

UNDERSEA

Q U A R T E R L Y

THE NEWSLETTER OF THE NAVAL UNDERSEA MUSEUM AND THE NAVAL UNDERSEA MUSEUM FOUNDATION



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navalunderseamuseum.org

PEARL HARBOR REMEMBRANCE CEREMONY December 7, 2010



US NAVY/NUWC KEYPORT PHOTO
BY PAT HARDESTY, MRC

LT DOUGLAS SMITH, PEARL HARBOR SURVIVOR

The Naval Undersea Museum was once again honored to host the Pearl Harbor Remembrance Ceremony, December 7, 2010. Nine Pearl Harbor survivors attended: Gerhard Jensch, Douglas Smith, Jorgen Tveiten, Tom Berg, Maynard "Rocky" Hoffmann, Roy Carter, Bill Mills, Bob Rains, and Kenneth Freeberg.

The military vehicles on display were provided by the West Sound Military Vehicle Preservation Club.



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The Foundation gratefully acknowledges contributions made in 2010 to the museum by individuals, businesses or other organizations.

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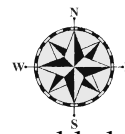
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2010 REVIEWED



From the President...



Bruce Harlow

Another year has gone by and the museum and foundation continue to do well. This time of year reminds us to be grateful for our many blessings as Americans; this includes the service of our men and women in harm's way, defending our freedoms that we so often take for granted. The Pearl Harbor ceremony this past month puts a human face on history and provides the opportunity to honor the courage and sacrifices made by our veterans for all of us.

I also am reminded of the service of our volunteers here at the museum. Without the hundreds of hours donated by these fine folks, the museum would not be open to the public. Some greet the public, some work behind the scenes, some run the museum store – all of these people, through their volunteer hours, exhibit their interest in naval history. However, they also show us how to fully experience a successful life by being involved and engaged in the world.

I would be remiss if I didn't also mention the staff at the museum and the foundation. Yes, the people are paid for their efforts but all go above and beyond their jobs to ensure the success of the museum every day.

It appears that my message this quarter is one of thanks – thanks to all mentioned above and thanks to you, our supporters, our contributors. I wish you all happy holidays and a successful new year.

BRUCE HARLOW

From the Director...



Bill Galvani

During 2010 the museum added a new exhibit, made improvements to the collections, and hired new staff. We opened the "41 for Freedom" exhibit in early 2010 in the lobby to mark the fiftieth anniversary of the first strategic deterrent patrol by a Polaris submarine. Exhibit Chief Ron Roehmholdt's design for this display incorporates a very large model of USS *Lafayette*, the patches from all 41 Polaris boats, photographs of the subs in construction and on patrol, and a video that summarizes the first ten years of Polaris operations at sea.

Behind the scenes and not visible to the visitors are the continuing improvements in the storage areas that allow us to take care of the historic items with which the museum has been entrusted. On the third floor we have converted the archives storage from old-style shelves to compact shelving that doubles our ability to store documents and photographs in the same amount of space. On the ground floor by the auditorium we have changed a little-used storage closet into a room for storing paintings, large framed photographs, and similar works of art on paper. Jennifer Heinzelman and Lorraine Scott, the collections

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WEST SOUND MILITARY VEHICLE PRESERVATION CLUB

We were honored to bring our vehicles to the Pearl Harbor Day Remembrance Ceremony. The mission of the WSMVPC is to promote and support the acquisition, restoration, preservation and enjoyment of historic military vehicles and to present those vehicles to the public in a manner that reflects positively on the military, its history and the club.



The club is about 7 years old and has about 35 members, mostly from Kitsap and Mason

counties. Most of our vehicles are WWII or Korean War vintage, but some are Vietnam era. To participate in club-sponsored shows, vehicles must be at least 35 years old and must be in stock condition in all significant respects. The club does about 10 public shows a year, mostly in the local area. **RICK LEENSTRA**, President

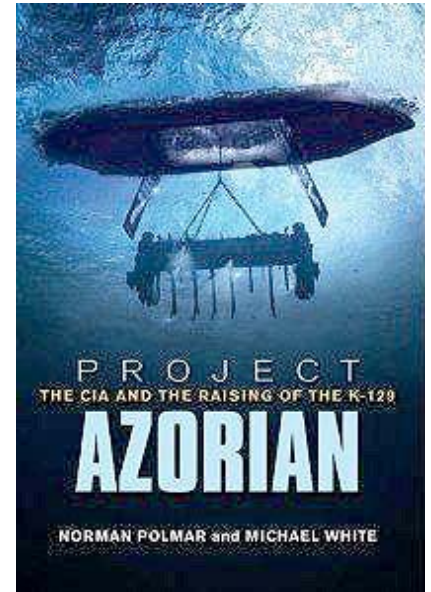




Book Review from a Guest Contributor. **LARRY TUCKER**, Museum Volunteer

PROJECT AZORIAN: THE CIA AND THE RAISING OF K-129. By Norman Polmar and Michael White. Naval Institute Press. 2010. ISBN-10: 1591146909 ISBN-13: 978-1591146902 276 pages

