Atlantic in the early part of the new millennium that Leigh's photography would take on a whole new dimension in the way shipwrecks are now photographed by him and others that followed. While shooting the majestic bow of the liner *Justicia* with flash photography in a depth of 230ft/70m, Leigh was not happy with the results. What he had seen with his naked eye was the image he wanted: this huge shipwreck disappearing into the distance in fabulous visibility. Thinking hard about this, he returned to the North Atlantic the following year with a new venture, "time exposure photography." The concept had been staring him in the face — simple time-lapse photography as used by land photographers. Armed with his Aquatica now mounted to a tripod system, he was able to use a multi-speed Agfa film that was pushed to as much as 1600 speed, and thus capture the ultimate image he was looking for.

Leigh went on to shoot many other wrecks using this concept, paving the way for a new dimension of underwater monochrome photography. He has been a member of just about every major deep technical wreck diving expedition over the last decade, and was the leader of the *King Edward* project in 1997, which became the first sport diving team of its kind to explore and document a wreck in depths

Photo: To capture the essence and sheer size of this wreck, model Richard Stevenson had to pause for 19 seconds while the camera performed a time-lapse exposure during the 2003 expedition. At 48,000 tons and almost 1000 feet long, Britannic is the largest sunken ocean liner in the world. Seen here at 400 feet, lying on her starboard side, the picture shows the props on her stern.

Nikon F90x, 16mm fisheye Nikkor lens, Aquatica Pro 90 film housing. An aperture of f/22 with Agfa Scala multi-speed film pushed to 1600 ASA. The entire system was attached to a Velbon tripod that was erected on the rudder of the wreck.

greater than 380ft/115m. Since then, he has systematically shot expeditions as they unfold above and below the water, reporting them as a photo-journalist. Now reaching 40 years of age, he continues to work as a full-time professional fire fighter as he has for the last 15 years, north of London where he lives. Wreck diving and photography is something he chooses to do during his time off at weekends and annual leave periods.

Another reason why he originally began shooting stills underwater was to collect images for a book — that he continues to work on fourteen years later — which will document all the deep wrecks in the English Channel. This is a vast project in an area where there are more wrecks per square mile than anywhere else in the world. Leigh states, "It's a case of slowly working through them, diving them one by one, photographing them, and researching their history."

Leigh became one of the very first people in Europe to use the concept of mixed gas diving to explore deep, previously unseen shipwrecks during the very early 1990's. He moved naturally from the heavy cumbersome open circuit sets into closed circuit rebreathers when they became practical and safe for deep wreck diving. Leigh began rebreather diving in 1993, and has worked with companies in their development. Today, he uses an AP Valves Evolution unit — a unit he first dived when his friend was building it.

Although he is still a dedicated film photographer, he also uses digital equipment and has been a proficient Photoshop user since 1995. His current equipment includes the same F90x film camera and Aquatica Pro 90 housing that he has used for the last ten years, which, in his words, is bullet proof. He also uses a Canon full-frame 5D digital with, of course, Aquatica housing. The digital housing has had extra work to rate its depth much deeper than 100m/330ft. It also incorporates the Aqua viewfinder, which comes in extremely handy when you

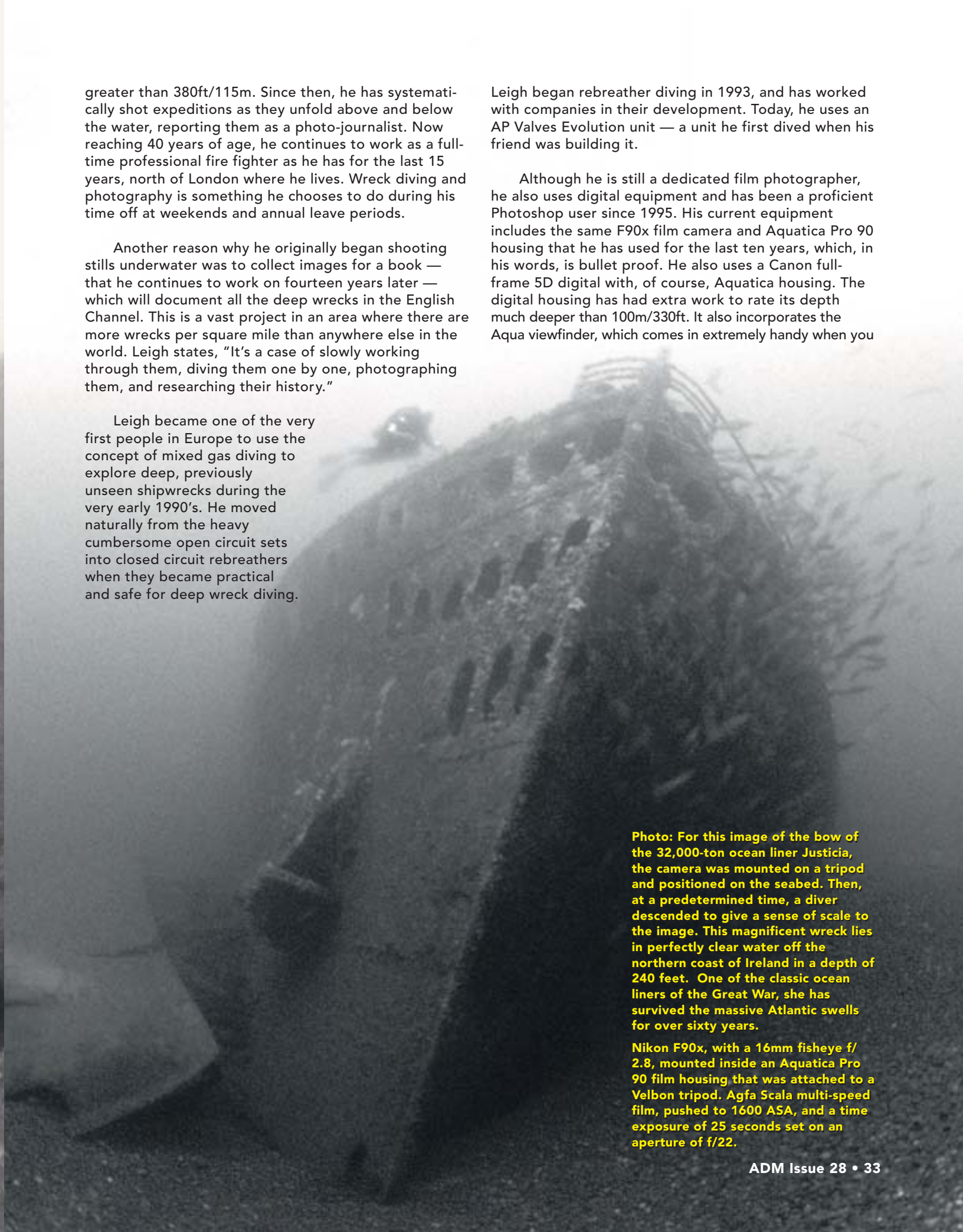


Photo: For this image of the bow of the 32,000-ton ocean liner Justicia, the camera was mounted on a tripod and positioned on the seabed. Then, at a predetermined time, a diver descended to give a sense of scale to the image. This magnificent wreck lies in perfectly clear water off the northern coast of Ireland in a depth of 240 feet. One of the classic ocean liners of the Great War, she has survived the massive Atlantic swells for over sixty years.

Nikon F90x, with a 16mm fisheye f/2.8, mounted inside an Aquatica Pro 90 film housing that was attached to a Velbon tripod. Agfa Scala multi-speed film, pushed to 1600 ASA, and a time exposure of 25 seconds set on an aperture of f/22.

have a large CCR mouthpiece between you and the viewfinder. His system also incorporates an underwater remote-control shutter release system developed by Aquatica for long time exposures. Both of these systems include a fisheye lens and a pair of big Sea & Sea YS350 strobes held steady by ultra light buoyancy arms.

Leigh believes that both mediums, film and digital, have a place in his field of photography. The great latitude of monochrome film cannot be matched, and gives such a sense of satisfaction when developed and placed on a light box. The final product of digital is nowhere in the same league as film, but being able to shoot hundreds of frames in a single dive is something else — as is being able to see if you have the exposure right. The downside of film is the mere 36 exposures and, of course, getting lost in the post on the way to or back from the developers! Leigh says, "The great debate of what's best will go on, but just ask the pros like North American wildlife photographer Thomas Mangelsen where their money is really made."

The photography side is just a small part of Leigh's interest in shipwrecks. Leigh has been instrumental in the diving and discovery of an estimated four hundred virgin shipwrecks around England, and his own research has led to many of these discoveries. Each year he and his team explore new wrecks, and they work closely with government departments on location. When these wrecks have been exhaustively researched and photographed, Leigh publishes their stories.

His images and shipwreck articles have been published extensively around the world for over ten years, and his photographs have appeared in books, newspapers, and on no fewer than thirty covers of diving publications. On top of this, Leigh is a regular speaker at major diving conferences around the world as well as specialist photographic seminars and workshops. His recent travels as a speaker have taken him through the USA, New Zealand, Australia, the Caribbean, and various European countries.

So what drives him and what's left for him in the future?

"Well, I've got this on-going project to photograph ocean liners as they rest on the seabed around the world, deep or shallow. Some day I want to produce a book about lost ocean liners as they were and as they are now. The hardest part of this project is getting the actual photographs; right now I've got approximately thirty to forty different liners in the bag. Liners were lost just about everywhere, and my travels have taken me to the site of the *Titanic* as well as other famous liners such as the *Lusitania* and even modern liners like the Russian *Mikhail Lermontov* off of south New Zealand. I'll probably look for a publisher at around 50 or so — that should keep me going for another few years! Liners are perhaps the best calibre of shipwreck in the world."

Leigh Bishop's *Lost Liners* presentation guides the audience through many of the liners he has dived to date. Check his website for up-coming presentations as well as more shipwreck information and expedition diving.

www.deepimage.co.uk
email wreckdiver@mac.com

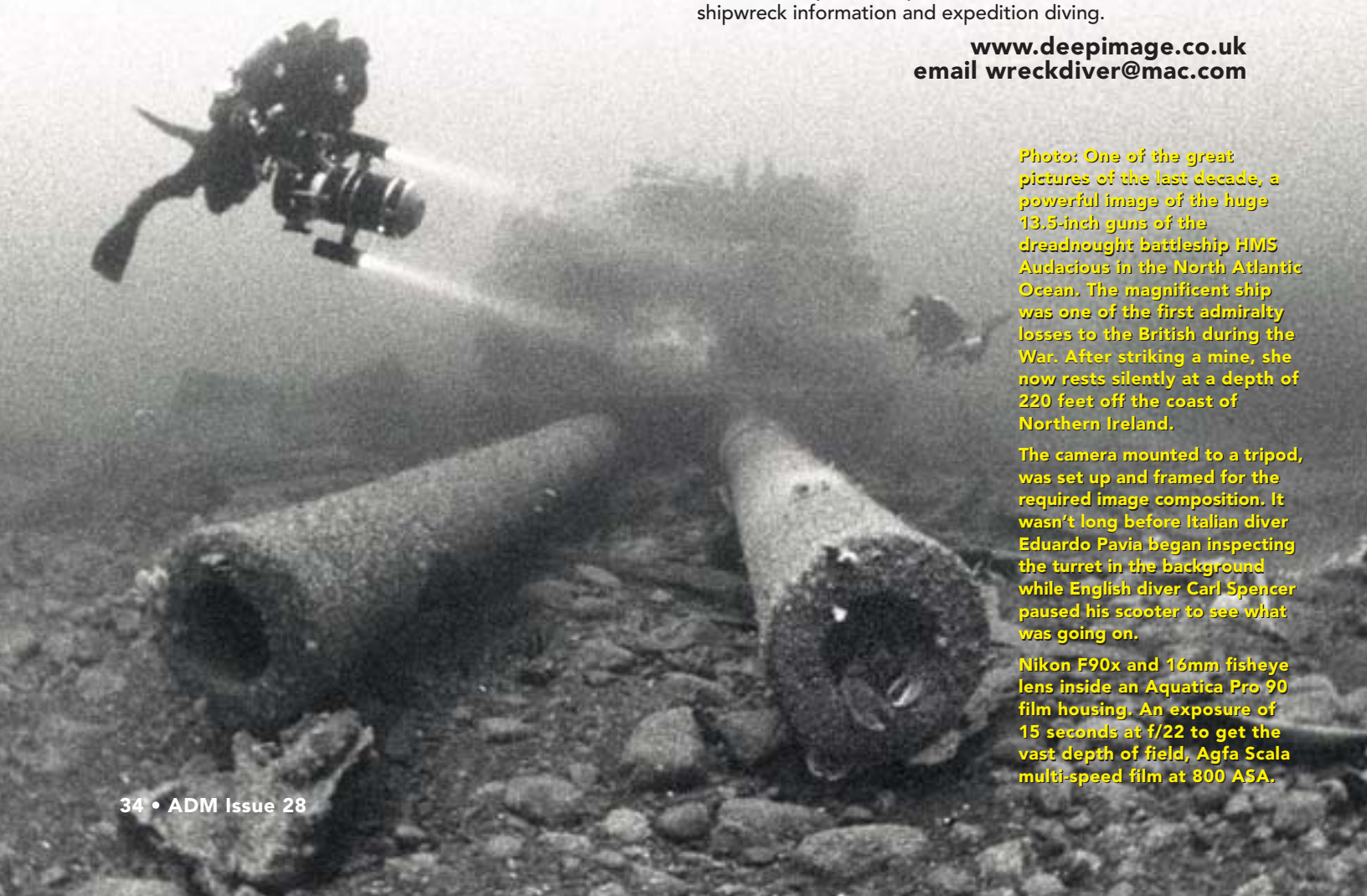


Photo: One of the great pictures of the last decade, a powerful image of the huge 13.5-inch guns of the dreadnought battleship HMS Audacious in the North Atlantic Ocean. The magnificent ship was one of the first admiralty losses to the British during the War. After striking a mine, she now rests silently at a depth of 220 feet off the coast of Northern Ireland.

The camera mounted to a tripod, was set up and framed for the required image composition. It wasn't long before Italian diver Eduardo Pavia began inspecting the turret in the background while English diver Carl Spencer paused his scooter to see what was going on.

Nikon F90x and 16mm fisheye lens inside an Aquatica Pro 90 film housing. An exposure of 15 seconds at f/22 to get the vast depth of field, Agfa Scala multi-speed film at 800 ASA.

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wreck of the RBJ

Third Times a Charm

Text and Photography by Mel Clark

After reading many wonderful stories of the RBJ wreck, I thought I would try it for myself. She is located off Pompano Beach in Florida. The RBJ is famous for her final resting orientation. This dive site is actually two wrecks intentionally sunk almost two years apart. The interesting detail about this site is that the RBJ landed directly on top of the Corey N Chris at a 90-degree angle.

