Issue #3, Fall/Winter 2009

# The Lookout

## Manifest



## The Lookout Newsletter


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## A Message From The Wheelhouse

Hello Divers –

Thanks for checking out Issue # 3 of The Lookout! In this issue, we cover several wide-ranging topics, both historical and technical. We discuss the wreck of the Pinthis, located off Scituate, MA – as this site is a spectacular dive with a compelling story of her loss. We also share some summer diving highlights. These include a recap of a few exciting trips to the Stellwagen Bank National Marine Sanctuary, diving both the Paul Palmer, a favorite; as well as a newer wreck in 105 feet of water – an as of yet unidentified contemporary fishing vessel. It was a tough summer weather-wise and this definitely impacted our exploration activities, but we did make a few good trips and managed to set things up for what will hopefully be a great 2010 dive season. We also discuss our "heated vest" project – a complex endeavor spanning approximately one year to create a completely novel heated vest for maintaining proper body temperatures during extended or especially cold dives. Finally, we have a quick recap of our recent trip to Grand Cayman Island and a look ahead to this upcoming winter diving season.

We haven't been able to stick to a regular publication schedule for The Lookout. At this time, we are working with a twice per year release – generally Fall/Winter and Spring/Summer. Putting together a quality newsletter is a lot of work and we will only publish if we think we have something worth reading and can do a quality job! We appreciate you reading the newsletter and hope you enjoy Issue # 3. We expect to publish the next issue in the April/May 2010 timeframe. If you have a topic you are interested in hearing about, please let us know. Until then, safe diving!

Heather & Dave

## The Pinthis – Forty-Seven Lost in Massachusetts Bay

The coastal tanker *Pinthis*

The Pinthis is well known as a spectacular wreck dive, but the history of the vessel's loss does not always stand out as a truly significant tragedy. Not many divers know that forty seven people died when the Pinthis collided with the SS Fairfax on June 10, 1930 – making it a sinking associated with greatest loss of life in Massachusetts Bay.

The Pinthis, built in 1919, was a steel-hulled bulk petroleum carrier, two-hundred six feet in length and thirty-five feet wide. The vessel was powered by a single oil-fired diesel engine. The Pinthis was owned by the Tank Ship Building Corporation of Newburgh, NY, and had been leased to the Shell Oil Company. The Pinthis wasn't a particularly large vessel, but like many small-to-moderate sized coastal tankers, she transported a significant amount of material, delivering much needed supplies to coastal communities.

At the time of the collision, the Pinthis was carrying 11,500 barrels of oil and gasoline – representing about a half million gallons of fuel oil – that had been taken as cargo from her departure point of Fall River, MA. The Pinthis was en route to deliver the cargo to Chelsea, MA and Portland, ME on her final voyage.

FAIRFAX SINKS TANKER WITH ALL ON BOARD

Collision in Fog Off Scituate—Crew of 30 Believed Lost on Oil Vessel—Seven of Passengers and 11 of Crew of Liner Also Missing

Explosion Follows Crash And Flames Spread To Baltimore Boat

Many Vessels Are Ashore or in Distress in Worst Fog Blanket For Years

VOTE ON TARIFF BILL SET FOR FRIDAY AT 2

Watson Talks That Bill Will Pass By Narrow Margin Only—Reed May Reveal Position Today

The collision between the Fairfax and Pinthis makes headlines.

The evening of June 10, 1930 was a night notable for extraordinarily dense fog. At approximately 7 pm that evening while underway off Scituate, MA, the Pinthis encountered the coastal passenger vessel SS Fairfax. Once the vessels sighted each other, a collision was nearly imminent and with very little time to alter courses the vessels collided – the 5,500 ton Fairfax striking the 1,111 ton Pinthis on her starboard side.

The cargo aboard the Pinthis exploded into an inferno upon the collision, and the fire quickly spread to the Fairfax. All of the Pinthis' crew of nineteen were killed in the fire and explosions resulting from the combustion of the vessel's cargo. Passengers aboard the Fairfax caught fire as a result of the burning gasoline that splattered and splashed, spreading the flames. Some passengers burned to death on deck, while others jumped into the water in a futile attempt to extinguish the flames – in some places, the water, too, was burning from floating gasoline slicks.