My friend Craig and I were anchored within 100 feet of this oddly designed ship anchored in Suisun Bay near Benicia, California. The sun was warm and the fishing was not – which is sufficient catalyst for a couple of “old” sailors to talk of many things and in this case it was the Glomar Explorer. We were discussing the age and condition of the Glomar in relation to the obsolete freighters and Navy war ships in the vicinity. The other ships in the “mothball” fleet were huddled in groups, faded gray and nameless – even their once proud hull numbers were missing. Conversely the much newer Glomar Explorer was clearly identified and anchored a fair distance from the other ships. The identification and separation of the Glomar were notable. It was as though the Glomar wished to remain conspicuous among the other ships. Craig thought the Glomar was once owned by billionaire Howard Hughes and we could tell by the rigging that the Glomar was a ship with unique capabilities – but then the fish started to bite In April of this year I attended a showing of the movie *Azorian: The Raising of the K-129* at our museum. Since then I have read several books and magazine articles about K-129, as well as the Glomar and its involvement in one of the most ambitious, expensive and secretive intelligence operations of the cold war. I have discovered that the Glomar played a necessary role in the operation to raise the Soviet submarine K-129 from its grave in 16,500 feet of water; although the real story is about the mission’s operational details, participation by contractors, government organizations, and individuals in this undertaking. I quote a recently declassified CIA document¹:



“Azorian ranks in the forefront of imaginative and bold operations undertaken in the long history of intelligence collection. It combined immense size and scope, advanced technological development, complex systems engineering and testing, unusually severe cover and security requirements, a demanding mission scenario in an unforgiving marine environment, the potential for a serious confrontation with the Soviet Union and difficult and technically unusual exploitation phase and high cost.”

In March 1968, Lyndon B. Johnson withdrew from the presidential race amid growing opposition to his policy on the Vietnam War and a worse-than-expected showing in the primaries; sporadic fighting continued during the Vietcong offensive on Saigon; and, unbeknown to most of the world the Soviet Navy lost a Golf-II ballistic missile submarine 1,590 miles northeast of Hawaii. The diesel- electric K-129 was quickly becoming a dinosaur amid the modern nuclear Soviet fleet, although still lethal with its three nuclear missiles and two nuclear tipped torpedoes. Communication with the Soviet submarine command failed to occur and the Soviet Navy was making full-scale effort to locate the missing submarine. The American Navy was aware of something going awry by the increased activity at Soviet bases and the apparent search for a lost ship in the Northern Pacific. The US Air Force detected three small and distinct low amplitude “precursor” events (underwater explosions) on an underwater acoustic monitoring system designed to detect atomic explosions. The more sensitive Navy’s SOSUS

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PROJECT AZORIAN: THE CIA AND THE RAISING OF K-129

system did not record these events – but the events were recorded by a Naval cable ship. These recordings were the beginning of one of the most complex, expensive and secretive intelligence operations of the cold war. It took the Americans six years of technical preparations in order to attempt and salvage the submarine. In 1974, the CIA attempted to salvage the sunken Soviet Golf-II ballistic missile submarine “K-129” from the depths of the North Pacific Ocean.

The CIA’s code name for this effort was Project Azorian. In the intervening 35-plus years, there have been several books addressing the K-129 and the CIA’s recovery attempt, as well as many magazine and newspaper articles. The authors of *Project Azorian: The CIA and the Raising of K-129* dismiss many conspiracy-like theories as to why the submarine disappeared. Polmar and White have provided a superior account of one of the most intriguing covert operations in the saga of the Cold War intelligence history. This book demonstrates the authors’ comprehensive knowledge of this fascinating and previously highly-classified incident. It is based on extensive interviews and newly declassified CIA documents and will serve as significant addition to maritime history. Added to the declassified information were interviews of CIA and Naval officers, men on board the Hughes Glomar Explorer, and Soviet officials.

Project Azorian: The CIA and the Raising of K-129 has eight appendices containing technical information about the K-129 and the Soviet submarine fleet and bases, Soviet missiles including the R-21 missiles carried by the K-129. You will also see extensive technical and operational data and unique capabilities of the USS *Halibut* (SSN-587), the lift ship Hughes Glomar Explorer, the capture vehicle (the claw), and the “Hughes Mining Barge” (the submersible dry dock for the capture vehicle). The authors have also included 14 pages of notes and references, a book list, and a complete index. I particularly liked the Book List because it provided me with a bibliography of preceding books concerning “K-129” with an evaluation of

the factual or speculative nature of their contribution to the public’s knowledge of this unprecedented event. This book presents the reader with well researched facts about the sinking of the K-129 and how the U.S. located it and later recovered it (or part of it) with the “mining” ship Glomar Explorer. It also provides not-seen-before photos of the Golf on the sea bottom and of the US effort to raise it. Of particular interest is the analysis of the acoustic data collected by US sensors when the K-129 went down and how the data was utilized to locate the position of K-129 when it sank.