The story starts out with the Corey N Chris, formerly the BC-246. The BC-246 was a 130-foot dredge operated by the U.S. Army. She was obtained by the Broward County Artificial Reef Program and sunk on May 18, 1986. Renamed the Corey N Chris, she lies in 260-270 fsw in an east to west direction. The bow is facing towards shore and is on the uphill side of the slope in around 260 fsw. The stern faces out to sea and lies in 270 fsw. In 1988, the dive site received her claim to fame. The M/V Otto, a 226-foot freighter, was sunk next to the Corey N Chris. The M/V Otto had her fate sealed as an artificial wreck when she ran aground in Jamaica. She was patched and towed to Florida where the Broward County Artificial Reef Program acquired her. After much preparation, she was sent to her watery grave by the Jacksonville Navy Explosive Ordnance team on May 15, 1988. The plan was to sink the now renamed wreck RBJ (Ronald B. Johnson) parallel to the Corey N Chris. Luckily for us, the currents intervened and caused the RBJ to land on top of the Corey N Chris, resulting in a very intriguing dive site. The RBJ first settled across the deck of the Corey N Chris with her bow in the sand and her stern suspended high in the water column. Over time, and with the help of Florida's legendary hurricanes, the RBJ's structural integrity gave way and her stern collapsed to the sea floor. The RBJ now lies atop the Corey N Chris in a north to south orientation with her bow and stern on the bottom.

The team assembled at Alsdorf Park to meet Captain Oliver of Avid Diver Charters. Jo Cribley and I were to meet our two local dive buddies, Steven Gutierrez and Curtis Soles, at the boat launch. It was great to see Steven and Curtis again after such a long absence. We all gathered our rebreathers and bailout bottles, and headed for the boat. Oliver greeted us and helped us load his boat. The Avid Diver is a well laid out six-pack. For those divers who dislike "cattle boats," this is the tech charter for you. The boat comfortably fits six OC or CCR tech divers and all their crap (gear). The stern has a walk-through transom and an easy to climb Christmas tree dive ladder, all necessities for a tech diver to easily exit and return to the boat. For rebreather divers, the Avid Diver

has another critical piece of hardware: the captain is a rebreather diver himself and has a rebreather-friendly attitude. This attitude can be hard to find, so make sure to check with your charter boat before the trip to avoid unnecessary hardships.

After securing all our gear we head out to "sea." Well, not really, the RBJ is only about 15 minutes out of the harbor! It is a good thing the site is close as the winds are blowing at 15 knots and the waves are running about 3 foot at this point. We arrive on site and see the huge wreck on the depth sounder. Oliver is known for his ability to always catch his wreck, even the hard to get wrecks. Today would be no different for him. After one pass over the wreck to see the speed of the waves and current, Oliver gets into position and tosses the grapple. He snags the wreck and tosses out the line and float. The good news for us is that the grapple seems to be set on the wreck; however, the bad news is the current is ripping. Being a West Coaster, it is a strange concept for me not to be able to look at a current prediction table and determine the best time to dive. For some reason, Mother Nature does not play by the "rule book" here in Pompano, Florida, and the currents are very unpredictable. We wait it out for about half an hour before we decide the current is not going to let up this morning.

Oliver suggests "dive bombing" the wreck. This is another foreign concept for a Pacific Northwest (PNW) diver. Dive bombing entails the entire team being ready at the same time. The boat captain will then try to predict the speed of the current, the speed of the diver descent, then drop them up current and hope they hit the wreck. The drop is critical. If the drop is not far enough up current, then the team will miss the wreck. If the drop is too far up current, then the team will take too long to arrive at the wreck, wasting precious minutes at 270 feet. One member of the team will drag the up line down with them; and will attach it to the wreck. The lucky team member today is Curtis. The other two key ingredients to dive bombing are a large target and good visibility. This is why this is a foreign concept to a PNW diver. If we attempted this method back home, we might miss the wreck by a foot and not even know it — or worse yet, be slammed into the wreck before we are able to see it. Fortunately, the visibility is around 80 feet today, and Oliver is very experienced at dropping the divers correctly on a dive bomb.

The team suits up while Oliver attempts to keep the boat as steady as possible in the now 4-foot seas. The only problem I have experienced with dive bombing so far is the heat. Unlike the PNW, Florida is hot even in the autumn, and sitting in a drysuit (or a wet suit for that matter) on the boat is a bit troublesome to say the least. Oliver picks his spot and gives us the thumbs up. As a team, we stay together and do what I call a "turn and burn" to the bottom. We stop our descent at around 200 fsw so we are well above the sea floor and can have a bird's eye view while looking for the wreck. The team forms a line across so we can cover as much ground as possible. Our maximum bottom time is 30 minutes. After 25 minutes of scouring the bottom, we see a shadow in the distance. We all swim as hard as we can towards this black abyss. I feel a sense of excitement as the wreck nears, and I also feel a sense of extreme irony, as our time on the bottom is now 27 minutes.

We arrive at the bow of a wreck. Curtis grabs on to the bow railing with one hand, and holds the up line with the other.

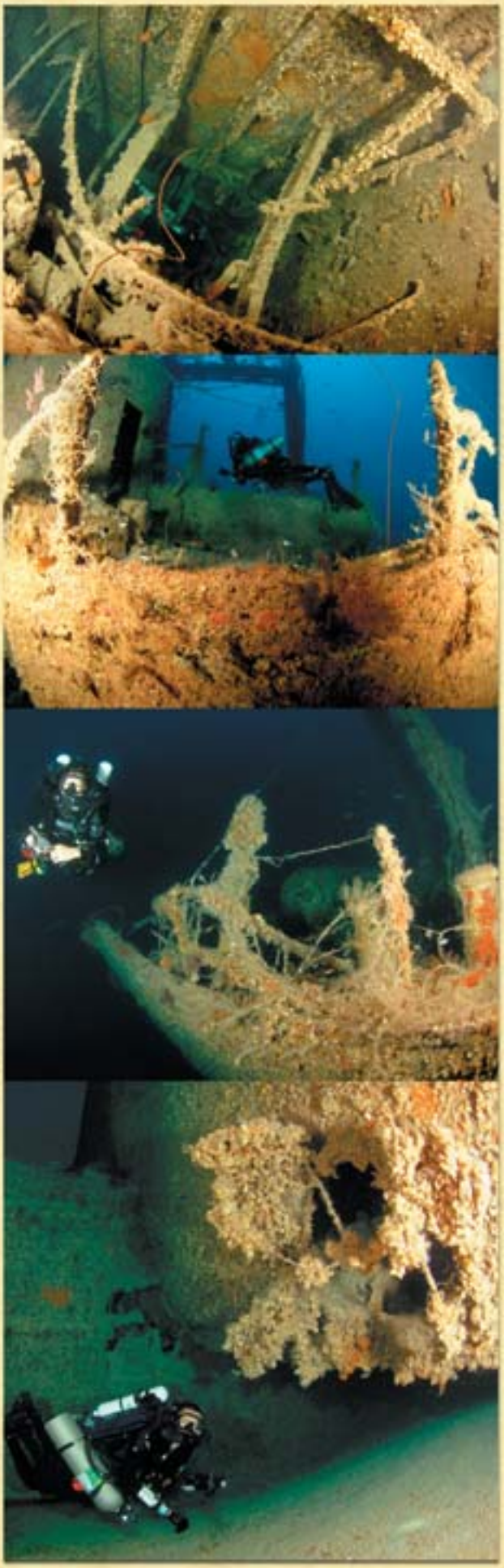
Steven quickly joins in and attempts to tie the up line to the wreck. While they work on the up line, I quickly pull my camera out in a vain attempt to get a picture. I manage a shot and then look over to my human carabiner (Curtis) who is holding the up line to the wreck. He has that look about him of how did I manage to get this job! At that moment, Curtis and Steven both get swept off the wreck like tumble weeds in a windstorm. It is now decision time for me as I cling to the wreck for dear life. Stay and take some pictures and be separated from the team and my lifeline to the surface, or let go. Gee, a tough one. I drop the camera (tethered to me of course), and kick for all my life to catch up to Steven and Curtis and the up line. We finish an uneventful decompression, and return to the bucking boat. Oliver manages to get us and all our gear aboard safely, and we return to Pompano Beach a bit defeated. As it turns out, the wreck we managed to touch, albeit briefly, was the Papa's.

After a three-hour surface interval, the wind settles down a bit. We decide to try the RBJ again. Oliver judges the wind and current, and tosses the grapple out. Again he catches the wreck on the first toss! He must have some kind of wreck-catching voodoo going on. This afternoon the current has subsided a bit. The team suits up, and we decide to pull ourselves down the line. After 70 feet of pulling, Jo decides to bail on the dive and returns to the boat. Steven, Curtis, and I continue to slowly work our way down the line. Even though the current is less than we had in the morning, it is still a large nuisance and slows our descent.

We reach the forward kingposts of the RBJ at around eight minutes. Steven and Curtis tie in while I prep my camera. Unbeknownst to me, one of my strobes is tangled in some monofilament on the kingpost. I fight with the current and the monofilament and finally free my strobe. After a long hard swim to the wreck and fighting with my camera in the current, I start to feel funny. The feeling is hard to describe other than you feel like you cannot breathe, and you feel an imminent sense of doom. I know all too well that this feeling is excess carbon dioxide in my body. On a rebreather, even if the equipment is working correctly (which it was), you can still build up carbon dioxide in your body from working hard and improper breathing. I immediately complete a diluent-loop-flush and go to open circuit. I signal to Curtis and Steven that my dive is over and I am going up. I fight this horrible feeling of just wanting to die for about five minutes. Decompression can be painfully long when things go bad. After about five minutes my body chemistry returns to normal, and I finish my decompression once again defeated by the RBJ! The take home lesson for me so far is get a scooter!

If you are keeping score, it is RBJ two, Mel zero! As I am not a quitter, some have gone as far as to call me fairly persistent, I plan a dive to the RBJ for the next day. We meet again at the boat launch and hope that the weather favors us today. Curtis, our human carabiner, was not able to make this dive…something about work!? We arrive at the site, Oliver hooks the wreck, and we suit up. Same routine, but today the winds are down; the waves are small and, best of all, the current seems to be slight. Could this be the day, I ask myself? I also have a tiny bit of nervousness lurking in the background after yesterday's potentially life changing events.

We enter the water and work our way down the line. The current is light! The wreck comes into sight, and again we are on the kingposts of the bow of the RBJ. The nervousness I was experiencing has totally disappeared, and is now replaced by sheer



excitement. This wreck is HUGE! Steven ties us in, and we drop down to the bottom. One of my goals on this dive was to get some pictures of the swim-through where the RBJ sits on top of the C N C. You can swim right under the bottom of the RBJ. The three of us swim under the bow side of the RBJ. This is quite a different experience swimming under a wreck. We then completely swim around the stern of the C N C.

Back under the RBJ, the stern section this time, I feel resistance as I exit the swim-through. I turn to realize my fin strap is caught in monofilament. I easily remove it and continue on. But this reminds me of how littered this wreck is with monofilament, and how careful you need to be. Getting tangled in monofilament at 270 fsw can be a problem, if not handled correctly.

Steven now leads us down the starboard side of the RBJ towards the bow. I manage to get a few shots of the intersection of the RBJ and C N C with a diver in the background. We swim over the main deck of the RBJ, passing through a few of the cargo holds. Did I mention how big this wreck site is!? I look at my bottom timer, which says 30 minutes. We agreed on a longer bottom time of 40 minutes, if we managed to get to this wreck. After all, this is my third try and I want to see this wreck. I look at Steven and thought he was going to start back to the up line. Wrong, off to the engine room for us. No wreck dive is complete without the obligatory engine room tour.

Of course, our time is getting short, and it is time to head back to the up line. The three of us swim rapidly back to the bow where our up line should be. We get there, and the up line is there (ha-ha, you thought I was going to say it was gone). Steven untied us, and we started our long climb back to the surface. Our deco was fairly uneventful except for the bull shark that was circling. Once again my PNW diver comes out in me. Being blissfully unaware that this is not a good thing, I start taking pictures. Steven gets me to stop taking pictures, and he starts making bubbles and noise. He later informs me that on a CCR, sharks seem to be more interested and less nervous around us. If the shark circles, especially if it is a bull shark, I need to look mean and try and scare them away. Another lesson learned, now I know why people say rebreathers are more dangerous than open circuit, it must be because sharks like rebreathers more!

I also learned a new way to make decompression time seem like an eternity: it's called "dodge the swarms of stinging jellyfish at 20 feet for 30 minutes."

This dive was spectacular and a must-do for the technical diver. This is what I have read about the RBJ. It is important to be aware, if you plan a dive to the RBJ, that it is a current-swept site that is rather unpredictable. If you manage to get to the wreck, the wreck itself is a labyrinth and holds many dark dangers, so be cautious. Some days the dive can be a piece of cake, and other days she can be a dark demon seeking her prey. It is also important to seek a boat captain with experience on tending this wreck. I want to thank Oliver P of Avid Diver for persevering through some very tough conditions to get us on the RBJ. I would not hesitate to recommend his operation, if you are a technical diver or rebreather diver. Thanks to Curtis and Steven for being great guides and buddies. And Jo, what can I say? I have never seen a diver manage through such nausea and still smile about it.