The Pinthis and Fairfax eventually separated – the Fairfax was caught in the hull of the Pinthis and only when the Pinthis fell away as she sank did the vessels disengage. At that point, the Fairfax was burning along most of her port side and superstructure. The vessel had lost communication abilities as a result of the fire, but was ultimately able to relay a distress signal to transfer injured passengers to another vessel after the crew contained the fire. In the end, seventeen passengers and eleven crew from the Fairfax perished.

The Pinthis sank into 100 feet of water as a burning inferno and the surface water continued to burn for four days even after the vessel sank. Three bodies were located floating after the sinking and interestingly, they showed no signs of burning. Commercial salvage divers inspected the wreck shortly after the sinking and found the wreck in an interesting state. The aft pilot house section was nearly intact and did not show evidence of burning; only the section of the vessel forward of the collision point showed signs of fire. The commercial diver inspecting the wreckage did locate two bodies of Pinthis crew members near the pilot house -- and they, too, showed no evidence of burning. Given the intensity of the fire and lack of any survivors from the crew of the Pinthis, this was an interesting observation.

As is the case in most sinkings with loss of life, an investigation followed. So did lawsuits, in an attempt to assign responsibility for the disaster, loss of life and damage/loss associated with each vessel. Ultimately, after much testimony and the inability of anyone to represent the version of events as told by crew members of the Pinthis, the captain and crew of the Fairfax were absolved of any responsibility for the collision.

The opening into the aft engine space of the Pinthis.

Today, the wreck of the Pinthis rests on a sand-gravel bottom in 100 feet of water approximately six miles east of Scituate, MA. The visibility tends to be excellent averaging about 30 feet (and sometimes as good as 50 feet!). The wreck is turtled, the bow nearly sheared off and the stern section partially collapsed. The rudder can be found along the port side of the wreck, but the propeller was salvaged for scrap (though the propeller turned out to be steel, not bronze). In the bow, an anchor is present, and a chain stretches out a few hundred feet along the bottom. Following this chain out to the end, one finds a small anchor. There are many openings along the hull that permit easy entry to the interior of the wreck. Each year, the wreck collapses a bit more, and new areas are exposed, while others become no longer accessible.

Scott Tomlinson swimming through the interior of the Pinthis.

For a diver with overhead training, the interior of the Pinthis is a fabulous swim. A diver can enter through an opening near the bow and swim the entire length of the wreck, passing through a few sections of bulkhead framing, swimming through the holds all the way to the engine room bulkhead. This portion of the wreck is quite open and a considerable amount of ambient light filters through from holes in the hull or burned out rivets. The inside of the wreck is also a haven for codfish. Upon reaching the bulkhead between a hold and the engine room, the interior space becomes more constricted; however, a well trimmed diver can easily thread through the engine room space and exit at the very end of the wreck.

There are sometimes quite a few hazards on the exterior of the wreck (due to the amount of sport fishing that goes on at the site). Monofilament fishing line – the type that is hard to see and has high tensile strength – can sometimes litter the site. It is also common to see dogfish on the Pinthis – both living and dead. Since this wreck is so actively fished for cod, many recreational sport fisherman end up catching dogfish that they kill and throw back. There are times that dead dogfish can be found all around the periphery of the wreck and this is a truly unfortunate thing to see.

Overall, the Pinthis is one of the best wreck dives in Massachusetts Bay. As a shipwreck, its intact features and recognizable structure makes it both interesting and visual. The history of the Pinthis – it's sinking and the tragic loss of life between both vessels involved – also gives the dive special meaning.

# Heated Vest System Project

In 2008, our dive group of eight decided to invest in heated vests to provide comfort and safety while diving in cold water. We researched commercially available heated vest systems and common home-built motorcycle vests solutions. No system met all of our performance requirements, which lead us to independently develop our own system.

Finished heated vest system

Our group had discussed heated vests several times in the past, particularly for use during the winter when the air and water turns cold, and during trips to colder water destinations such as Halifax and the Empress of Ireland. We frequently perform deep dives with significant decompression obligations in 35-40°F water. While we can tolerate the cold water dives without supplemental heat, there are times when the temperatures are far from comfortable. It is our opinion that supplemental heat reduces the risk of decompression sickness or errors due to difficulty manipulating equipment or concentrating while cold. In particular, we sought to mitigate the risk associated with a drysuit failure, which would be considered a catastrophic failure that could have serious consequences, especially when coupled with a large decompression obligation.