This book is an excellent composite of investigation, research, reporting, analysis and writing.

Norman Polmar is an internationally known analyst, consultant, and award-winning author; Polmar has written more than 40 books, including, with K. J. Moore, *Cold War Submarines: The Design and Construction of U.S. and Soviet Submarines* (Brassey’s, ISBN 1-57488-594-4) and *Historic Naval Aircraft: From the Pages of Naval History Magazine* (Brassey’s, ISBN 1-57488-572-3). He is a columnist for the U.S. Naval Institute’s *Proceedings* and *Naval History* magazines. Polmar lives in the Washington, DC, area and is not new to this subject. He is a leading expert on naval and aviation matters.

Michael White has worked in film and television for over thirty-five years. His career in special and visual effects began in 1976 at Pinewood Studios, and in 1990 he moved to Vienna, which he has used as a base to work around Europe as a director of well over fifty commercials and some twenty corporate films.

FOOTNOTE

- 1 [Author excised], *Project Azorian: The Story of the Hughes Glomar Explorer*, Studies in Intelligence, Fall 1985, Secret, Excised copy



Book Review from a Guest Contributor. **LARRY TUCKER**, Museum Volunteer

DESCENT: THE HEROIC DISCOVERY OF THE

ABYSS. Brad Matsen. First Vintage Books. 2003. ISBN-10: 0375422587.
ISBN-13: 978-0375422584. 304 pps.

Brad Matsen has been at our museum twice these past couple of years to discuss his books. The first was in April 2009 when he discussed *The Further Adventures of Shadow Divers, John Chatterton and Richie Kohler - Titanic's Last Secrets*.¹ Matsen skillfully draws on details found during a 2005 exploration of *Titanic's* wreckage, archive documents, photographs, and museum relics to present facts that have altered theories of the 1912 *Titanic* tragedy. I read *Titanic's Last Secrets* and found it to be an truly amazing discussion of the *Titanic's* construction, and the events that occurred that fateful night when it sank to the sea floor more than 2.5 miles deep in the North Atlantic – far beyond the reach of light. The book also provides the reader with a suspenseful narrative of man's efforts to locate and photograph the telltale debris field near the main wreckage. Matsen came back to our museum again last spring and spoke of *Jacques Cousteau - The Sea King*.² He again captivated my interest with this biography of probably one of the most recognized men in the world. Cousteau's biography is a responsible, conservative, and neutral story of a man we all knew through his many TV specials.

During these museum events Matsen and I spoke about his work and how it relates to our museum. He suggested that I read a book that he authored in 2005 about William Beebe. I recently purchased "*Descent: The Heroic Discovery of the Abyss*". I could not put this book down! Matsen's customary thorough subject matter research is evident in "*Descent*" – as it is in all of his books. This is a fascinating oceanographic story about an amazing man who was both an explorer and a scientist during the early nineteen-thirties. Prior to William Beebe's and Otis Barton's undertaking, a few hundred feet was the extent that man had ventured underwater. They took man's exploration of the undersea world to a half-mile deep. Brad gives readers a glimpse into the real-life adventures of these two divers and their support crews who

brave the cold, dark waters of the "abyss". Matsen has successfully incorporated the story of the bathysphere into the historical context of the era. He has captured the significance of Beebe's and Barton's work as he traces the events and observations made during the multiple dives. As we are continuously reminded – we know so much more about outer-space than we know about what lies within our oceans.

William Beebe was an internationally acclaimed adventurer, naturalist and widely popular from his best-selling books, newspaper and magazine stories. Otis Barton was an inventor, engineer, adventurer and designer of the spherical submersible, which he called a Bathysphere. Together these two adventurers embarked into areas of our planet never before explored. Beebe loved studying sea animals and knew that many species near the surface were but a portion of what he could find under the waves. The technology of the time, however, did not allow for deep sea exploration. He needed a way to dive to greater depths.

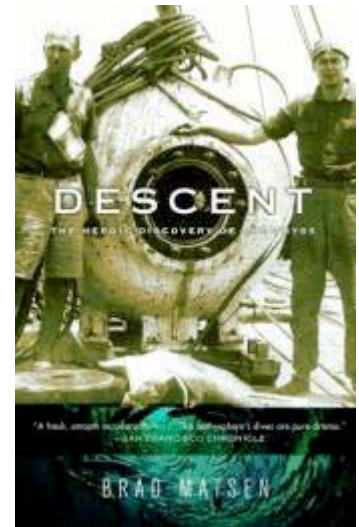
As with many of the explorers and adventurers that we read about, Beebe and Barton were literally taking their lives in their own hands. One can only imagine the caliber of a person that would squeeze their way into an approximately four feet, nine inches in diameter cast iron sphere with only the basic and rudimentary life support equipment on-board. The interior of the bathysphere was equipped with only a light and telephone, oxygen tanks, and chemicals – soda lime to absorb carbon dioxide and calcium chloride to absorb moisture. There were also fans to circulate the air inside. The bathysphere tenders would seal the occupants inside with a fifteen inch, four-hundred pound circular hatch, held put in place with ten large bolts – hammered tight with hammer blows on a large wrench. Then a large