Oliver Paoli at Avid Diver Charters (954) 854-7786
www.aviddivercharters.com

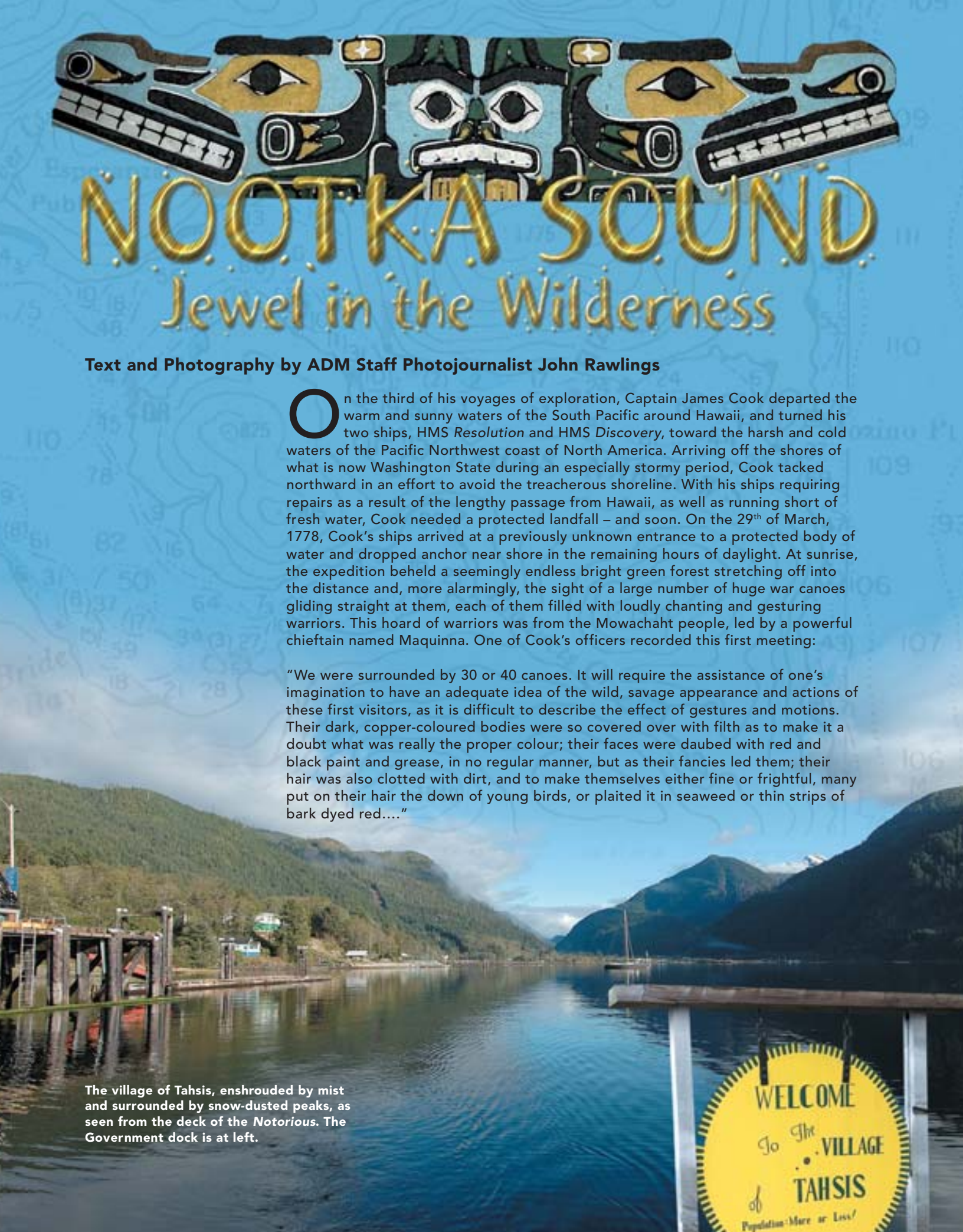
NOOTKA SOUND

Jewel in the Wilderness

Text and Photography by ADM Staff Photojournalist John Rawlings

On the third of his voyages of exploration, Captain James Cook departed the warm and sunny waters of the South Pacific around Hawaii, and turned his two ships, HMS *Resolution* and HMS *Discovery*, toward the harsh and cold waters of the Pacific Northwest coast of North America. Arriving off the shores of what is now Washington State during an especially stormy period, Cook tacked northward in an effort to avoid the treacherous shoreline. With his ships requiring repairs as a result of the lengthy passage from Hawaii, as well as running short of fresh water, Cook needed a protected landfall – and soon. On the 29th of March, 1778, Cook's ships arrived at a previously unknown entrance to a protected body of water and dropped anchor near shore in the remaining hours of daylight. At sunrise, the expedition beheld a seemingly endless bright green forest stretching off into the distance and, more alarmingly, the sight of a large number of huge war canoes gliding straight at them, each of them filled with loudly chanting and gesturing warriors. This hoard of warriors was from the Mowachaht people, led by a powerful chieftain named Maquinna. One of Cook's officers recorded this first meeting:

"We were surrounded by 30 or 40 canoes. It will require the assistance of one's imagination to have an adequate idea of the wild, savage appearance and actions of these first visitors, as it is difficult to describe the effect of gestures and motions. Their dark, copper-coloured bodies were so covered over with filth as to make it a doubt what was really the proper colour; their faces were daubed with red and black paint and grease, in no regular manner, but as their fancies led them; their hair was also clotted with dirt, and to make themselves either fine or frightful, many put on their hair the down of young birds, or plaited it in seaweed or thin strips of bark dyed red...."



The village of Tahsis, enshrouded by mist and surrounded by snow-dusted peaks, as seen from the deck of the *Notorious*. The Government dock is at left.

Fortunately for everyone concerned, this demonstration was not as war-like as it first appeared, and the British explorers were greeted with songs, dances, and ceremonial strewing of eagle down upon the water – a traditional sign of greeting. Future relations between the Mowachaht and visiting crews would become increasingly harsh; but, at this first encounter, Chief Maquinna and Captain Cook developed a confident relationship with each other based on mutual respect. Brisk trading ensued, the Mowachaht interested in anything made of metal and the expedition members fascinated with furs, especially those of the sea otter. Cook was urged by the Mowachaht to come further into the protected harbor with the words, "Nootka, Itchme. Nootka, Itchme." Not understanding the language, the explorer interpreted these words as both the name of the people and the place, and it is known as Nootka Sound to this day. The specific location of Maquinna's village also carries a name left over from this exciting and happy time: "Friendly Cove."

Well over two centuries have passed since that first exciting meeting that literally started the recorded history of what is now British Columbia. As a history buff, Nootka Sound has always intrigued me...as a diver and underwater photographer, it positively lured me. I had often wondered whether the wilderness on land would also be reflected by a wild beauty underwater.

Often when dealing with areas "off the beaten path" hooking up with dive boats, gas supplies, etc., can be a challenge. To my delight, however, I found that there actually was a dive charter operation in Nootka Sound based in the tiny village of Tahsis. Fairly new and relatively unknown even in the Pacific Northwest, Tahtsa Dive Charters opened in August of 2005. Tahtsa is a Cheslatta T'en (First Nations) word meaning "Waters Far Off," a name very applicable to the location! I immediately contacted them, and yet another adventure was launched on Vancouver Island, a place that I have grown to love.

Nootka Sound is on the western side of Vancouver Island, and this trip involved crossing the US-Canadian border and catching a ferry from Vancouver on the mainland across to the east coast of the island itself. There are three options for reaching Tahsis and Nootka Sound: by seaplane - by ship, the *Uchuck* III, a small freighter that serves the coastal communities – or by driving the length of the island and cutting across to Tahsis on logging roads. My dive buddy, Valerie Lyttle, and I chose the latter. From the ferry landing at Nanaimo, we traveled north to Campbell River and then swung west through areas of peaks, valleys, and dense rain forest. Ultimately bidding farewell to paved roads, we plunged northward on dirt logging roads on the final stretch to Tahsis. Deep forest stretched out on either side as we drove, and we often stopped to drink in the beauty of a particular view – snow-topped peaks, waterfalls, and rivers abounded. Rounding a slight curve, we found ourselves face to face with a mother black bear and two cubs – the three of them darting into the brush before I could hang my camera out of the window. Another dive buddy, Vel Wilson, was scheduled to meet us at Tahsis, and as she rounded a similar curve in the road she found a herd of Roosevelt elk blocking her path. Vel told us later that the herd crashed off the road into the dense forest and all she could see was "butts and horns"!

Linking up with Vel on the road, we followed her in to Tahsis, and chuckled as we saw the sign – "Welcome to the Village of Tahsis. Population: More or Less!" Rounding a final curve in the road, for the first time we saw the raw beauty that is Tahsis Inlet – a long, fjord-like body of emerald-green water stretching off to the west into Nootka Sound, surrounded by rocky cliffs and dense forest. Pulling into the parking lot of Tahtsa Dive Charters immediately adjacent to the government dock, we met owners Scott and Jude Schooner and almost immediately felt that we had known them our entire lives. Scott spent four years in the Canadian Navy as a "Clearance Diver" in the Fleet Diving Unit Pacific. After leaving the Navy, he and Jude spent the next seven to eight years sail boating the coast of British Columbia and the west coast of Vancouver Island, during which time they became intimately familiar with the waters. In 1999, they found themselves in Tahsis, overwhelmed by the surrounding beauty of Nootka Sound, and have never left. Their sailboat is still anchored within sight of their shop.

Above Middle: A curious Black Bear watches from the shore as a boat passes by. Photo by Kirk Davis.

Above Right: Home of Tahtsa Dive Charters.

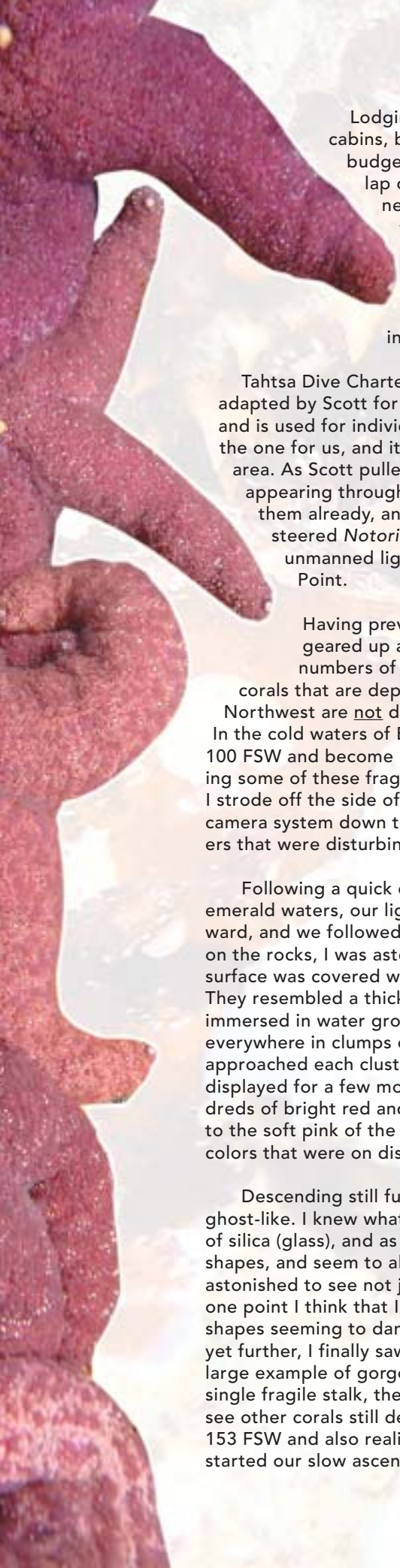
Bottom Right: Slowly returning to nature – a fallen Totem Pole at "Friendly Cove".

Two Giant Red Urchins perch upon a wall covered with Strawberry Anemones.

A China Rockfish glides along the base of a wall.

A beautiful specimen of a deepwater Gorgonian Coral.

Bright purple Ochre Seastars cluster atop a layer of orange encrusting sponge.



Lodging in Tahsis can be easily arranged in advance – a variety of small fishing motels, cabins, bed-and-breakfasts and private homes are available that will suit virtually every budget. Being pretty much known as "the end of the road," divers should not expect the lap of luxury while in Tahsis, but they CAN expect a warm welcome and the friendliness and kindness that are so much the mark of small-town life. Valerie's wide grin told me that, like me, she had fallen in love with Tahsis at first sight. Jude had arranged for us to stay at a beautiful cedar cabin overlooking the water. Named the "Mermaid House," its interior was decorated with First Nations' carvings of whales, wolves, and bears throughout. Surrounded by both art and natural vistas that took our breath away, our excitement about our upcoming dives steadily increased.

Tahtsa Dive Charters' larger boat, the 30-foot *Notorious*, was only recently acquired, and is being adapted by Scott for its new job of hauling divers. A small 18-foot runabout is also part of the "fleet," and is used for individual divers or small groups. With a large, open forward deck, the *Notorious* was the one for us, and it wasn't long before piles of dive gear and camera equipment filled her forward area. As Scott pulled away from the dock, I found myself gazing at the peaks around me, only briefly appearing through the ever-present fog and mist. Some of the taller peaks had a whisper of snow on them already, and Scott mentioned that they were expecting a colder winter this year than last. He steered *Notorious* into the Tahsis Narrows, a channel leading to Esperanza Inlet and a small, unmanned light beacon came into view on shore, marking the first of our dive sites – Mozino Point.

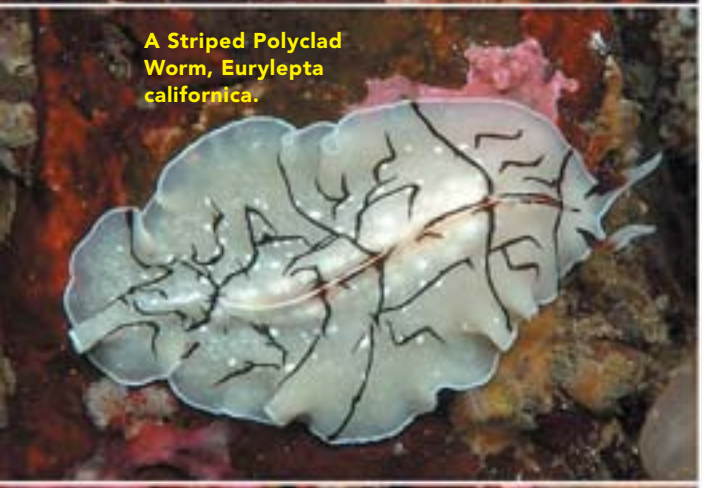
Having previously donned our drysuits for added warmth, it didn't take our team long to get geared up and ready to enter the water. Here at Mozino Point can be found both large numbers of cloud sponges as well as formations of cold-water corals. Unlike warm-water corals that are dependent on photosynthetic algae to survive, the cold-water corals of the Pacific Northwest are <u>not</u> dependent on algae for energy, and thrive at depths reaching beyond 15,000 FSW. In the cold waters of British Columbia, these corals can be found at some locations beginning at around 100 FSW and become more prevalent with increased depth. We excitedly looked forward to photographing some of these fragile, rare, and beautiful deep-water corals. I found myself grinning in anticipation as I strode off the side of the *Notorious* and splashed into the rich green water. As Scott handed my heavy camera system down to me, I noticed a harbor seal lying on the rocks on shore, eyeing the noisy intruders that were disturbing his peace and quiet.

Following a quick equipment check on the surface, the team began the descent into the clear emerald waters, our lights slashing out into the darkness like sabers. A steep rocky wall plunged downward, and we followed its contours past clouds of yellowtail rockfish. As the beams of our lights danced on the rocks, I was astonished at the gorgeous colors that were on display before us. Much of the rocky surface was covered with a coating of absolutely gorgeous bright red and pink strawberry anemones. They resembled a thick, fuzzy, pink blanket and imparted a mental sense of warmth even though we were immersed in water growing colder with each foot we descended. Giant rock scallops seemed to be everywhere in clumps of three, four, or even a dozen, each of them as large as a dinner plate. As we approached each cluster of scallops, their bright orange interiors with dozens of tiny "eyes" would be displayed for a few moments until they sensed our presence and closed as a defensive reaction. Hundreds of bright red and purple sea urchins also clung to the wall, their fluorescent colors in stark contrast to the soft pink of the blanketing strawberry anemones. I was astonished at the absolute barrage of colors that were on display.

Descending still further, I began to see large bright "clumps" materializing beneath me...almost ghost-like. I knew what I was seeing – cloud sponges – and <u>lots</u> of them. Cloud sponges are constructed of silica (glass), and as such are both beautiful and incredibly fragile. As they grow, they assume bizarre shapes, and seem to almost resemble the skeletons of mythical dragons. At Mozino Point we were astonished to see not just one or two of these beautiful sponges, but dozens upon dozens of them. At one point I think that I probably had twenty to twenty-five of them in view, their pale yellow colors and shapes seeming to dance in the beam of my light. Tearing myself away from the sponges and descending yet further, I finally saw a flash of bright orange beneath me and found that I had luckily stumbled onto a large example of gorgonian cold-water coral. Bright orangish red and growing from the bottom by a single fragile stalk, the coral resembled a colossal Menorah. Snapping a series of photographs, I could see other corals still deeper in the background. Glancing at my computers and SPG, I saw that I was at 153 FSW and also realized that my turn pressure had been reached. Vowing to return, we regretfully started our slow ascent, recording still more colorful images as we climbed through the clusters of cloud

A Giant Pacific Octopus peers out from its den, a small cave.