While researching existing solutions, we quickly realized that there are very few commercially available systems and none seemed ideal, in our opinion. This was mainly due to the fact that each had inherent "weaknesses" (e.g., vest was not waterproof, connections were not waterproof, power source was not optimal, etc.). The home-built motorcycle vest solutions included the same "weaknesses." The disappointing results of our research caused us to step back, more clearly define our desired performance requirements, and think about how we might design and construct a heated vest system to meet these requirements.

**Desired Performance Requirements, Design, and Construction**

Our requirements consisted of the following: the vest should be comfortable and the entire system must be waterproof, simple, and reliable. The vest should be comfortable while diving, whether against bare skin or over a shirt. It should be small enough to fit under a well-fit thermal undergarment and drysuit. All connections should be waterproof so the system will continue to safely operate (without damage) even with a severe drysuit flood at any diving depth. All components should be simple and the battery system must be reliable.

Our initial approach to meeting our desired performance requirements was to construct a "hybrid" system using components from various commercially available systems or products. Using this approach, we would have been able to achieve all of our desired performance requirements, except two. The connections to and within the vest would not be waterproof and, therefore, the vest would likely be ruined by repeated "typical" drysuit leaks. Secondly, we were not certain whether the vest would safely and reliably operate during a more severe suit flood. Ultimately, we determined that we could not accept these two performance issues.

We concluded that the only option was to design and construct the entire system. We knew this would be a significant undertaking, both in terms of time and finances. It is safe to say that we underestimated both of these burdens. For example, development of prototypes was a slow and costly process. Sourcing materials that were suitable and reliable (e.g., heating elements, waterproof material, adhesives, etc.) was time consuming and required considerable testing given that we were using the materials in a unique application – there was little guidance or performance data upon which we could rely. Costs were also generally high, given the small quantities we needed to obtain or produce.

The process of assembling the vest to produce a waterproof system required creating jigs and tools. Many of these challenges were unforeseen and required creative thinking to find solutions and move the project forward within a reasonable timeline. Finally, among the group, there was a wide range of body types and heights from 5'3" to 6'4" that required custom fitting to produce three vest sizes. The process from start to finish took approximately one year. A summary of the final product is below.

The most enjoyable aspect of the entire process was evaluating prototypes. Our prototype testing consisted of burn testing heating elements, measuring heat output and diving the selected heating elements attached to a tee shirt connected to a battery sealed in its canister within the leg of a drysuit. We learned a few things from these dives. Our heating element design worked well and provided comfortable heat. The need for a separator thicker than a tee shirt was apparent by mild burn marks on the test diver. We also learned that all connections must be insulated to prevent a small shock when the vest was turned on (an issue resolved by the waterproofing material).