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DESCENT: THE HEROIC DISCOVERY OF THE ABYSS

eight-inch wing bolt would be set in place and tightened, covering the remaining tiny four-inch hole in the hatch. This tiny hole allowed any last minute communication with the tenders and was also used to bleed off any built up pressure from inside the sphere post dive. The sphere also had three-inch thick windows made of fused quartz, the strongest transparent substance available at that time. The bathysphere was then lowered into the sea on a steel cable – seven-eighths of an inch thick. The occupants knew full well that if the bathysphere failed they would immediately be crushed to death by the pressure of the water above them. The missions of 1930 were successful when they descended to a depth of 1,426 feet. An institutional sponsor of the bathysphere and dives was the New York Zoological Society. The current director was W. Reid Blair who publicly called Beebe's dives as, "*stunts that would feed Beebe's popularity but contribute little to the scientific understanding of the ocean and its creatures*". Fortunately Beebe was able to shake off criticism of Blair and other scientists. Netting and trapping specimens from various depths, as well as additional bathysphere dives took place from 1929 to 1934. In 1932 the bathysphere reached a depth of 3,028 feet – setting a new record. All of the preliminary dives as well as the record setting dive took place off the coast of Nonsuch Island, Bermuda.³ Together, Beebe and Barton exposed the unknown by direct observation of life in the blackness of the abyss.



The exhaustively researched history and stunningly insightful; "*Descent: The Heroic Discovery of the Abyss*" and the other two Brad Matsen books mentioned in this review can be found in our museum book store.

BRAD MATSEN is the author of many books about the sea and its inhabitants. He was a creative producer for the television series *The Shape of Life*, and his articles on marine science and the environment have appeared in *Mother Jones*, *Audubon*, and *Natural History*, among other publications. He lives on Vashon Island, off the coast of Washington State.



BEEBE AND BARTON

FOOTNOTES

- ¹ *The Further Adventures of Shadow Divers, John Chatterton and Richie Kohler - Titanic's Last Secrets, Brad Matsen, Twelve, 2009.*
- ² *Jacques Cousteau - The Sea King, Brad Matsen, Pantheon, 2009.*
- ³ The world record stood for 15 years, until Barton created a vessel called a Benthoscope in 1949, which allowed submersion to a depth of 4,500 feet.

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From the Director... **2010 REVIEWED**

managers, planned these projects and ensured their successful completion by knocking down several walls and then painting the rooms prior to the installation by contractors of the storage equipment.

We have hired Mary Ryan as our curator and she is rapidly learning about undersea history. Mary is a recent graduate of the Museum Studies program at the Cooperstown Graduate Program in upstate New York. She has already begun adding historical information to our website so that people can learn about undersea history without necessarily visiting the museum, although of course we hope they will.

Speaking of websites, Olivia Weatherly Wilson, our Operations Manager, has greatly improved ours and has also developed a Facebook page for the museum that has some 600 friends, a number that increases every day. When we have a special event or program at the museum, Olivia has pictures and news about it on the Facebook page within 24 hours, and usually before the end of the day it took place.

Many of these events are generated by Educator Joyce Jensen and the special programs she has planned. Throughout 2010 Joyce organized different events to appeal to people of all ages, from the Distinguished Speakers Series and Book Fair for adults to the First Saturday and Wild Wacky and Sometimes Wet programs for youngsters with their moms and dads. Engineers Discover "E" Day comes up at the end of February for the twelfth year, and it continues to be our single biggest daily event.

The volunteers who support our museum continue to do a superb job of representing the museum and helping us in every activity we undertake. In 2010 our volunteers contributed more than 5,500 hours of service in activities as varied as greeting the public to cataloging blueprints to entering artifact data into the database. Our volunteers make it possible for the museum to do so many things that we could never accomplish without them. All the staff and I greatly appreciate their daily contributions.

The museum has been accredited continuously since it first achieved accreditation from the American Association of Museums (AAM) in 2000. AAM requires museums to have a re-accreditation visit every ten years, and sometime in 2011 a two-person team will come to see how and what we are doing. The Naval Undersea Museum is one of a very small percentage of museums, fewer than eight percent, across the nation that have achieved this important indicator of quality and professionalism.