An Opalescent Nudibranch, Hermissenda crassicornis.



A Striped Polyclad Worm, Eurylepta californica.

A juvenile Puget Sound King Crab.

sponges and the colossal blanket of color we had passed earlier. Even at our final 15-foot stop we were treated to an explosion of color as a hoard of bright purple ochre sea stars mobbed together on a coating of bright orange encrusting sponge. Finally emerging into the sunlight, we found Scott grinning at us from the stern of the *Notorious*; fully aware of what we had seen and letting us savor the moment.

Another fascinating site that we dived is known as "Boulder Alley." Centuries ago a massive cliffside gave way and numerous colossal boulders crashed down into the inlet. These boulders, some the size of houses, now litter the bottom and are covered with anemones, algae, and urchins of all sizes and colors. Diving here was like sneaking through a series of turns in a giant maze, and we found ourselves playing hide-and-seek with several species of rockfish and several huge lingcod. We were hoping to find the den of a giant Pacific octopus here, but such was not in the cards. Large adult Puget Sound king crabs were present, and one that we found had just recently molted. Its newly formed exoskeleton almost sparkled in the gleam of our lights, with each point on its bright orange and yellow shell glistening with sapphire blue highlights. I am convinced that this species is one of the most gorgeous to be found in nature.

The following day we again dived at Mozino Point. It is a huge site, and on this second day we did two dives here, each time heading in a different direction and encountering still more colorful scenes. The deep currents were not cooperative with us on this second day, however, and we were kept away from the deep-water coral gardens by the force of their flow, not wanting to tamper with heavy exertions at depth.

We had planned that day three was to be a surface interval and, laden with camera equipment, we headed up the inlet to visit "Friendly Cove," the site at which Cook first landed centuries ago. As Scott steered the boat toward the west, we were again treated to astonishing scenery – as if we had placed an order for it, blue skies and sun burst their way through the cloud cover and bathed the shoreline in light. Black bears searched for food on the beaches, sea otters clung to floating bull kelp almost as if they were "sleeping off" a good party, and bald eagles plunged down toward the water to seize salmon. Only occasionally would we pass another boat, usually a small tug towing behind it a raft of logs, otherwise it was easy to imagine that we were alone and had drifted back in time. Arriving at Friendly Cove, we found that the site of the once huge ancient village is now overgrown with blackberry bushes and ferns. A lighthouse is there, manned by members of the Canadian Coast Guard, but other than that there is only one lone house standing where the village used to be. The owner of the house, a member of the Mowachaht people named Ray, walked down to the pier to welcome us once we arrived. We asked if there were anything left of the old village. He told us to walk down a path along the shoreline for a bit and we'd see something. About fifty yards or so down the path, we found Ray's "something": a 50 – 60 foot long totem pole lying in the brush. It is traditional that when a pole falls it is left where it lands to be reclaimed by the land, and this one was slowly rotting away. Moss and small ferns grew from it while the blackberry vines interlaced themselves about it. Despite the ravages of time, you could still see the beautiful and intricate carvings and recognize the stylized faces of bears, eagles, and wolves – some of the old paint could still be discerned on the carving, although it was mostly obscured

by moss. Even as old and faded as it now is, the carver's work was still amazing.

Our final day of diving began at a site called "The Zoo" due to the large number of species that can be found there. The name proved to be accurate, as during our dive we encountered Puget Sound king crabs, rockfishes of various species, a shy wolf-eel that hesitated to emerge from its rocky hole, and two separate giant Pacific octopuses, one denned up in a small cave and the other within a long cleft in the face of a rock wall. During our surface interval, Scott told us that the next dive site, "Shark Alley," despite its name, was known for a large variety of small creatures. As a result, I switched lenses on my camera to a 60mm Nikkor and over to a flat macro port on my Aquatica housing. It was an excellent choice – the dive site literally abounding in various species of nudibranches and other colorful smaller creatures. Yet again I found myself thankful for the digital revolution, taking well over 100 shots on this dive alone. My favorite creature encountered during the dive was an absolutely radiant little juvenile Puget Sound king crab, so colorful that it almost sparkled in its intensity. Photographing the beautiful "small things" was a fitting ending to our time spent underwater at Nootka Sound.

The following morning we bade farewell to our hosts and, both happy and tired from our experience, turned our gear-laden SUV back east onto the logging road to start the long trip back down the island toward home. Departing Tahsis, we found ourselves once again laughing at the sign at the edge of the village, the reverse of which reads, "The last one to leave should turn out the lights"…a comical little reminder of the natural beauty that thrives in the isolation that is Nootka Sound.

A newly-molted adult Puget Sound King Crab.

A Three-colored Dorid, Polycera tricolor.

A beautiful specimen of a Rose Anemone, Urticina piscivora.

Information on diving in Nootka Sound can be found by visiting the following websites:

Tahtsa Dive Charters
www.tahtsadivecharters.com

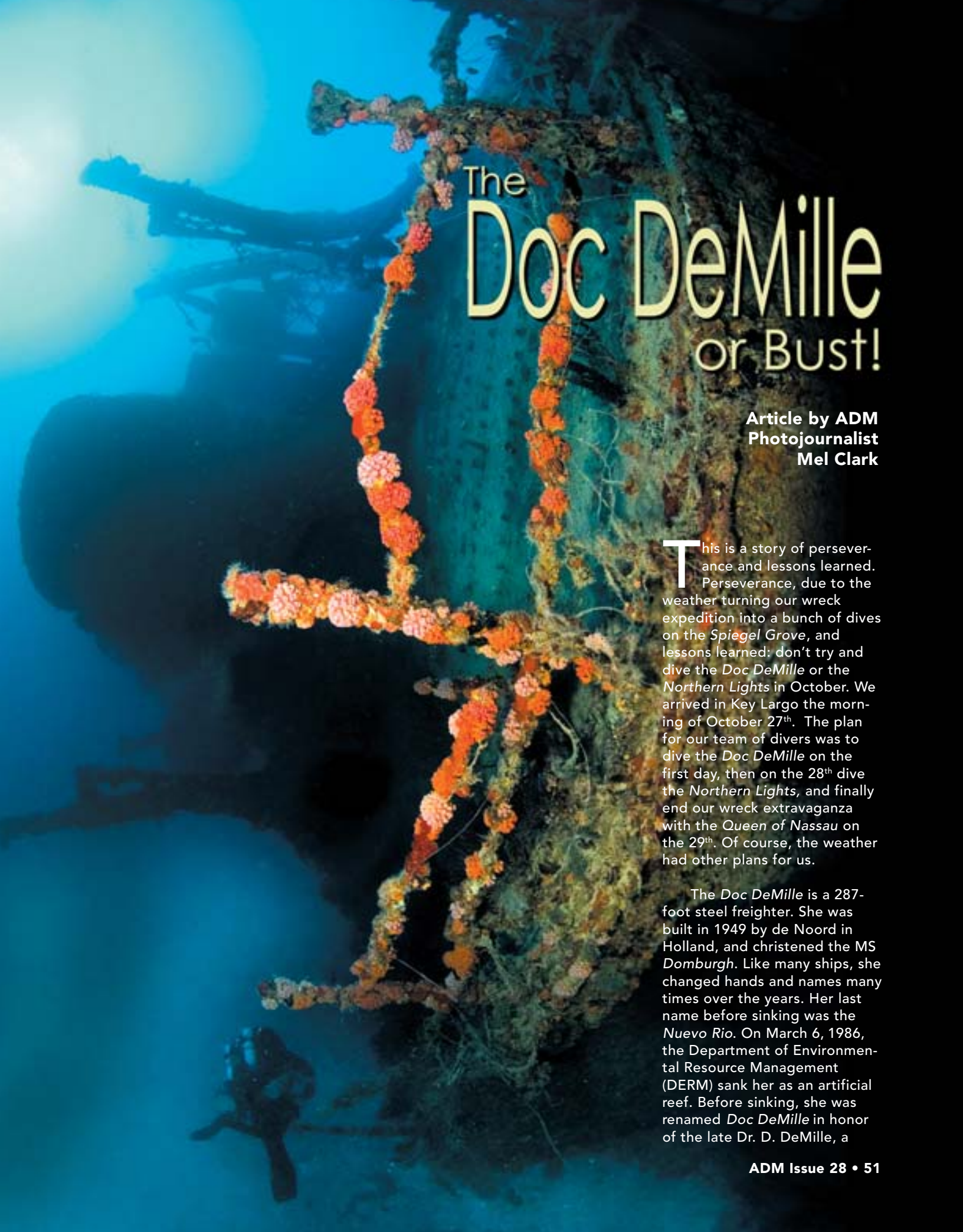
Tourism Vancouver Island
www.vancouverisland.travel/outdoor/divingsnorkeling

Just getting to Nootka Sound can be half the adventure! Here are some links that will provide useful travel information:

British Columbia Ferry System
www.bcferries.com

Nootka Sound Service, Ltd.
www.mvuchuck.com

Additionally, there are several seaplane companies that fly directly into Tahsis from points in both British Columbia and Washington.



The Doc DeMille or Bust!

Article by ADM Photojournalist Mel Clark

This is a story of perseverance and lessons learned. Perseverance, due to the weather turning our wreck expedition into a bunch of dives on the *Spiegel Grove*, and lessons learned: don't try and dive the *Doc DeMille* or the *Northern Lights* in October. We arrived in Key Largo the morning of October 27th. The plan for our team of divers was to dive the *Doc DeMille* on the first day, then on the 28th dive the *Northern Lights*, and finally end our wreck extravaganza with the *Queen of Nassau* on the 29th. Of course, the weather had other plans for us.

The *Doc DeMille* is a 287-foot steel freighter. She was built in 1949 by de Noord in Holland, and christened the MS *Domburgh*. Like many ships, she changed hands and names many times over the years. Her last name before sinking was the *Nuevo Rio*. On March 6, 1986, the Department of Environmental Resource Management (DERM) sank her as an artificial reef. Before sinking, she was renamed *Doc DeMille* in honor of the late Dr. D. DeMille, a

Miami veterinarian. The *Doc* was sent out in style by the Homestead Air Force Base bombers. She was positioned above her final resting place, and left defenseless waiting for her final blow. The Air Force bombers released their payload of fury upon the powerless ship. The bombs exploded on impact, sending their fiery prey to the bottom. Well, it was not exactly like that, but it sure sounded cool.

The bombers used concrete bombs and the ship had pre-positioned remote charges installed on her. This allowed the Air Force a great target practice site, and also preserved the ship for sinking as an artificial reef. She now lies upright and mostly intact in 160 fsw, and is teeming with life. Many small and large fish call her home, including a school of very shy jewfish (Goliath Groupers). With all this going for the *Doc*, she is still seldom dived due to her distance from shore. She lies about a 1/2 mile off of Pacific Light-house on the Fish & Game Unlimited reef. You can charter a boat out of either Miami or Key Largo to gain access to this site. Either way, you are in for a two-hour boat ride, assuming the seas are calm.

Aside from the distance off shore being problematic, it is also challenging to find a charter operator willing to take you out to this wreck. After many hours on the phone I contacted Chris at Silent World in Key Largo, and he agreed to take on this tech rebreather charter.

Most of my stories start at o'dark-thirty; so, too, does this one. Leon Scamahorn, Jo Cribley, and I meet our local guides Matt Reece, Steven Gutierrez, and Curtis Soles. We overload a few trucks with life's small necessities such as compressors, boosters, and other miscellaneous trinkets, and head to the Keys. Oh, what a beautiful pink fiery sunrise I marvel at. Later that day, I remember the old sailors saying "Pink Sky At Night, Sailor's Delight, Pink Sky At Morning, Sailors Take Warning." This was foreshadowing at its best for this trip. We arrive at Silent World in Key Largo and meet with Chris and Alison, the shop owners. They have a very well laid out and stocked shop for the recreational to technical diver. Chris is working on creating a technical-diver-friendly location in the Keys. We fill out the usual paperwork, and head to the boat to meet the captain and crew. Silent World operates two custom dive boats. They take up to twelve recreational divers and six to eight technical divers, not the usual "cattle boats."

We load the boat and discuss our plan. The winds are gusting to over 25 knots. AJ, our boat captain, is not optimistic that we will make it to any of our targets today, but he agrees to give it a try. We make it past the breakwater, and the conditions are rough, to say the least. We are given two options, dive the *Spiegel Grove* or break out the beer and call it a day. As I have never dived the *Spiegel Grove*, we decide to dive, then get beer. We arrive on site and started to suit up. This is where I got to observe Jo, my dive buddy, in her pre-dive ritual of puking, positive pressure testing her CCR, puking, negative pressure testing her CCR, and so on. No worries, this was the first day and just a shake down dive before the big day tomorrow, I told myself.

Day two, we load the boat and head out. The winds are only slightly less than yesterday, and the seas are about the same. AJ decides to give it a try and head out to the *Doc DeMille*. We spend the next two enjoyable hours pounding our way out to the *Doc*.

We arrive at the approximate location of the *Doc*. AJ slows the boat to a crawl and searches the area looking for her on the depth

sounder. I find myself in a combination of thought between worrying and praying that we find the wreck after the effort we put in to get here. Luckily for us, something comes up on the sounder. Gary, the second mate, prepares the grapple and awaits AJ's commands. Hooking the *Doc* can be very challenging in rough seas. It takes us over half an hour and many attempts before we are locked in. AJ warns us that we are on something, hopefully the *Doc*.

I have heard that the current can run very strongly here as this site is influenced by the Gulf Stream. At the start of the dive, the current is running about a knot. Most of us at first pull ourselves along the granny line in a vain attempt to get to the anchor line. Once we get to the bottom, the *Doc* comes into sight, and she provides us some protection from the current.

All the troubles of getting here seemed to disappear from my mind as I focus on the wreck in front of me. The *Doc* sits proudly on the bottom rising up around 70 feet. This is a blessing as we are able to hide from the current in the *Doc*'s shadow. I was instantly impressed with the abundant marine life encrusting the wreck. Steven, Curtis, and Leon secure the anchor line to the stern railing, while the rest of us drop to the bottom to explore the stern. The stern section is twisted and now lies at about a 45-degree angle with the starboard side facing down. There is a large opening on the starboard side aft ship, likely caused by one of the charges used to sink her. I swim around the stern and up over the railing. I catch a very quick glimpse of a jewfish above the engine room. The fish seems very startled that we are on his wreck, and darts into the safety of the engine room.

The *Doc* sits upright but it seems as though a bit of the mid-section is flattened. At first glance, it almost looks like she is in two pieces. I continue forward entering through this open section into the cargo holds. At the bottom of the aft cargo hold, I see a large hole and the remnants of a concrete bomb. There is a very narrow door at the bottom of this hold that attaches to the next forward hold. I choose to ascend over the bulkhead and back down the other side versus trying to squeeze through the narrow doorway. This is what I call "duck and cover." I am using the interior of the wreck or the down current side to protect me from the current. On the bottom of the forward cargo hold there is a perfect skeleton of a huge jewfish. It looks so perfectly placed — like a museum curator laid it out.