Figure 1 - Burn Test of Prototype Heated Vest with Salvo 10Ah LiPo

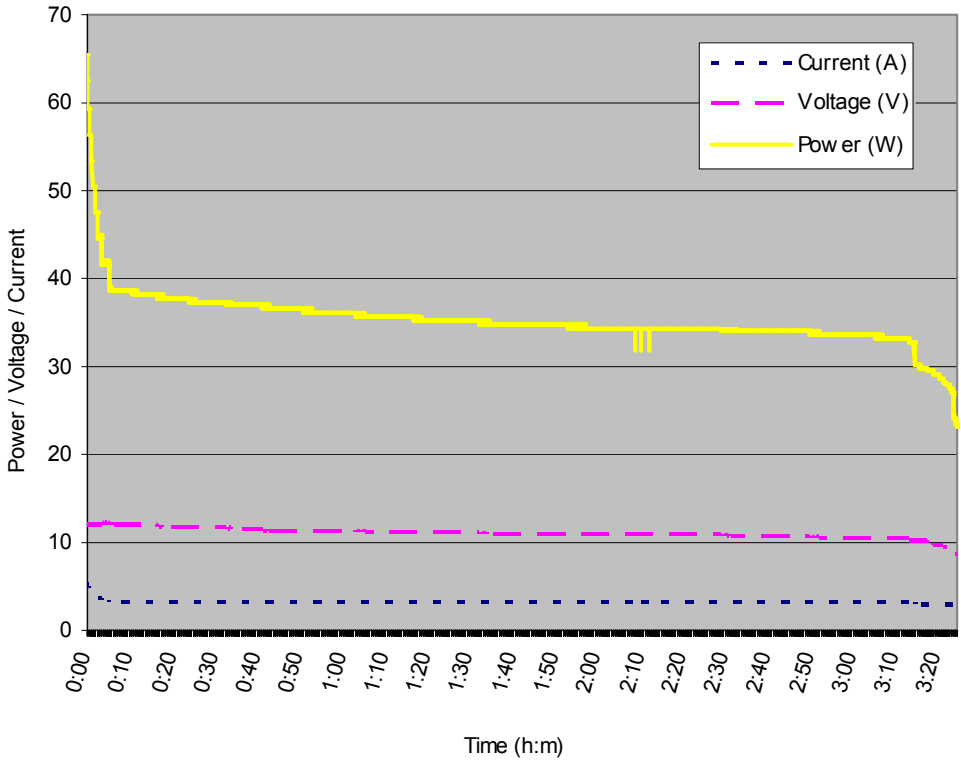
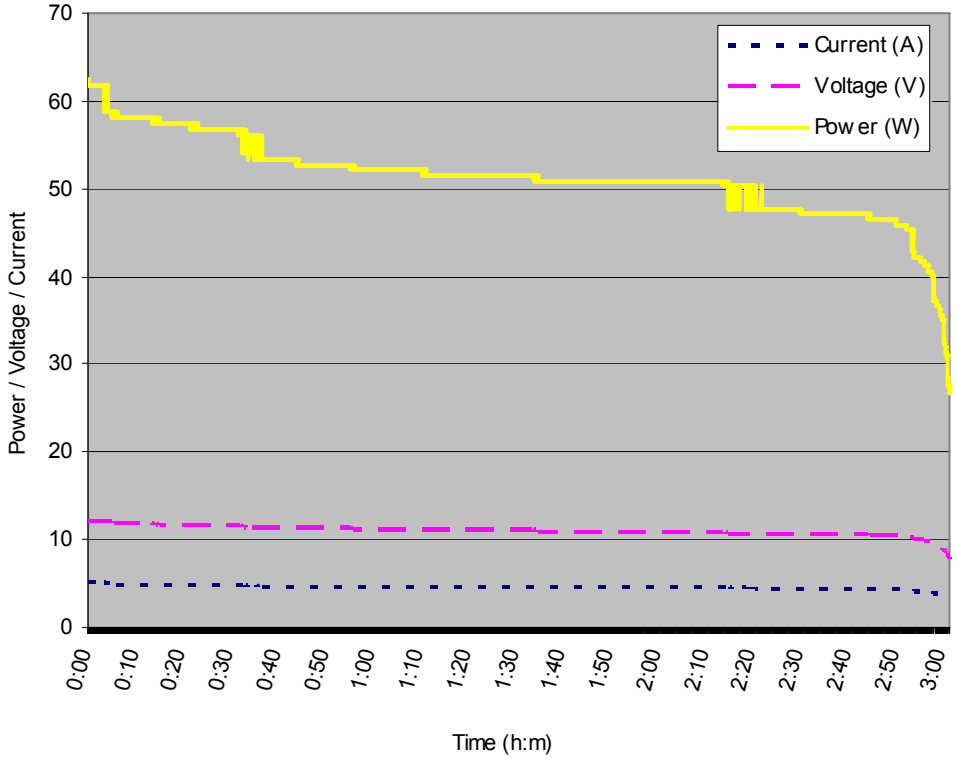



Figure 2 - Burn Test of Commercially Available Heated Vest with Salvo 15.6Ah Li-Ion




## Final System Specifications

The vest is an over-head style vest constructed of a waterproof material with under-arm adjustment straps. The heating elements are sealed within the waterproof vest and located in the front and back of the vest. The skin-side of the vest is fleece. The exterior side is cordura. We sized each vest for each person.

The heating elements are 12 Volt self-regulating elements that were custom constructed for us. We elected to use self-regulating elements because they deliver nearly consistent heat over the battery operating voltage range (Figure 1). They are approximately 35 Watt elements that provide approximately 100°F of heat as measured with an IR temperature sensor in air. Most manufacturers and homebuilders appear to use typical electric resistance heating elements, which has reduced heat output as the battery voltage drops. For example, a heat vest with typical resistance heating elements may deliver approximately 60 Watts of heat when the battery is fully charged and approximately 45 Watts when the battery is nearing its low-voltage cut-off (Figure 2). The heat output of typical resistance heating elements can be controlled by electronics or a variable resistor. However, by using a self-regulating heat element we did not require mechanisms to control the heat output.