The support of the Naval Undersea Museum Foundation continues to be important to the museum, and in 2011 will have greater impact than in the past. I thank you for your support in previous years. I ask you to think about ways that you can work with Foundation President Bruce Harlow to help the Foundation increase its ability to help the American public understand the accomplishments and importance of undersea history to the U.S. Navy and the defense and security of our nation.

BILL GALVANI

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From Collections Management..

STORAGE MATTERS



Lorraine Scott

As Jennifer Heinzelman discussed in the last issue of *Undersea Quarterly*, when the Naval Undersea Museum’s collections committee accepts an artifact into the collection, we are committing the museum and the US Navy to do everything in our financial and educational power to ensure items are cared for and preserved as long as possible. As collections managers, we take steps to ensure preservation which range from environmental monitoring to utilizing acid free storage materials.

The majority of accidents that cause damage to artifacts often occur during routine handling or by following poor storage practices, usually stemming from a lack of adequate storage space. Most of us can probably attest to a closet or room in our home where items get jumbled, boxed and piled up. In the museum environment, we must rise to a higher standard of artifact storage than our home closets may afford us.

It is all too common for museums to suffer from a lack of appropriate artifact storage space. Here at the Naval Undersea Museum, over the past year and a half, we have been able to plan for and install three unique sets of compactor storage shelving. These allow us to maximize storage capability in finite areas, while at the same time ensuring high levels of storage standards for historic artifacts, documents, and photographs.

In our Locker Room storage area, designated for “medium” sized artifacts (such as sonobuoys, dive tanks, models, and uniforms), four banks of customized shelving and two rows of stand-alone cabinets provide us with over 40% more storage capability. Heavier artifacts rest on reinforced shelves that are appropriate for artifact weight; no bending shelves here.

A smaller adjacent room will house framed artifacts (paintings, etc). Framed items can be a challenge to store correctly. Too often museums (for lack of space) store frames leaning next to each other, not unlike a row of books. This can lead to frame damage and can make accessibility difficult. Our newly installed specialized shelving includes rows of powder-coated metal mesh frames that can be rolled together to maximize storage area (it looks like portions of chain link fencing-but better!). Now framed artifacts can be hung appropriately so they are protected, yet visible, which reduces the need for potentially damaging handling.

And last but certainly not least is new compactor shelving installed in our Archives, located on the museum’s third floor. Standard metal shelving housed our collections of photographs, slides, films, and documents since the museum’s opening in 1991. As our collections grew over the years, storage space became maximized. As with the Locker Room, new compactor units increase our capacity by over 40%.

Perhaps only collections managers get excited about shelving, but preserving the US Navy’s historical artifact collections in an organized, professional manner is an undertaking important to many.

LORRAINE SCOTT



VOLUNTEER LARRY TUCKER & COLLECTIONS MANAGER JENNIFER HEINZELMAN TAKE DOWN METAL SHELVING IN ARCHIVES



WORKERS INSTALLING FRAMED ARTIFACT STORAGE RACKS



INSTALLATION OF ROLLING COMPACT STORAGE FOR ARCHIVES

From the Curator...



USS SQUALUS RESCUE AND RECOVERY

On the morning of May 23, 1939, USS *Squalus* (SS-192) ventured out on her nineteenth practice dive off Portsmouth, New Hampshire, after eighteen successful tests. The Navy's newest submarine, *Squalus* was state-of-the-art, the product of eleven months and two million man-hours of work. She and her sister boat USS *Sculpin* (SS-191) represented a new type of undersea boat, the fleet-type submarine. They could dive deeper, remain submerged longer, travel farther, and carry more firepower than any other submarine at the time.

Earlier test dives with *Squalus* revealed only minor issues that had been swiftly and easily remedied. But that Tuesday morning, just as she completed her emergency battle descent – one of the last tests before formal trials to join the fleet – *Squalus's* main induction valve blew. Water rapidly flooded the aft torpedo room, both engine rooms, and the crew's quarters, drowning twenty-six men. Despite her crew's desperate efforts to raise her, the amount of water in her tail pulled *Squalus* down to the ocean floor. Less than five minutes after beginning her routine test dive, *Squalus* was stranded at 243 feet without power or heat.

When the news came that *Squalus* had sunk, the Navy turned to lieutenant commander Charles "Swede" Momsen, a pioneer developer of undersea rescue equipment and techniques. Momsen had recently designed a bell-shaped rescue device called the McCann Submarine Rescue Chamber that would be used for the first (and only) time to retrieve the trapped men. Eighteen hours and four tense trips later, all thirty-three survivors were safely aboard the surface rescue vessel USS *Falcon* (ASR-2). On the heels of the triumph of this unprecedented rescue, the salvage operation to recover the bodies and retrieve the sunken *Squalus* began.