I eventually make it to the bow where i notice that the whole bottom section of the bow is missing. The edges are jagged and I conclude this must be damage from the charges. Since the top deck of the bow is intact, the damage could not have been caused by the concrete bombs. I ascend and duck behind the super-structure of the bow. There is a somewhat penetrable structure here that we look into, and we find the ship's spare anchor. At this point, I notice our bottom time is at 40 minutes and it is now time to turn the dive. I signal the team and we effortlessly float back to the anchor line in the current.

Luckily for me, I have the camera so I get out of undoing the grapple duties. Leon, Steven, Curtis, and Matt all fight in the current to free the grapple. They are fighting against not only the current but the bucking

boat 160 feet above that is still hooked to the up line. Eventually, the four of them free the grapple and tie it up as high as they can to avoid it snagging the bottom. At last, relief from the current as we all drift with ease. This peace will be very short-lived as the grapple finds the bottom and we are all jerked to a stop. This reminded me of sky diving when you pull the ripcord and the chute deploys. Now all six of us are hanging on the anchor line for dear life in what seems like a four-knot current. This situation only gets worse as we all reach our last stop at what was meant to be 15 fsw. We now have many elements to deal with. The current is tiring us all out as we have now been hanging in it for 60 minutes with another 30 to go. The waves and the boat attached to the line are causing huge up and down swings on our deco line, turning our deco into a variable roller coaster ride. And, to add insult to injury here, we are all getting pounded into each other. This entertaining deco eventually comes to an end, albeit what seemed to be an eternity later.

The last fun challenge is to get back on the boat. We each wait our turn underwater on the safer deco line, safer being used here as a very relative term. I watch each diver ahead of me negotiate the ladder that is clearing the surface of the water on each wave passage. We all make it back on board without injury or loss of any gear, quite amazing! However, the day is not over yet. It seems that whatever the grapple hooked onto, it wanted to keep. This was very surprising to all of us as the grapple was properly turned upside down on the line to prevent such a deco nightmare and allow easy recovery. Eventually, with a lot of persistence, the grapple is recovered and we head back to Key Largo. The return trip is a bit easier as we are going with the waves versus directly into them. Every now and then it feels like we are in the movie *The Perfect Storm* as the boat gets picked up by a wave and then surfs down the other side.

The winds never subsided for the rest of our trip. I must give AJ credit as he took us out each day and tried to get us to our target in these far from ideal conditions. We ended up diving the *Spiegel Grove* three times and the *Doc DeMille* once. I have heard tales of divers having flat calm seas and no currents on the *Doc*. My comment to this is hope for the best, but don't count on it! The *Doc* is a wreck very worthy of the effort, even in hard conditions. The deep blue water and abundant marine life only increase this wreck's virtues. It is more common than not to see the jewfish and perhaps a school of eagle rays.

I want to thank Chris and Alison Brown of Silent World in Key Largo, a 5-star TDI Facility for allowing us to take on this adventure. Thanks to AJ Manzanilla and Gary Thompson for getting us out diving and bringing us home safely. Finally, great job Steven, Curtis, Matt, Leon, and Jo for being a great dive team and keeping it all together when times got tough.

www.silentworldkeylargo.com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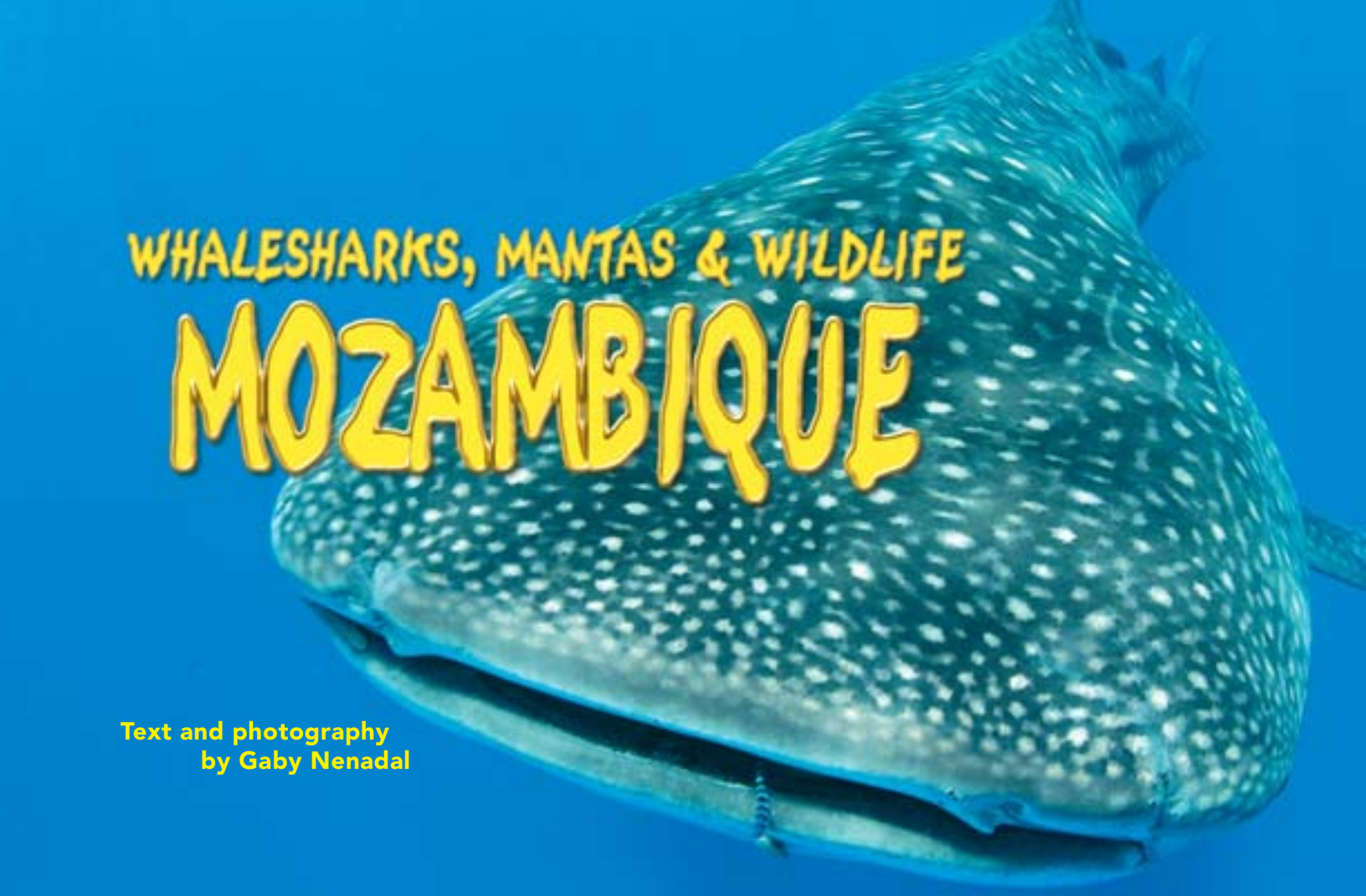
WHALESHARKS, MANTAS & WILDLIFE
MOZAMBIQUE



Text and photography by Gaby Nenadal

There he is...he's coming right towards me.... All of a sudden, I'm feeling very small when I look at the wide mouth, the long body, and the big fins... Finally, after more than 550 dives, I'm seeing my first whale shark ever! What an experience! It was worth coming all the way down to Mozambique.

Guarantee on whale sharks

After fifteen years of diving without seeing a whale shark, I finally decided that it was time to visit a place with a "whale shark guarantee." This time, I really wanted to see the world's biggest fish, and the most wanted animal on many divers' list. When I visited dive destinations like Thailand, Maldives, Philippines, or Australia, I always heard: "Oh what a pity, you just missed the whale shark – we saw it yesterday/on the morning dive/on the dive you skipped...."

After some research on the Internet, I found that there seemed to be only one place on earth with whale sharks all year round: Tofo in the southern part of Mozambique, in the province of Inhambane. So where's that exactly? Mozambique is hardly known as a tourist destination. It is more known for its long, dark history of civil war from 1976 to 1992. Although the war has been over for fifteen years now, the country neighboring South Africa in the north and Tanzania in the south, has still not managed to attract a lot of attention.

A lot to do

Mozambique hasn't fully recovered after the war, but it is way better off than many other African countries. There are many opportunities for all kinds of travelers: you find unspoiled and deserted beaches, wildlife parks, interesting remains of the country's

Portuguese history, all kinds of water sports, horse riding, 4 x 4 tours, luxury and simple backpacker lodges. People are poor but very friendly. If you take normal precautions, it is a safe country to travel.

Still a mystery

Although there has been some research done over the last few years, still very little is known about *Rincodon typus*, as the whale shark is called scientifically. Many key questions such as breeding, main feeding areas, or population size remain unanswered.

What researchers could find out, however, is that Tofo has a large migratory population of whale sharks, mostly juvenile males. Although they are migratory, the sharks are there all year round, only varying in numbers. They are most likely to be seen between October and March. So far, it is not known why they are there and why it's only the males, where they come from and where they go. It is believed they come to Tofo for a nice plankton snack before they continue their travel across the oceans. Sometimes scientists see tagged whale sharks from Ningaloo Reef in Western Australia, having traveled all the way through the Indian Ocean, just to swim back, eventually.

No sweet without sweat

All the local dive centers offer two-hour "Ocean Safaris" with semi-rigid inflatable boats that are also used for diving. After the captain or a guide spots a whale shark at the surface, everybody puts on the snorkel gear while they bring the boat right in front of the shark. Then, everybody enters the water and waits until the big jaws appear out of the blue - a special moment. After swimming with the shark – the length depends on the whale shark's mood and the snorkeler's fitness – the boat crew picks everybody up, and you go for the next one.

After two hours of swimming and then climbing into the boat, you get quite tired – but you are rewarded with up to 10 or even 15 whale shark encounters! One stayed for half an hour and tried to follow me everywhere I swam, which was quite a strange experience. I guess he was attracted to the dome port of my housing! All together, I did five ocean safaris and was rewarded with 45 to 50 whale sharks – at some point, I lost track of the count. You can also often see them on the way to the dive spot – then, of course, you get your whale shark encounter, too!

Since the conditions are often challenging – there is a lot of surf and it can be quite choppy – it is important to choose a good, reliable dive center. There are several, but one should be emphasized because they are especially accommodating, flexible, and professional with very good boat drivers: Liquid Adventures. They are a bit outside of Tofo Town, close to Bamboozi Beach Lodge, at a beautiful, secluded beach. Apart from diving and snorkeling, 4x4 adventure tours, fishing, kayak, and surf trips are offered – untiring divers can even take surf lessons.

Adventurous boat rides

Launching the boat is an adventure itself. The ones who have been to South Africa know the procedure already: everybody helps pulling the boat into the water, against the surf, and then crawls into the boat somehow, before the next wave pushes it back onto the sand again. You have to quickly place your feet in foot straps before the captain gives full throttle and the boat jumps over the waves.

Not "only" whale sharks

Apart from whale sharks, you can also see mantas, dolphins, and humpback whales during the ocean safaris - the latter in season, from June to September; some stragglers stay until October.

The diving also offers some remarkable experiences: there are turtles, schools of snappers and bigeyes, big groupers, tuna, king fish, stingrays, guitar sharks, and also a lot of critters such as frog fish, scorpion fish, crocodile fish, huge honeycomb morays, crabs and lobsters, Spanish dancers, and peacock mantis shrimp, to name a few. The mantas can also be seen while diving - very likely at a dive spot, clearly called "Manta Reef." Since there are three cleaning stations at this place, you can move from one to the other until you finally get to see them. Usually, the individuals are quite large and inquisitive.

Diving conditions

Diving and snorkeling is possible all year round. Be aware that visibility varies a lot, sometimes on a daily basis. It can be as low as 15 feet on one day and 100 feet on the next or vice versa – there are no real differences between summer and winter seasons. A rule of thumb you wouldn't expect is that the windier it is the better the viz will be. Apparently, the wind and waves will scatter the plankton and therefore improve the conditions whereas calm days usually involve a plankton bloom and greenish water.

Since Tofo is outside the Tropics of Capricorn, there are no coral reefs; however, you will find isolated coral bommies or some hard, leather and small, soft corals, growing on volcanic rocks. Water temperatures also vary from cool 70°F in winter (May to September) to comfortable 84°F in summer (October to April). February (which is also cyclone season) and August are windy months, usually.

Some of the dive sites are quite deep with the reef top below 65 feet, but there are also comfortable, shallow dives. The most well known reefs include Galleria, Amazon, Crocodile Rock, Oasis, and Manta Reef, to name a few.

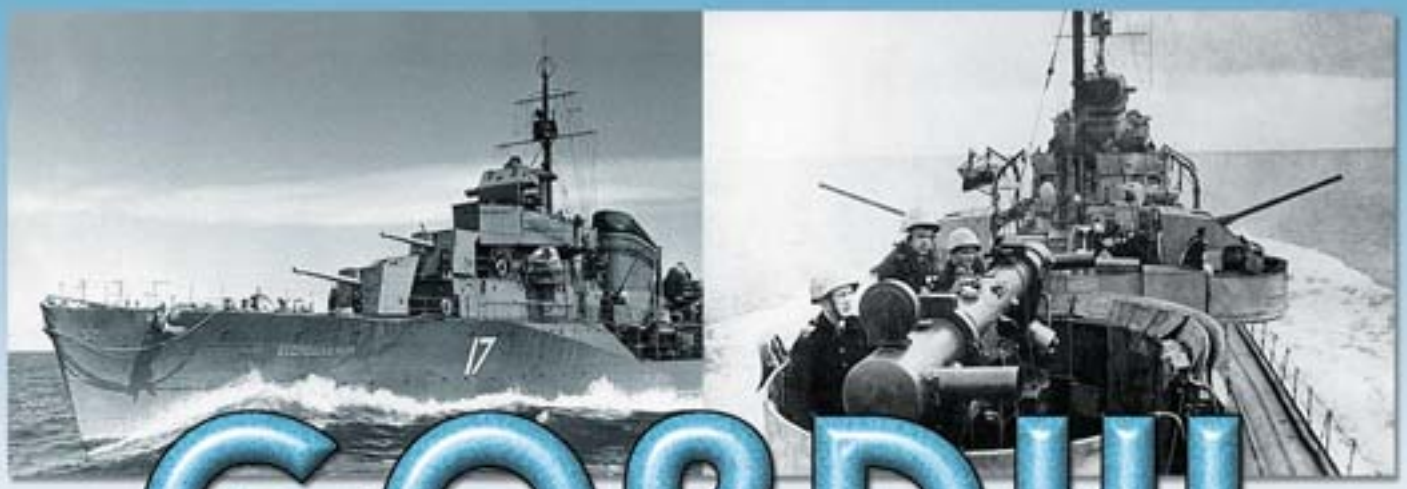
Traveling in Mozambique

There are several options to travel to and within Mozambique: most international flights will land at O.R. Tambo–Johannesburg airport in South Africa. Then you can fly into Mozambique by Inhambane airport, close to Tofo, and be picked up by your resort or dive center. If you want to see more of Mozambique's people and the country, you could take a rental car in South Africa and approach Tofo via road – strangely, these are in perfect condition in some areas and in a horrible state in others. It is best to take your time, drive slowly and enjoy the landscape. With a rental car you can also complete your diving holiday with a great stopover: a visit to Kruger National Park to watch the Big Five and many other wild animals like zebras, giraffes, baboons, hippos, or gazelles. A perfect opportunity to unpack your camera again and do some above-water shots, too!