The battery pack is a Salvo 10 amp hour Lithium Polymer (LiPo, 12 Volt). The battery provides a minimum three hours of continuous burn time. The voltage cut-off and short-circuit protection are wired into the battery pack to prevent damage; some battery pack/light head assemblies do not have both of these electronics or they are contained within a light head.

We designed and manufactured delrin drysuit inflator valves that include an electrical connector. This eliminated the need for an additional penetration through our drysuits.

All connections inside and out of the drysuit are underwater pluggable/unpluggable connectors. We obtained custom manufactured connectors to meet our power, size, and watertight requirements. The combination of a waterproof vest and waterproof connections enable the system to safely operate, without damage, during the most severe drysuit failure.

## Ongoing Testing

We are happy to report that we currently have eight vests in service. The first vest was completed in May 2009 and the final vest was completed in September 2009. To date the vests have worked without issues, include during two modest drysuit floods. We all look forward to the true testing that will occur this winter.

# Grand Cayman 2009

We last visited Grand Cayman in 2004 after we won the trip as the grand prize at the Boston Sea Rovers clinic. We had a fantastic time, as Grand Cayman represents an all-around great place to vacation. The island is clean and boasts all the usual modern amenities, the food is good, the diving is superb – and there is now a direct flight there from Boston, which is very appealing when traveling with large amounts of dive equipment. Our group of seven divers selected Grand Cayman as our vacation destination for 2009 and booked our adventures through Cobalt Coast Resort and Dive Tech.

After a few years of cold-water dive trips with complex logistical components (i.e., Halifax, where we had to ship and rent air compressors and boosters, and have Oxygen, Helium and Argon trucked in), we were ready to do a trip that was comparatively simple – ideally in a place that would have everything waiting for us upon arrival. Dive Tech is one such operation that can fulfill these criteria. They are probably one of the most equipped facilities for technical diving that we have seen. In particular, they are completely set-up to support deep rebreather diving operations with a large supply of rebreather cylinders, scrubber material, bailout/stage bottles, and they of course have the capability to prepare whatever trimix and decompression gases are required. They have two vessels and an experienced staff that can facilitate the dives (all dives except shore dives are guided – for the most part).

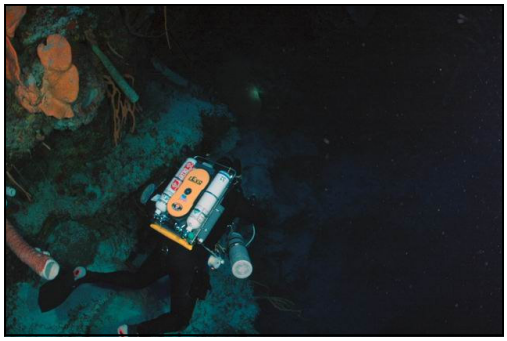
The group on the pier ready to load and go.

Since our group represented a mixture of rebreather divers, recreational divers and non-divers, we sought to configure the trip so that all could enjoy themselves and ideally do so while remaining together. Our general dive plan consisted of morning charters where we did two reasonably long dives (in a mixed group of CCR and OC divers). The standard formula in Grand Cayman is to conduct the first dive mainly on the "big wall" (which drops straight down to 4000 feet), moving into the reef zone after approximately 30 minutes with the second dive mainly in a reef zone. If any time is spent on the wall on the second dive, it is along the shallower portions and for a brief period. This is intended to keep groups together and within no-decompression limits with total runtimes between 60-70 minutes per dive. During the afternoons, time could be spent relaxing with family and friends or conducting shore dives.

Most of the dive operations on Grand Cayman Island are on the west end (Dive Tech has two locations in the West Bay locale), which is in the lee of the easterly prevailing wind; however, given that we were visiting in the early part of the season, we did experience moderate to strong wind out of the northeast. As a result, some days we needed to be positioned further down along the west end of the island where the water was calmer. These do tend to be the most visited sites and are somewhat worn. Some of the best diving on Grand Cayman is along the North Wall and (we are told) on the east end, which is more remote and not accessible by operators located on the west end. Our favorite dive sites along the North Wall were without a doubt Eagle Ray Pass and Tarpon Alley. Each site has very sheer walls and uniquely formed reefs surrounded by white sand bottoms.

Jeff Downing swims along one of Grand Cayman's big walls.