Navy salvage diver Harry Lloyd Frickey was born in Saskatchewan, Canada, in 1912 and enlisted in the Navy in September 1933 after becoming a U.S. citizen. While aboard the USS *Argonne* (AS-10) in 1937, he qualified as a Class C swimmer. After sharing his interest in diving with the San Pedro, California, submarine base commander, Frickey was transferred to Washington, D.C., to train at the Deep Sea Diving School. Just four days after *Squalus* sank, Frickey completed his training and qualified as a first-class diver authorized to dive up to 300 feet. He was sent to Portsmouth the day he graduated to take part in the salvage mission.



THE BOW OF USS SQUALUS (SS-192) BREAKS ABOVE THE WATER DURING THE FIRST ATTEMPT TO RAISE HER BEFORE FALLING BACK DOWN TO THE OCEAN FLOOR.

Squalus's depth and extra weight from the water-filled compartments meant she could not simply be raised to the surface. Instead, the salvage team devised a plan to raise her in stages. Working from the *Falcon's* deck, Frickey and other salvage divers ran cables around *Squalus* that in turn were attached to pontoons. The first attempt to lift *Squalus* ended disastrously when the salvage crew lost control of the buoyancy in her bow. The bow shot to the surface before the entire sub dropped stern-first back onto the ocean floor, damaging



U.S. NAVY SALVAGE DIVER HARRY FRICKEY SITS ON THE FANTAIL OF USS FALCON (ASR-2) IN HIS MARK V DIVING SUIT DURING THE USS SQUALUS SALVAGE MISSION.

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USS SQUALUS RESCUE AND RECOVERY

equipment and leaving a tangled mess of cables and hoses that took a month to rectify.

Fortunately, the next effort successfully raised *Squalus* to a depth of approximately 160 feet, allowing *Falcon* to tow her underwater to shallower water. Salvage divers still painstakingly performed their grueling tasks in preparation for another lift, but the shallower depth made for easier, safer working conditions. Following a second successful lift to 96 feet, divers were able to set aside the helium-oxygen breathing mixture required for deep work and use air instead.

Squalus was to be fully raised on September 13, but the water still inside her tail made her so heavy only her conning tower and the tip of her bow rose above water. She was towed, partially submerged, to Portsmouth Navy Shipyard, where she entered drydock on September 15.

After 113 days, four months, and 640 dives, *Squalus* was returned, but in poor shape. Shipyard workers replaced all of her internal components, which were permanently damaged by the prolonged saltwater exposure. Upon the completion of the \$1.4-million retrofit, *Squalus* was recommissioned with a new name, USS *Sailfish*, to distance her from the tragedy.

All of the 57 salvage divers who worked so tirelessly to bring *Squalus* home were recognized for their efforts: four were given Congressional Medals of Honor, 49, including Harry Frickey, earned Navy Crosses, and four received citations from the Secretary of the Navy.

NUM has a personal connection to Harry Frickey, as we are fortunate enough to have his Navy Cross medal and letter in our collections. We were also lucky to have had the opportunity to interview him about his experiences as a Navy diver during the *Squalus* salvage operation before his death in 1995. His recollections offer personal and technical perspectives into the salvage mission and into the experiences of a hard-hat Navy diver during the World War II era.

MARY RYAN



SQUALUS BACK IN DRYDOCK AT PORTSMOUTH NAVY SHIPYARD ON SEPTEMBER 15, 1939.



My name is Mary Ryan and I joined NUM in late October as the new curator. I have worked in the exhibit and curatorial areas of the museum field for several years and hold a master's degree in history museum studies from the Cooperstown Graduate Program. Before joining the NUM staff, I worked for Taylor Studios, Inc., the design firm that created the Puget Sound Navy Museum's exhibit on USS John C. Stennis. In my role as curator, I look forward to developing new exhibits, expanding our knowledge of our artifacts, and strengthening our collections.

Meet Your Volunteers..

ED BOYLE, VOLUNTEER OF THE YEAR



The Naval Undersea Museum presented the Volunteer of the Year Award for 2010 to Ed Boyle. Ed was also honored with the Lifetime Achievement Award and a Presidential Volunteer Service Award. Ed has been a museum volunteer since 1991. He was instrumental in the oral history that the Museum collected from noted Navy diver, Harry Frickey. Ed served the museum in many capacities, the most recent as a docent and greeter. Even after he moved to Sequim, Ed continued to make the trip to the Museum several times a month.



Ed is a retired Navy hard hat diver who was stationed at Keyport when it was still known as Naval Torpedo Station. Following retirement from the Navy, Ed was a Washington State ferry boat captain for more than 20 years. We extend our sincere thanks for the thousands of hours Ed donated to the Museum. We will miss having Ed at the Museum on a regular basis and we wish him and Delores all the best as they settle into yet another retirement in Gig Harbor!



NAVY MUSEUMS NORTHWEST VOLUNTEER CHRISTMAS PARTY

Bill Galvani, Barbara Moe, and Bruce Harlow spoke to the volunteers during the luncheon at Kiana Lodge. Bruce asked everyone to raise their glass in a toast to the members of our armed forces who are not able to be home for the holidays - those who are defending our freedoms.