Important information

Visas: A visa is required for entry into Mozambique. It is recommended that travelers acquire the appropriate visa prior to departing for Mozambique, although a one-entry visa can be obtained at country points of entry, including airports. Your passport must be valid for six months after leaving Mozambique.Visas can be arranged at the border post at Komatipoort, South Africa, if you are driving into Mozambique, or at Maputo or Inhambane airports.

Health Information: Medical facilities are hardly available and primitive, and most medical providers do not speak fluent English. Please ask your doctor for information on vaccinations and other health precautions. Malaria prophylaxis is highly recommended.



GORDYI
Destroyer Destroyed

Text and Photography by Sten Stockmann

It is Friday afternoon and the weather forecast could not be better - a perfect day to leave the office early and go do some diving! So we drive out to the Porkkala peninsula, which forms the narrowest part of the already tight Gulf of Finland — or the "Badewanne" (bathtub) as the Germans used to call it. As we head out towards international waters in our little RIB, we enter the area of the Porkkala-Naissaari barrage, one of the most heavily mined areas of WWII. Over 50,000 mines were laid in the Gulf of Finland during the war, and a substantial amount of those were right here, in an effort to prevent Russian submarines from entering the Baltic Sea. But our target for today is not a submarine, it is the Gnevnyi-class destroyer *Gordyi* (meaning Proud), a casualty of the Russian evacuation of Hanko in 1941.

As the Germans advance into the Baltic during the summer of 1941, some 30,000 Russian troops stationed in Hanko are cut off and isolated. Planning for their evacuation is started in October 1941, and is carried out in four main transportations on November 1st and 25th. The *Gordyi* along with its sister vessel *Surovyi*, the minelayer *Ural*, four minesweepers, and four MO boats form the fourth convoy which sails from Suursaari on November 13th under the command of Captain 2nd Class Narykov.

During the night of the 13th, the convoy enters the "Juminda" minefield, and the destroyer *Surovyi*, one minelayer, and one MO boat is lost. The remaining ships continue towards Hanko; but on the morning of the 14th, they reach the "Corbetha" minefield south of Porkkala. A mine detonates under *Gordyi*'s hull, and the vessel tilts and sinks rapidly. Seventy-three survivors are picked up by the accompanying MO boats; however, Captain 3rd Class Efet and the rest of his crew go down with their ship. Only five ships of the convoy reach Hanko.

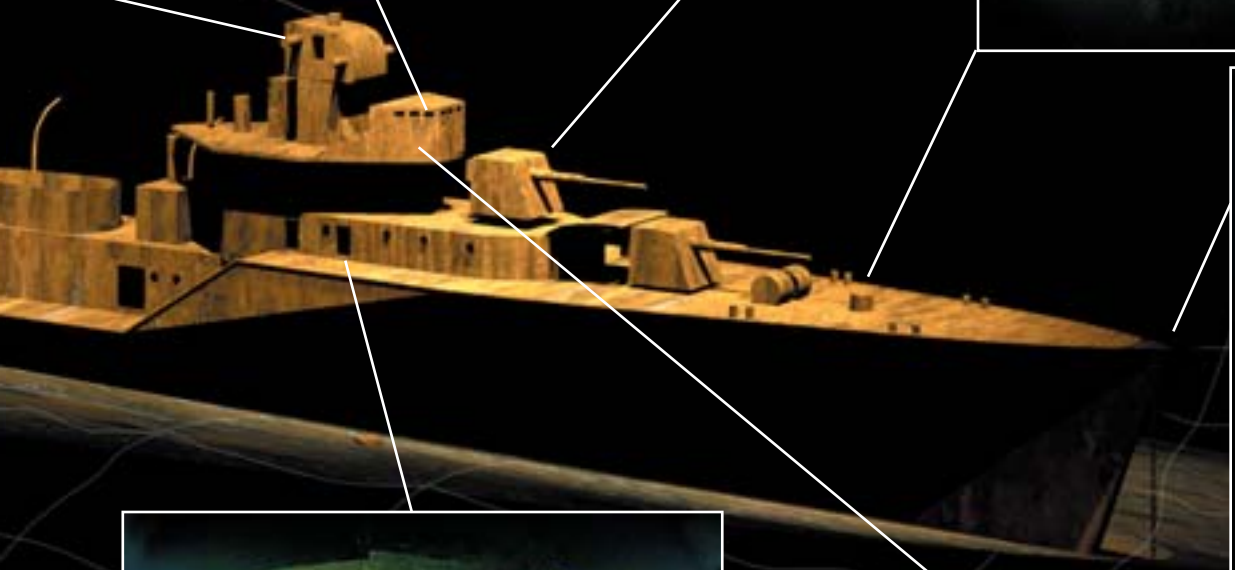
Although the Hanko evacuation as a whole was considered successful, the losses were heavy, and several vessels from the four convoys were lost during the dangerous journey across the heavily mined Gulf of Finland.

Gordyi was a Gnevny (Project 7) class destroyer built for the Soviet Navy in 1936.

Displacement:	1695 tons standard, 2100 tons full loaded
Length:	370 ft / 112.86 m
Beam:	33.5 ft / 10.2 m
Draught:	13 ft / 4.1 m
Machinery:	2 shaft-geared turbines 3 boilers 48,000 hp
Speed:	43 mph / 38 knots
Range:	1700nm at 16 knots
Armament:	4 x 130mm guns 2 x 76mm guns 4 x 12.7mm machine guns 6 x 533mm torpedo tubes 56 mines
Crew:	246
Fate:	Sunk November 14, 1941 after striking a mine in the Gulf of Finland

Illustration and Photography by Sten Stockmann

USSR DESTROYER GORDYI



The wreck of the *Gordyi* lies upright in about 190 ft / 58m depth, and is in fairly intact condition. Descending through the dark green water, the first thing that comes to our view is the artillery rangefinder. Below that is the remains of the bridge, where the compass can still be seen. Heading towards the bow, we pass the large 76mm guns. After examining the anchor winch in the bow, we drop down to the seafloor and head towards the stern. On the way we pass the remains of a mine anchor, possibly the one that sealed the fate of the *Gordyi*. A little further lies a lifeboat.

We continue amidships, where we find the 533mm torpedo tubes. In one of the tubes, the back of a torpedo can still be seen. Slowly returning towards the bridge, we peek in through the numerous doors and openings. But, as this is a war grave, we do not enter the wreck. Our planned bottom time is almost up, but there is still time for a last look at the guns and the rangefinder before we start our ascent.

The sun kindly welcomes us back as we break the surface of a calm and peaceful Baltic Sea.

Sten Stockmann, a 35 year old Finn has been diving since 1987, and becoming involved in technical diving in the mid-1990's. Sten has been shooting underwater photography since 1997. His main interest are exploring and documenting the wreck-littered Baltic Sea.
E-Mail: sten@elisanet.fi

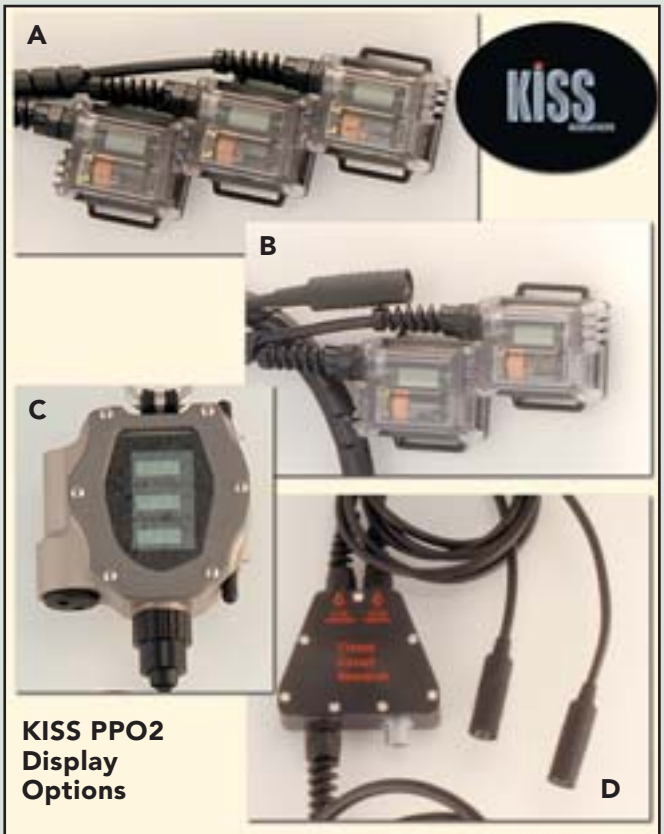
Special thanks to the Gortyi dive team members: Reima Räty, Juha Flinkman, Timo Niemi, Jouni Polkko, Harry Lindholm, Jorma Manninen, Jussi Kaasinen, Pasi Raasakka, Harri Kapanen and Tuomas Pensala.

Manufacturers Products

Dive Rite Jetstream Regulator

The Dive Rite Jetstream by Poseidon touts a one-of-a-kind combination using the Xtreme first stage and Jetstream second stage. Selected by the US Navy and NASA due to its simple construction, high performance and ease of breathing at any depth. The Xtream first stage uses a patented spherical stainless steel ball along with a soft seat material that virtually eliminates high pressure seat wear that is common in "knife edge" design seating systems. The Xtream first stage also uses a rolling diaphragm design that eliminates any restriction in movement, which creates a smooth transfer of gas from the first stage to the second stage. This rolling diaphragm design effectively creates a polymeric barrier insulating the diaphragm and gas volume so there is no need for additional environmental kits.

The Jetstream second stage uses servo valve technology that seals the seat without the use of conventional "knife edge" sealing. This allows for very low inhalation effort to open the valve. The servo valve design also eliminates any need for a Venturi or adjustment knob. As the world's premier side breather the Jetstream offers incredibly easy breathing at all depths and guarantees you enough air regardless of workload. The Jetstream can be worn on either the left or right side, making it ideal for sidemount diving. CE EN250 approved. MSRP: $625.00 **www.Diverite.com**



KISS PPO2 Display Options

The KISS rebreathers are built by a diver, with a diver still at the helm 10 years after its birth. With the owner being an avid rebreather diver, Jetsam understands people's desires for options; that divers want to make the unit their own. By listening to clients and working with both staff and industry respected individuals, Jetsam now offers divers a variety of display options. We know that what is perfect for one diver is not enough for another. One diver wants high tech computers and a back up display; the other wants the simplicity of our basic triple. With that in mind, Jetsam teamed with Closed Circuit Research to bring the state of the art dive computers and display systems on board with Jetsam's, offering possibly the most option's from any CCR company.

This means that KISS divers have 4 display options to choose from. Options are:

A Jetsam Triple display
B Jetsam dual display and cable for a VR computer
C Closed Circuit Research pendent display
D Closed Circuit Research full monitoring system

These systems each have their own features and benefits. For further information, please visit our website at, **www.kissrebreathers.com**

Dive Rite 35/50 Video Light

The H35/50 provides a large volume of light at color temperatures that are ideal for the professional, underwater videographer. Hot-strike ability allows the user to change between 35W and 50W output on the fly. The ballast for the light is located in the canister rather than attached to the light head making it extremely light and maneuverable when attached to the camera via mounting arms. The 12V, 9 Amp NiMH battery reduces bulk and weight as compared to gel cell batteries and offers an approximate burn time of 1.5 hours while delivering a strong, crisp white light with 4,700 degree Kelvin color temperature at 35W and 3,850 Kelvin at 50W. The 35W offers 3,600 lumens of illumination and 5,590 lumens at 50W. Depth rated to 400 feet (121m). The H35/50 canister holds the battery pack and ballast and with its round shape and PVC construction the canister is indestructible even under extreme pressures. The canister lid houses the on/off switch inside a switch guard to prevent accidental on/off. Made in the U.S.A. MSRP: $1,650.00 **www.Diverite.com**

Manta Vertical Bag

This special 12" x 18" bag is fabricated of tough Condura nylon with a metal loop closure. It can be opened while attached to the diver providing a 9" diameter access to the bag, which is gusseted for extra expansion. Multiple brass drain grommets help drain trapped water quickly.

www.mantaind.com

Miflex Hoses, the manufacturer of the range of Xtreme high performance diving hoses are pleased to confirm the launch of their products in America, working with the established and successful company XS Scuba.

Developed in cooperation with expert divers, the Xtreme range of diving hoses have been developed by a team of Miflex engineers, analyzing the weak points of traditional rubber diving hoses.

The fruit of their research is the Miflex Xtreme range of high performance hoses.

Available in a wide range of lengths, for regulators and BCD quick-disconnect applications and in three colors: Black, Blue and hi-viz Yellow.

Miflex Xtreme hoses feature a patent-pending, double nylon safety braiding designed to outperform and outlive traditional rubber hoses.

Miflex Xtreme hoses are 30% lighter than an equivalent length rubber hose and have unmatched flexibility.

You can tie a Miflex Xtreme hose in a knot and still be assured of continuous, uninterrupted air flow.

USA Distribution
www.xsscuba.com

For further information:
www.miflexhoses.com

NiteRider HID Dual-Beam Dive Light and HID Pro 40 U/W Video Light

NiteRider has introduced a new HID Dual Beam Dive Light and a new HID Dual Beam Video Light to their line of dive and UW video lights. Imagine the power of two 10 watt HID lamps in a single compact headlamp. The HID Dual Beam Dive Light comes with a hand mount and a neoprene headband mount. Both options allow for a hands-free diving experience. Dive helmet mounts and other mounting accessories are also available. The 13.2 volt 4.5 amp hour Nickel Metal Hydride Battery gives almost 2 hours of burn time with both lamps on or you can run either of the lamps separately for 4+ hours.

The HID Pro 40 U/W Video Light is a compact yet powerful lighting system comprised of two light heads, each housing two 10-watt HID lamps that produce a combined light output equivalent to 160 watts of conventional light. The HID lamps produce an exceptional 5800 degree color temperature that is closest to daylight thus rendering natural color tones without filtration. Each dual beam headlamp comes with a selectable power switch allowing for a full range of filming modes from close up to wide angle. The switches located on each headlamp give you the choice of having 1 to 4 lamps on at any time.

The compact 13.2 volt 4.5 amp hour NiMH battery can be easily mounted under most underwater video housings. Burn times are from 50 minutes with all 4 lamps to 4+ hours with one lamp.

The entire HID series can be seen on-line at

www.niteriderdive.com

Ultralight Control System's AC-CSL clamp

Ultralight Control System's most recent new part, the AC-CSL clamp is a larger clamp designed to be able to place your spotting light closer to the subject.