On the dive to Tarpon Alley, we even had the opportunity to observe a Hammerhead shark – a rare treat. We were told that these sharks are not seen often, and this was further evidenced by the interest expressed later in the day by local researchers that requested to see our photos. We did not get much more than a few glimpses as the shark made a pass by us, but it was something unique and interesting to see! We otherwise saw a few Blacktip sharks at Tarpon Alley and a small Nurse shark near shore on a one-way swim transit dive. Other marine life that we observed included a fair number of green sea turtles, and brightly colored tropical fish of various species indigenous to these waters. The healthy reefs, walls and overall great visibility made each dive truly enjoyable.



Peter Piemonte takes his rEVO past 300 feet on the Carrie Lee / wall dive.

While the aim of our trip was to keep the diving primarily within a recreational setting for the reasons described above, we could not help but to be tempted to do one deep dive while we were there. After all, we did pay a significant amount of money to bag-check our rebreathers for the flight down and back. A few of us had dived the wreck of the Carrie Lee previously, and wanted to do so again – this time on our rebreathers where we could extend our range and expand our bottom time. The Carrie Lee was an island freighter commissioned out of Grand Turk that carried supplies between Grand Cayman and Cayman Brac. In 1985, the Carrie Lee capsized while en route to Cayman Brac, about 10 miles east of Grand Cayman. The Carrie Lee had become unstable because it had a load of containers on its deck, but nothing in her holds below. This altered the stability of the ship such that it was top-heavy. Several unsuccessful attempts to tow the vessel to port were made before she finally sank in 100 feet of water off the southwest side of Grand Cayman. As a result of strong ocean storms, the

Dave Caldwell, Nat Robb and Peter Piemonte come up over the bow of the Carrie Lee.

Carrie Lee shifted, sliding deeper along a steep slope. Today the wreck rests along a steep slope ranging from 170-260 fsw, with the bow precariously dangling over the big wall.

Our team, consisting of our guide Nat Robb, Peter Piemonte, Dave Caldwell and Heather Knowles, conducted a dive on the Carrie Lee whereby we dropped over the wall to 300-315 fsw (91-96 msw) for a period and then ascended up the wall to the wreck for the remainder of our bottom time in a multi-level dive. It was an exciting and interesting dive – we actually encountered a thermocline, likely from an ocean upwelling, at 300 fsw. We had just over two hours of decompression, which was done quite comfortably in 82 degree water! The only annoying aspect of the dive was the constant high-pitched noise from a nearby submarine doing tour dives to about 100 fsw off George Town.

Roman Ptashka shooting HD video.

Our Subal housing, which holds a Nikon D70s camera, along with one Ikelite DS-200 and one Sea & Sea YS-60 strobe is rated for 200 fsw. While we were told that it would be acceptable to take the housing deeper, one could not help but wonder just how much deeper would be prudent. We are pleased to report that the housing and strobes successfully made it to 305 fsw / 93 msw (and back). However, only three buttons were functional below about 200 fsw (aperture, shutter speed and shutter). Fortunately, those were the only three buttons needed!

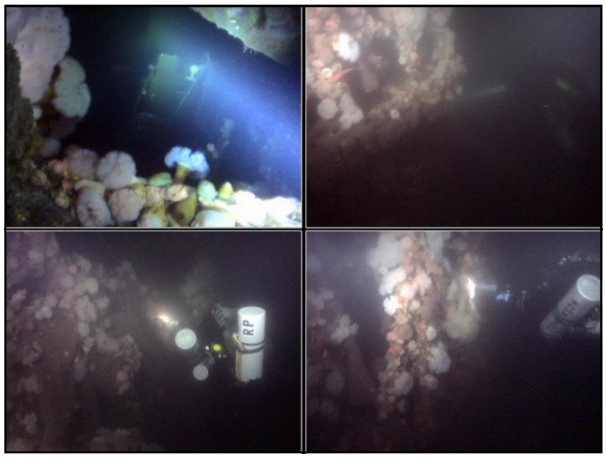
Overall, our Grand Cayman 2009 dive vacation was a truly excellent trip. Dive Tech is a first-rate operation that can facilitate any configuration of diving that a group desires. We found that Cobalt Coast Resort is excellent as well – large, modern, clean rooms with excellent food and service. We look forward to our next trip to Grand Cayman, whenever that may be!

## Exploration Report

The 2009 exploration season was hindered by poor weather for offshore diving, but we managed to get a few trips in and make some progress towards what we will hope will be a better 2010 season.