Why not become a Museum Volunteer?

The Museum and the Museum Foundation offer many opportunities to volunteer your time, your talents, your knowledge. Are you a people person? Become a **Docent** or work in the **Museum Store**! Do you love organizing? The **Library** could use your enthusiasm! Are children your specialty? **Family Day** and **Discover "E" Day** are just the ticket! For more information, contact **Daina Birnbaums**, 360/697-1129, MuseumStore@wavecable.com, or **Joyce Jensen**, joyce.jensen@navy.mil, 360/396-5547.

From the Museum Store...

BOOKS, BOOKS AND MORE BOOKS!!



NIKKI HAAS, DAINA BIRNBAUMS,
LIV GALLES AND HAILEE RICHARDS

As you know, we had a wonderful Book Festival in the museum last month. If you missed it, or if Santa didn't bring you any great reading material, it's not too late! We still have a nice selection waiting for you on our Northwest Authors table, a few of which are pictured here. A number of copies are autographed, and when they are gone, they're gone! Come on in, drop us a line at museumstore@wavecable.com or call us at 360-697-1537.



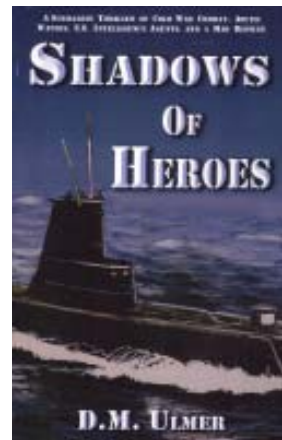
Letters From the Emily Dickinson Reading Room
By Kelli Russell Agodon

Winner of the White Pine Press Poetry Prize, Kelli's work has been featured by the great Garrison Keillor on NPR's *The Writer's Almanac*. \$16.00



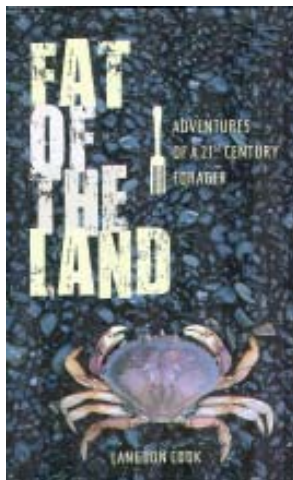
Northwest Essentials: Cooking With Ingredients That Define A Region's Cuisine
By Greg Atkinson

Cooking with eleven quintessentially Northwest ingredients, written by one of the Northwest's best known chefs. The gorgeous photography alone will make your mouth water! \$24.95



Shadows of Heroes
By D.M. Ulmer

Written by a former naval officer with thirty two years of service, this is an exciting tale of Cold War submarine espionage. \$17.95



Fat of the Land: Adventures of a 21st Century Forager
By Langdon Cook

Follow Langdon on his entertaining and humorous foraging forays in the Pacific Northwest, complete with tips and delicious recipes to use once you've found your ingredients. Still a great read, even if going out in the elements to gather is not for you! \$26.95



Invasion of the Potato Chips
By Jason Wright

Written by a local middle school student, this irreverent tale is a fun read for all ages! \$6.99

From the Schoolroom...

REINVENTING THIS MUSEUM



Joyce Jensen

Like most cultural institutions, the Naval Undersea Museum continually works to remain relevant in an age of high speed communication where the whole world is a

keystroke away. For many years we spoke about the supremacy of the objects, the real stuff, the artifacts. Increasingly, many museums have learned that the most complete, well preserved collection in the world is only a warehouse if we aren't able to get people in the doors. We are called upon to put the objects into a context that will make people come here and importantly, to encourage them to return again and again.

We know that people come here to visit for a variety of reasons. The most common reason we hear is, "I saw the sign on the road and I always meant to stop." These are often local people and they are the guests that we want to encourage to return. We try to do this by offering a handout about our scheduled events. We encourage our volunteer staff to engage these folks in conversation to try to determine what they found particularly engaging about their visit. We know that oftentimes social groups and families come to the museum because they perceive that a museum is a place to learn something.

We aspire, above all else, to be a place of learning. We have an important part of the Navy story to tell and we are eager to share this story with the community. As we plan programs and exhibits we continually ask ourselves, what is the big idea? We're looking for an organizing principle within the scope of our mission that the staff believes is engaging, interesting and artifact based. Once we have an organizing idea, much spirited discussion surrounds how to best accomplish the task of engaging the visitor. We know from our very extensive American Association of State and Local History survey that visitors want to see people and stories in our exhibits and our programs. Cognitive research

also shows that people can mentally organize information effectively if it is recounted to them in a story. We know from experience that the exhibits and programs that have been most successful were the ones that allowed the visitor to construct personal meaning around the exhibit or program.