Most housings have a hot shoe part or a threaded hole that one of Ultralight's ball adapters fit into. These typically are not near the front of the housing. When you add one of the regular size clamps and a spotting light holder the light does not spot your subject.

This clamp gives you the extra length to be able to position your spotting light further forward.

www.ULCS.com

Golem Gear Q-Vest

The Q-vest is designed as a modular system consisting of a vest, bulkhead connector block and an external battery canister. This configuration allows diver to wear the vest under the drysuit without additional bulk and dangers associated with internal batteries.

The vest outer shell is made from abrasion and tear resistant Cordura. Sewn-in are rubber coated heating element panels, 3 on the back and 2 on the front. The vest is designed to be worn over thin form fitting thermal wear and under the drysuit underwear. In this configuration the majority of the heat output is transferred directly on diver's torso and the thick drysuit underwear keeps the heat in.
www.golemgear.com

Aquatica Nikon D3 Underwater Housing

The new State of the Art Aquatica D3 housing for the Nikon D3 full frame camera comes loaded with features making this housing the ideal system for demanding professionals and discerning amateurs.

- A saddle mounting/ locking system allows for easy sliding of the D3 body on two solid rods. There is no miss-alignment of the body inside the housing.
- There are spring loaded contacts with the Aperture and Speed dials making for flawless and smooth changes to these settings.
- All D3 housings come standard with dual bulkhead connectors and moisture alarm
- Aquatica D3 ports, extensions and lens gears are compatible with all other bayonet mount Aquatica housing.

FEATURES

- Bayonet Port: Positive bayonet mounting leaves no doubt that your ports are secure in place and water tight.
- Port locking mechanism (NEW): a new port locking mechanism is integrated in the Aquatica D3 housing; this lock is accessible from the exterior of the housing making port changing a breeze.
- Fingertip access to all camera menu controls include On-Off, Mode, bracket, Meter positioning, MSC focus control and AE/AF lock as well as AF preferences.
- The most critical aspect of underwater SLR photography is the viewing system. The Aquatica D3 uses a viewfinder that derives the biggest and the brightest image possible in full frame viewing to your eye.
- Live View (NEW): The Aquatica D3 housing give the user access to the Live View feature of the Nikon D3 camera.
- Remote control access is built in all Aquatica housing and using the #19300 remote control take but a few moments for the photographer to complete the remote operation setup.

www.Aquatica.ca

Manta Mini SPG Combo

This submersible pressure gauge/depth gauge combo is also made with a brass body and an impact resistant polycarbonate lens. Both the depth and pressure gauges have luminescent faceplates with easy to read numbers on both! On the depth gauge we have an orange luminescent indicator to indicate 120ft for sport divers and also a green luminescent indicator to show 15ft to remind you to always do your last safety stop! The SPG has an orange luminescent indicator to show 1000 psi on the face. The gauges come standard with a 32" high-pressure hose. One of the best features in the combo console is that there is a built in safety knife. The knife is made from high quality stainless steel and is 6" long. The knife locks into place on the backside for emergencies! Each gauge is prepared with Viton O-rings and oxygen compatible lubricants. **www.mantaind.com**

Lava Pads

With a snap of your fingers, this new product can be used to provide protection against the cold. Each plastic pad is filled with a non-toxic liquid with a small metal disc which, when snapped, causes the liquid to produce heat up to 129° F. The Lava Pads can later regenerated, simply by boiled in water.

www.lavapads.com

GOLD HOUND TREASURE DIVERS

HISTORIC SHIPWRECK SALVAGE

Text and Photography by Curt Bowen

The soft humming of the Aquapulse underwater metal detector thrums through treasure diver Greg Bounds' head. Waves churn less than ten feet above his back, rocking his lead overweighed body back and forth as he moves the ring of the metal detector right and left. His fingers quickly decipher the identity of each item the detector noses out.

Thick sea particles continuously wash over him like a never-ending shower of fine sand, reducing the visibility to less than twelve inches. But he hardly needs the use of his eyes to discover the objects of his search. The captain and his crew have thousands of hours grappling, groping, and digging…decades of experience and hard-won knowledge that is dedicated to the search for their elusive goal. So, much like a Bluetick Coonhound sniffing out the scent of a running raccoon, Greg scents the bottom of the ocean in search of his metal prey.

Captain Greg Bounds and his crew of modern day explorers seek the lost 1715 Spanish treasure, and are better known as the Gold Hound treasure divers.

To fully understand the scope of their quarry, we must turn the clocks back almost 300 years. Between 1688 and 1715, much of Europe was at war, hindering the normal trade routes from the Americas back to Spain. At the end of the hostilities and in dire need of finances, the King of Spain ordered a fleet of ships that had been tied up in Cuba for several years to load all the stockpiled silver, gold, and precious gems and head back to Europe.

Even though the hurricane season had long since begun, Captain–General Don Juan Esteban de Ubilla, under tremendous pressure from King Philip V of Spain, ordered the fleet loaded. On the morning of July 24th, 1715, the fleet of treasure ships departed from Havana, Cuba, and headed north. Using the Gulf Stream to facilitate their journey back to the Old World, the convoy planned to sail north along the Florida Keys, up the eastern coast of North America, and then cut back to the east just south of Iceland. They would then head back south along England and, finally, make for Spain.

Several pleasant days of calm weather had passed, and the treasure ships were cruising steadily northward in the Gulf Stream, just offshore of Florida. The morning of July 29th, 1715, however, would signal trouble, as large ocean swells appeared in a windless sky. By afternoon, fast moving milky white clouds raced high in the atmosphere. Experienced navigators knew that these early signs were harbingers of an impending tropical storm.

Mother Nature was brewing a monster in the Atlantic, and its eye was staring directly through the path of the Spanish ships. The morning of July 30th would bring increasing winds, well over 30 knots, and seas rapidly building to over 20 feet. Powered only by sail, the ever-increasing easterly winds started separating the fleet and driving the ships closer to the dangerous shores and shoals of the Florida coast.

As nightfall arrived, so did the eye of the storm as it released its full fury of 125 mph winds and 40-foot seas. The small wooden treasure vessels of the 1700's had no hope of surviving such brutal force. One by one, they were pushed and tossed at the mercy of the sea until, finally, they were smashed onto the Florida coast or shallow offshore reefs.

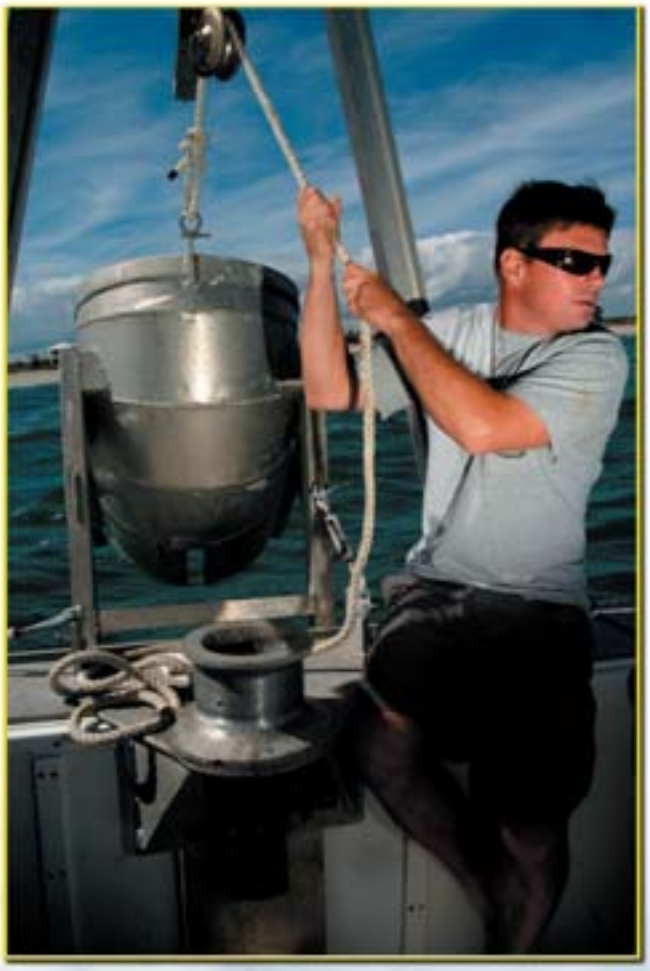
July 31st, 1715, would bring the loss of all vessels, with very few survivors cast up on the uninhabited storm-beaten shores, now covered with wreckage. The bodies of over 1000 people that perished during the night continued to wash up in the decreasing storm surge. Over the years that followed, the Spanish would make various attempts to recover some of the lost treasure, but most still remains on the bottom of the sea.

Fast-forward 293 years to 2008, and we see a much different Florida. Condo-covered beaches, interstate highways, marinas, and millions of tourists and residents crowd almost every inch of land. But just a musket's shot from the beaches of the Sebastian shoreline there still hides a king's ransom of riches. And the Gold Hound crew is sniffing it out one coin at a time.

Above: Gold Hound treasure diver Chas Francoviglia holds up a Spanish silver coin found on the galleon wreck site.

Captain Bounds and his mates, Chas Francoviglia and Tony Gil, spend many of their days sitting just off shore in their treasure-hunting vessel, the M/V *GoldHound*. They are equipped with all the modern day treasure searching equipment, including a special device called a mailbox which is used to change the direction of the vessels prop wash downwards and onto the sea floor. Running the engines for only ten to fifteen minutes through the mailbox creates a seven to twelve foot deep hole on the sandy sea floor. Once the hole has been dug, one of the divers will quickly descend with a metal detector and scan the area for any treasure. Each hole is marked on the vessel's computer GPS navigation chart, along with any discoveries. The complete record and location of each and every discovery made over the last several years has created an invaluable map of how the wreckage sits on the bottom of the sea, as well as how it was tossed onto the shoreline in 1715 by the hurricane.

Each and every discovery brings the Gold Hounds closer to the giant payoff day and the estimated 120 tons of silver and gold that is still waiting…buried deep in the sand. Someplace….



Above Right: Captain Greg Bounds prepares to lower the mailbox which diverts the boat's prop wash towards the sea floor for the removal of large amounts of sand that may be hiding treasure.

Below: The *GoldHound* is triple anchored to help maintain exact location for mailbox operations.

Become a treasure diver for a day

Yes, treasure hunting is an exceptionally expensive operation, so Captain Bounds has started a new and exciting program that allows the standard diver to join in the quest for treasure. For a small daily fee, any advanced certified diver can join the crew for a day's search for gold. It's an excellent opportunity to learn the tricks of the trade from the experts, see what is the best equipment that really works, and experience an opportunity to perhaps make history.

Captain Bounds is sorry to say it, but, no, you do not get to keep any discoveries. Due to the State of Florida's regulations, all discoveries must be turned in, cataloged, and divided amongst the shareholders of the treasure permits. But you *can* place your name on the piece you discovered, and have an opportunity to purchase it after all legal avenues are completed.

Become a Gold Hound investor

The mother lode still sits on the sea floor, and it is just a matter of time before Captain Bounds discovers it. At an estimated treasure of over 300 million dollars in 2008 valuation, the small $1000.00 investment per year will buy you 0.001 percent of all treasure discovered during that year. If the mother lode is discovered, the State of Florida takes the top 20% of the best valued items and the rest is split amongst the investors — which could bring in up to $240,000.00 dollars in treasure for your simple $1000.00 investment.

The Gold Hound crew is also closing in on other treasure wrecks that they have been working for the last decade which have even higher potential for massive treasure discoveries.

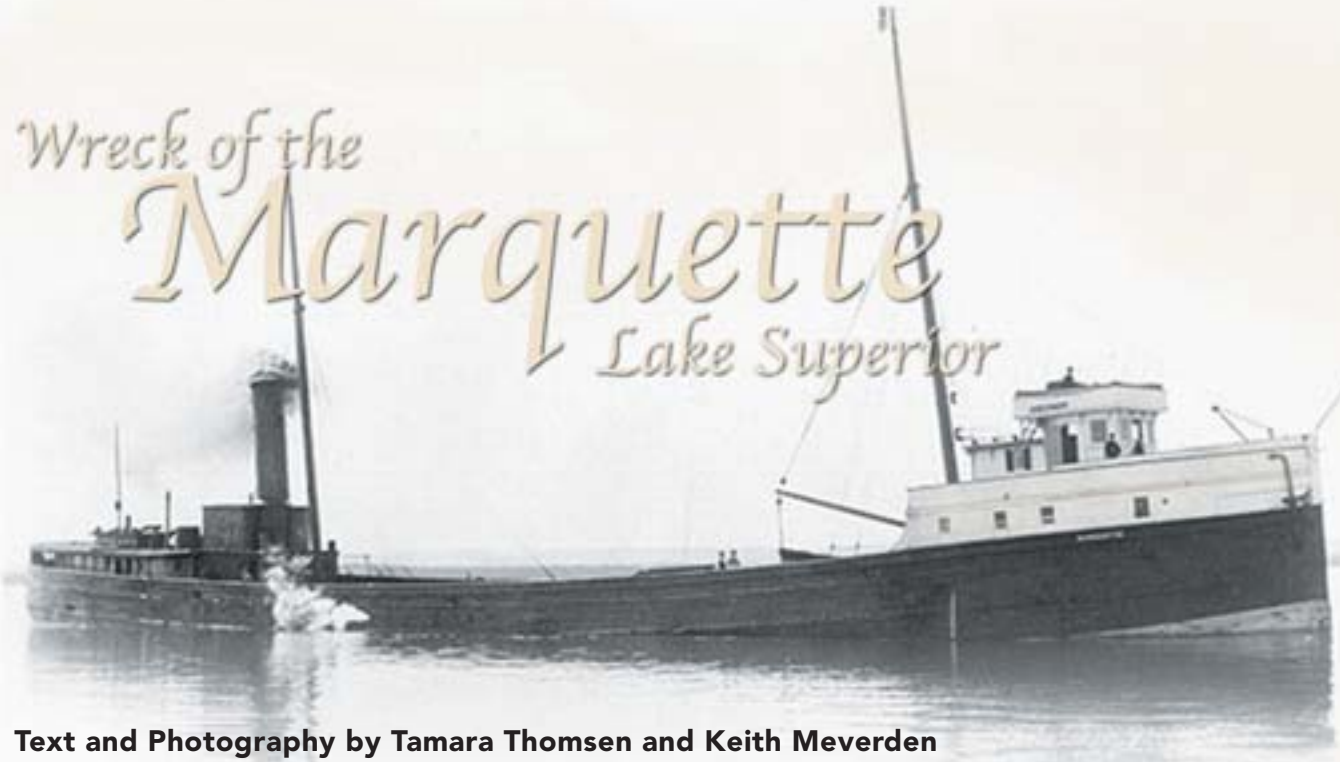
For complete details on how to join the crew for the day, or to become a Gold Hound Treasure investor, visit their web site at **www.GoldHoundTreasureDivers.com**

Gold Hounds Treasure Divers are located at the world famous Capt. Hirams Inn & marina. An excellent location to stay, eat and party. **www.hirams.com**

Above Right: Treasure diver for a day, Anne Kazel shows off a piece of ballast stone she discovered from the wreck site.