**USS Nezinscot:**

We continued our exploration of the USS Nezinscot, marking our third year diving the site. The Nezinscot proves to be both an interesting and challenging wreck site – poor visibility often hinders our efforts and results in each dive representing only incremental progress. However, we did have one trip to the site where the visibility was the clearest 10-12 feet we have ever seen (over the usual 3-5 feet) and this allowed us to view down into hold spaces that we were unable to observe previously. The team plans to continue diving the site into 2010.



Exploring the pilot house of the F/V Quoddy Bay.

**F/V Quoddy Bay:**

In 2008, the team located a seiner in 230 feet of water. The wreck sits upright and intact on the seafloor – definitely a "Hollywood wreck" given its condition with intact glass in the wheelhouse windows. Identifying this wreck was particularly challenging due to the lack of available reference material to help narrow possibilities. We have not yet been able to collect enough imagery to present the findings, but stay turned for additional information on this wreck in 2010.

**Other Work:**

A number of deep targets were identified and/or dived in 2009. While our schedule and weather conditions did not allow us to reach points of conclusions with any projects this year, we have a good direction for 2010.

# Gauntlet News — Summer Diving Highlights

Despite a rather lack-luster summer with a lot of bad weather and canceled dive trips, we were able to pull off a few good trips. Here's a quick recap of some of our summer fun!

## Nauset Overnighter:

Pat Beauregard splashes for a dusk dive.

Gauntlet made her first at-sea overnight trip in July. Our aim was to select a wreck that is not particularly accessible as a daytrip, but where the diving would be logistically simple, so we could do several dives. The group was limited to those diving CCRs in order to minimize the amount of gear that would be necessary for 2-3 dives. We decided on the Perth Amboy Barge #703, located approximately three and one-half miles off Nauset, MA. The wreck is about 60 miles from Salem, one-way. Overall, with the exception of some fog at the beginning of the trip and some wind at the end, it was an excellent voyage, and a great adventure!

**About the Perth Amboy Barges:**

On July 21, 1918 the WWI German U-boat U-156 fired upon -- and sank -- 4 barges under tow by the tug Perth Amboy. There were 32 people aboard the 140-foot-long iron tug, the wooden coal barge Lansford, and 3 steel barges #703, #740 and #766, including the captains' wives and children. The #703 barge was carrying a cargo of paving stones. The tug released the barges and escaped, but the U-boat proceeded to sink the 4 barges. Rescuers from the Chatham Coast Guard Station rowed lifeboats directly into the heart of the shelling, heroically rescuing everyone. Before the U-boat finally submerged and disappeared, nearly 800 people had witnessed what local historians later dubbed the "Battle of Orleans." This marked the first time the U.S. mainland had been attacked since the War of 1812, and the only attack on U.S. soil during World War I.

The bow of the 703 barge.

Scott Tomlinson over the stern section of the 703 barge.

The Lansford drifted for several days before sinking in approximately 110 feet of water a few miles from the other barges. The other 3 steel barges, also known as the "Nauset Barges," sit upright in approximately 110 feet of water. The #703 is the most intact steel barge of the three, with a completely unbroken hull, except for the last 15-20 or so feet of the stern, which is collapsed. The wreck is full of paving stones and sits on a white sand bottom.

The #703 is intact except for decking that has fallen away. There are frames and beams with holds full of paving stones. The bow section is the most undamaged in terms of interior structure, through which one can do a short swim. There is a small boiler (that would have been part of a small power plant to drive the winch) on the starboard side in this area. There are otherwise nooks and crannies all throughout the wreck, particularly on the sides of the hull where the paving stones come up and dip down. The stern section is collapsed and twisted. A windlass is located off the starboard side in the sand.

## Stellwagen Bank National Marine Sanctuary:

The pilot house of the unknown trawler resting upright on the sea floor.

Diving in Stellwagen is always an exciting prospect – the conditions are quite unique relative to what we are accustomed to in western Massachusetts Bay. However, we face constant challenges with weather, as most of the shipwrecks we are visiting are 25-35 miles from Salem, one-way. This season, we succeeded in making two great trips to the sanctuary. On each trip, we were treated to fantastic visibility and the opportunity to observe incredible marine life!