Righgt: Gold Hound treasure diver Chas Francoviglia scans with his Aquapulse 1B metal detector as he searches for treasure in a new hole created by the boat's mailbox.

Wreck of the Marquette Lake Superior



Wisconsin Historical Society Maritime Collection

Text and Photography by Tamara Thomsen and Keith Meverden

The wooden bulk freighter *Marquette* was built by George Presley in Cleveland, Ohio, for the Republic Iron Company, and originally named *Republic*. She was launched on 21 April 1881, and measured 235 feet long and 35.7 feet in breadth, with an 18.5-foot depth of hold that was capable of hauling 1343.23 gross tons. The Republic Iron Company kept their flagship *Republic* on a regular route transporting iron ore from Marquette, Michigan, to Cleveland, Ohio.

The *Republic*'s name was changed to *Marquette* on 5 August 1890 to accommodate the Republic Iron Company's newest flagship, which was to assume the name *Republic*. The Republic Iron Company finally sold the *Marquette* on 6 April 1892 to the J.C. Gilchrist fleet where she remained for the rest of her career. Typically, J. C. Gilchrist would self-insure his fleet; but, suddenly, in 1903 Gilchrist opted to take out insurance policies on many of his older vessels. Gilchrist lost seven of these insured vessels, including the *Marquette*, all in the 1903 shipping season. The *Marquette*'s sinking remains mysterious. On 15 October 1903, while hauling a cargo of iron ore out of Ashland, Wisconsin, she inexplicably sprang an uncontrollable leak in an unknown location on the ship…on a calm night…in deep water…in a somewhat remote area off Michigan Island, Wisconsin.

Photo: The Marquette's broken ships wheel and engine order telegraph

During the summer of 1991, impassioned wreck hunters Jerry Eliason and Kraig Smith began systematically searching for the *Marquette*. With the relatively good information on the location of the wreck provided in historic newspapers, they began searching an area five miles east of the Michigan Island Lighthouse (Apostle Islands, Wisconsin). The two had experienced relatively good success with the use of a basic fish finder when they had located the well-known North Shore wrecks *Onoko* and *Judge Hart* several years earlier, but the *Marquette* continued to elude them. Ken Merryman joined the search in 1993, and later they were joined by Randy Beebe. The group, collectively known as the Great Lakes Shipwreck Preservation Society (GLSPS), continued searching for the next five years. They expanded their search to an area that ranged between three and eight miles northeast and southeast of the lighthouse.

With no success with the fish finder, Jerry Eliason and his son, Jarrod, built their first side scan sonar in 1999. Thinking that they had missed the *Marquette*, they side scanned areas that they had previously surveyed with the fish finder. By 2004, the team had worked as far as ten miles east of the lighthouse and then continued to survey further to the west and south. Finally, on 30 July 2004 they got their first sonar hit, but it turned out to be an entirely different wreck -- the schooner-barge *Moonlight*. The team continued searching, and on 9 October 2005 they ultimately located the *Marquette*. According to Eliason, the group searched an area that covered fifty square miles, much of it twice.

In the summer of 2006, the GLSPS began sending divers down to the wreck to video, photograph, and catalog the artifacts that went down with the ship and remained preserved on the lake bed. Partnering with the Wisconsin Historical Society, the preservation-minded group listed the wreck site on the National Register of Historic Places on 13 February 2008. The *Marquette* is truly a time capsule resting on Lake Superior's bottom. All of her artifacts, everything that went to the bottom on the night of 15 October 1903, remain with the wreck and are now protected under the provisions of the National Register.

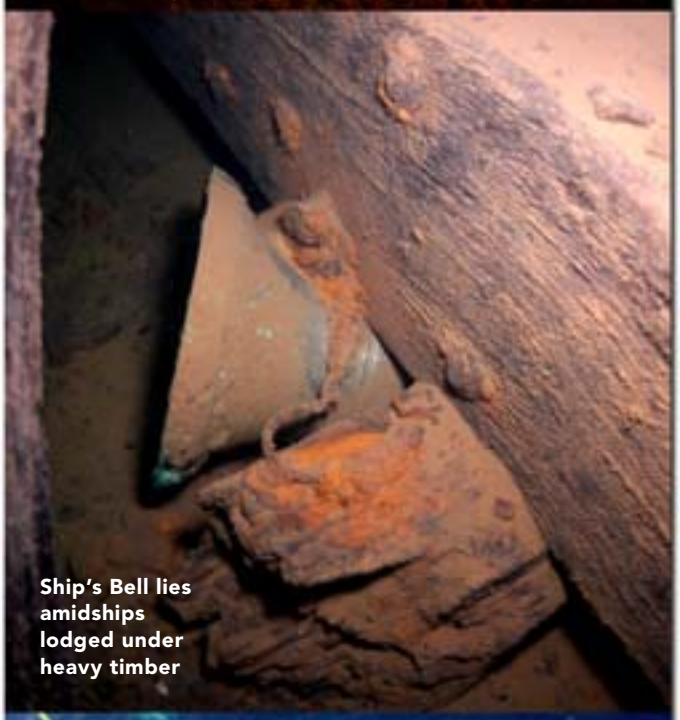
The *Marquette* lies in 215 feet of water five miles east of Michigan Island. Michigan Island was the *Marquette*'s last reported destination in an attempt to beach the foundering vessel, but today the wreckage lies facing southeast, away from the island. All of her crew safely departed the *Marquette* prior to her sinking, and reported that the *Marquette* broke her back on her descent, breaking up much of the weather deck and blowing one of the masts nearly twenty feet into the air. The *Marquette*'s current condition is evidence of the vessel's rather violent descent. The *Marquette*'s entire superstructure was torn free during the sinking, and today the vessel's hull is progressively broken from bow to stern.

Broken glass plate on engine temperature gauge

Chain locker lies on the main deck

Ship's propeller encrusted with rust

Engine Builders Plate retains orange paint



Ship's Bell lies amidships lodged under heavy timber

The port and starboard anchors remain fastened to the deck

The outer hull retains much of its green paint on which the letters *MARQUETTE* are painted in small white block letters, a few inches in height. Only at the waterline does the hull color change to white. Both the port and starboard anchors remain stowed atop the deck with their stocks lying outside the bulwarks. Chains run from the anchors through their respective hawse pipes and to the windlass. The iron, steam-powered windlass is framed in a wooden housing. The port and starboard anchor chains run over the windlass and through deck pipes that are capped with iron covers fitted around the chain links. The chain locker is located directly beneath the windlass on the main deck. The area surrounding the chain locker is accessible through a collapse of the weather deck aft of the windlass. The chain locker is a large wooden box that rests atop the main deck, and contains both the port and starboard anchor chains. Several artifacts rest atop the chain locker, including two window frames that retain several intact panes of glass.

Much of the forward superstructure was carried away during the sinking, with the exception of the pilot house deck, which now lies inverted atop the weather deck aft of the windlass. As the pilot house broke up and its deck inverted during the sinking, many pilot house artifacts were strewn about the forward hull, and the main deck from the foremast step forward is strewn with pilot house artifacts. One of the more significant pilot house artifacts lies on the main deck beneath the pilot house deck — the ship's wheel. The *Marquette* had two wheels mounted on a single hub. The wheel hub, with one of the wheels attached, lies to port and slightly aft of the chain locker. The other wheel's spokes were dislodged from the end of the wheel hub and now lie on the main deck floor. An engine order telegraph lies next to the wheel.

Aft of the chain locker, the main deck is a jumble of broken deck beams and dislodged planking. Much of the iron ore cargo was swept from the holds during the sinking. A bathtub lies on the main deck's starboard side, aft of the first cargo hatch. The tub is housed in a square box of finished wood, and lies on its end, wedged between the main deck beams. Inside the bow's starboard bulwark, a flushable head is intact, complete with flush lever and piping.

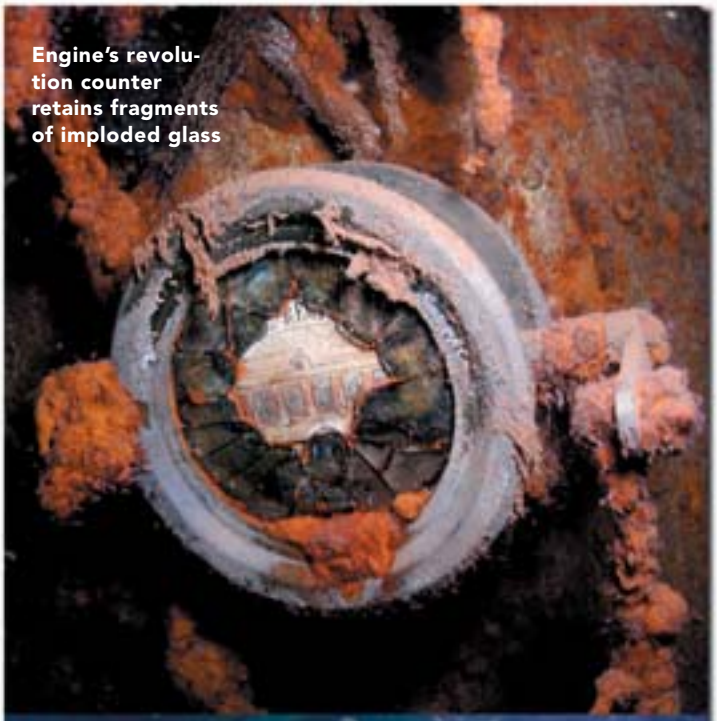
From the first cargo hatch forward, there is a small, planked walkway along the main deck's port side. A small blow torch lies atop this planking. Very little of either deck is intact aft of the second cargo hatch, and aft of this there is nothing of the lower hull visible except iron ore cargo until immediately forward of the boiler beds. Two bilge pump shafts protrude from the cargo.

Both the port and starboard hull sides are intact from the bow to just aft of amidships, where they fall outward at an increasing angle towards the stern to where they lie flat on the lakebed. The *Marquette*'s bell is located at amidships on the starboard side, lodged under heavy timber. The brass bell has a decorative ring around the top, but no name or clapper.

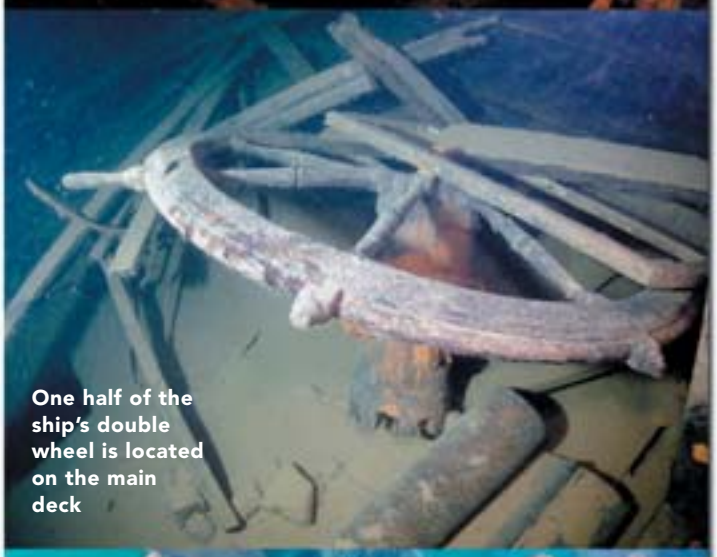
Nearly all of the *Marquette*'s machinery and pump systems remain, with the outer hull broken away. The *Marquette* was powered by a single coal-fired Scotch Boiler that fueled a single compound steam engine. The boiler was dislodged from its mounts during the sinking, and currently lies to port of the steam engine. The compound engine is upright and intact. Although there is a large amount of surface corrosion covering the engine, remnants of the engine's original silver paint is visible. Many brass oilers, complete with caps, are intact on all of the engine bearings. The smaller diameter high pressure cylinder is located on the forward end of the engine, with the larger diameter low pressure cylinder located astern. The stem pipe from the boilers enters the high pressure cylinder on the engine's port side, and is broken immediately above the coupler that joins the steam pipe with the engine. A large steam pipe joins the low pressure cylinder with the condenser, located on the engine's starboard side and fastened to the engine room deck. Two steam pumps are located to both port and starboard of the engine.

The engine's port side retains part of the engineer's catwalk for conducting maintenance and monitoring engine functions. Above the catwalk, a glass engine oiler is intact, the glass globe still filled with oil. Two other oilers, each feeding three oil lines each, are attached to the engine's port side. Immediately above the two engine oilers is the engine gauge panel. Two of the four gauges are intact, complete with indicator arrows, but their glass faces have imploded from the increased pressure of the water depth. The two forward, upper gauges were pulled off the gauge panel during the sinking. Aft of the gauge panel is the engine's builder's plate, which retains orange paint around its border and reads "Dry Dock Engine Works, Detroit, Mich., No. 1073, 1896." The engine's revolution counter is intact on the engine's starboard side, with the exception of the glass face, which shattered from implosion at depth. Despite the imploded glass, several numbers are legible on the gauge where they are not obscured by glass shards.

The circulating pump is located on the starboard side immediately aft of the condenser. A second, nearly identical pump is located immediately forward of the condenser, but the forward pump is missing the connecting rod that attached the circulating pump to the engine's pump arm. A horizontal steam pump is located on the engine's port side, oriented fore and aft, with nearly all of the piping and valves (complete with hand wheels) intact. To port of the steam pump lies a stern or masthead light. This light is lens up, and is constructed of tin that was painted silver or perhaps galvanized. The lens is broken, but a fragment of the lens remains in the upper right corner. A second stern or masthead light is lens down on the engine's starboard side outboard of the condenser. The light is similar to the port side light, but is extremely fragile due to corrosion.



Engine's revolution counter retains fragments of imploded glass



One half of the ship's double wheel is located on the main deck

Steam-powered windless

The engine's crank shaft is intact and remains connected to the thrust bearing, which is in turn connected to the propeller shaft and four-bladed propeller. The propeller is upright and intact, with its lower two blades embedded in the lake bed. Immediately aft of the propeller, the intact boiler stack extends off to the vessel's port quarter. The stack is surprisingly intact, as most collapse during sinking and usually lie flattened on the wreck. The *Marquette*'s stack includes guy wires that supported the stack in its former location, and the ship's steam whistle remains securely fastened to the stack's forward side, which now lies facing the port side of the wreck.

To learn more about the Great Lakes Shipwreck Preservation Society (GLSPS) and their efforts in shipwreck hunting, documentation, and preservation, go to their website **www.glsps.org**

*Tamara Thomsen manages the U.S. office for Delta P Technology, Ltd. (**www.vr3.co.uk**) and owns Diversions Scuba in Middleton, Wisconsin **www.diversions-scuba.com.***

*Keith Meverden is a marine archaeologist for the Wisconsin Historical Society's Maritime Preservation and Archaeology Program **www.wisconsinshipwrecks.org** and **www.maritimetrails.org***

Remnants of a ships lantern

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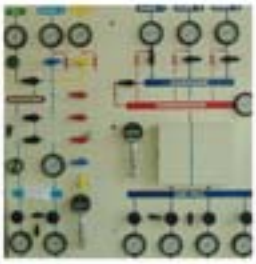

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