**The Sanctuary Advisory Council (SAC) Dive:**

Staff from of the Stellwagen Bank National Marine Sanctuary and the Diving members of the council got together for a dive that would be presented to the SAC during the October meeting. Our aim was to continue efforts to study and document an unknown trawler that sits in 105 feet of water – as well as have a little bit of fun, getting in a great dive on a Friday.

The wreck lies on Stellwagen Bank itself so it is subject to the typical strong currents known to the area. Therefore, our dives had to be timed for slack water and conducted using a shot line while the boat remained "live." Our weather and tide window allowed for a visit in mid-August. We were able to make a successful dive where measurements of the wreckage were obtained, along with video and still photos.

Inside the pilot house - the remnants of the helm.

The wreck appears to be a contemporary western-rigged fishing vessel. It is steel in construction and based on a beam measurement of 19 feet, estimated to be about 55 feet long. The overall length of the wreck could not be measured because the wreck is broken up into three pieces, with scattered debris around the main sections. One of the most unique features of this wreck is the upright pilot house resting on the sea floor. The pilot house sits completely intact, but separated from the rest of the vessel's wreckage.

This is an interesting site and the process of identifying the wreck has proved to be challenging, mainly due to the somewhat poor overall physical condition of the wreck. The impacts of fishing gear and ocean storms have degraded the site significantly; this makes observation and study of key features that might help narrow potential matches difficult. This research is ongoing, however, and hopefully the data compiled from the August dives will yield results. Either way, it was a fun and interesting dive on a rarely visited shipwreck abundant with marine life!

The Paul Palmer being launched in 1902.

**Paul Palmer Dive:**

On the same weekend as the SAC dive, Gauntlet made a visit to the wreck of the Paul Palmer, a 5-masted schooner located in approximately 80 feet of water on the southern portion of Stellwagen Bank.

The Paul Palmer was built in Walderboro, Maine in 1902 and was among a fleet of coal schooners built for Willam H. Palmer for use in the Palmer family's New England coal trade. When the coal industry began to take a downturn in the early part of the 20th century, the Paul Palmer, among other vessels of the Palmer fleet, was sold to J.S. Winslow and Company in 1911.

Under Winslow ownership and the command of Howard B. Allen, the 276 foot-long Palmer departed Rockport, ME on Friday, June 13, 1913 destined for Newport News, VA where she would have picked up a load of coal for the return voyage. There were eleven passengers and crew onboard – including the captain's wife and a female guest. At some point on June 15, 1913, a blazing fire aboard the vessel was observed by the lighthouse keeper at Highland Light off Race Point. Ultimately, the Palmer burned to the waterline despite a three-hour battle to extinguish the fire. The passengers of the Palmer took to lifeboats and were picked up by the schooner Rose Dorothea, bringing the victims into Provincetown. The Palmer finally succumbed to the flames in the evening hours and sank, with her masts and rigging partially exposed, breaching the surface.

The stern auxiliary anchor on the Paul Palmer.

Since the hull burned nearly completely prior to sinking, the amount of remaining wreckage is small. The wreck site mainly consists of a "footprint" of a large schooner with the largest beams of the keel running down the centerline of the wreck. The chain pile and winch are evident in the bow, and a small section of hull comes up along the port side in several places. Otherwise, varying bits of wreckage protrude from the seafloor, with an auxiliary anchor located aft, and bits scattered about the perimeter. While the wreck is low lying, and mainly sanded in, there is much to see in the way of marine life. This wreck is home to an abundance of large and diverse marine life, some of which appears almost tropical in nature. Large ocean pout, wolffish, sculpin, sea ravens, lobster, anemones, tunicates and sponges are found all over the wreck. There are very few – if any – wrecks that we have explored in Massachusetts Bay that are so 'alive' – it is truly impressive.

## What's Ahead?

Once again, another winter is upon us and this means exciting winter diving awaits. Winter diving is a great adventure, but do not forget – the key to success is preparation to ensure your safety both above and below the water. Low air temperatures can significantly impact the function of regulators, stiffen hoses, and potentially affect the efficiency of carbon dioxide removing scrubbers for rebreathers. Personal preparation is important as well – wearing warm clothing, hats, and protecting skin both before and after the dive is critical. Make sure you've considered the best ways to prepare for winter diving, in order to stay safe and have fun!

Soon enough, it will be "dive show season" – Boston Sea Rovers and Beneath the Sea will be around the corner in March. As always, we look forward to the shows and catching up with friends topside, as well as planning adventures for the coming season.