To learn what interests our visitors, we can look to see where people congregate when they are in the Museum. When I first came to the Museum 15 years ago, it was a sure bet that people were in the Ocean Environment exhibit. There was much talk about the interactive displays, the atmosphere of the mysterious ocean, the backlit text and the buttons to push. The electronic age has brought this type of technology into homes and schools and what was state of the art in 1993 is not so novel today.

Today, more often than not, we find groups congregated in the Trident Family Exhibit and the Greenling Control Room. I believe that these two spaces are instructive for reinventing ourselves as we go forward into a post technology world. The Trident exhibit appeals to people because it weaves a story about a special group of people. It tells the story of daily life. Even people with no connection to the undersea Navy can relate to the daily work of the sailors and challenges of family life for submarine families. For families who are connected to the submarine service the exhibit is even more relevant and meaningful.

In the case of the Greenling Control Room we find an entirely different experience going on. This exhibit is open ended. We do have explanatory text, but what we often observe is that people are creating their own stories in this space. I often tell new volunteers that there have been countless imaginary skirmishes fought in the Greenling. From the time that the visitor swings through the hatch and looks through the periscope to find his car in the parking lot we have engaged most of their senses.

Similarly, we find that programs have changed. Fifteen years ago we were still talking about docent led tours. Today we find that people come here with their own agenda and while they appreciate having someone available to ask questions of, they want to move along at their own speed and choose what to attend to.

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MAKING THE DREAM COME TRUE

I believe in the Naval Undersea Museum's vision of the future and I want to help make it come true!
I want to see the Museum complete with state-of-the-art exhibits, quality supporting facilities, and exciting educational programs.

Please sign me up for the following:

- ___ *Seat(s) in the Future* \$500 each
Dedicated to _____
- Sustaining membership*
- ___ Foundation Associate *\$1000+
- ___ Patron *\$500-\$999
- ___ Benefactor \$250-\$499
- ___ Builder \$100-\$249
- ___ Provider \$25-\$99

Make checks payable to the Naval Undersea Museum Foundation (NUMF)
VISA, MasterCard, American Express, Discover accepted.

Card # _____ Exp _____

Signature _____

Send to:

Naval Undersea Museum Foundation
P.O. Box 408
Keyport, Washington 98345

*Donors of \$500 or more may participate in the Seat-in-the-Future program by dedicating a seat in the Jack Murdock Auditorium for each \$500 given.

- Other*
- ___ As a one-time gift

Sustaining members receive regular quarterly newsletters, invitations to special events. The NUMF is a registered nonprofit 501(c)(3) organization. Gifts and memberships are tax-deductible for federal income tax purposes.

Name(s) _____

Address _____

City _____ State _____ Zip _____

Email _____ Phone _____



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REINVENTING THIS MUSEUM

Fifteen years ago we were doing satellite downlinks with the Jason Project, the Mars landing, and offerings from the Smithsonian. This is another area that was overtaken by technology. The big selling point of these events was that they were live! That was special in 1994 but the average person with a cell phone can transmit live from anywhere in the world. People, especially teachers, don't want to sit in an auditorium to watch talking heads no matter where they are broadcasting from.

Even our speakers' series has changed. We find that we have better responses to authors that purely lecture. The best response seems to be to the first person stories type of author. The biggest change in programs has been the observation that our most well attended programs involve family learning.

Discover E Day, Wild Wednesdays in the summer and even our First Saturday Family Days seem to answer a need from our community.

Finally, we find that by taking advantage of the technology that has been the root of so much change we can bring people into the museum. Our website and our Facebook page have generated a great deal of interest. Did you know that you can Google for "what to do this weekend?" Did you know that the museum's Facebook page has over 600 friends? Technology will help people find us and it's up to us to figure out new ways to continue to refine our public value as we march off into the future.

JOYCE JENSEN



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KEYPORT, WASHINGTON 98345

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Schedule of Events

EXHIBITS

Service and Sacrifice: The Trident Family - Pier Room
"The Skin You're In" Diving Exhibit - Exhibit Hall
Into the Depths: Teen Docent Exhibit – Lobby

Detailed information on some events may be available in other newsletter articles. All programs are FREE. Call 360/396-5547 with questions.

FAMILY DAY – THE FIRST SATURDAY OF EACH MONTH

Families with children pre-school to age 12 are invited to Family Day on the first Saturday of each month. Each Family Day will include an experiment or make-and-take project, a story and song time and a tour of the galleries. The fun begins at 10:00 am and ends with the tour about 12:00 pm. Parents or a responsible adult must accompany their children.

DISTINGUISHED SPEAKERS SERIES

Jan 22nd **Meagan Huff** will speak about her graduate work on the topic of undersea archaeology. She has examined the tension we often hear about between real archeology and treasure hunting.

Feb 26th **12th Annual Discover E Day**. In the last 11 this event brings an average of 650 visitors in the four hours of operation. It's a great chance for families to learn about science and engineering with real scientists and engineers who will help them build everything from paper rockets to electro-magnets. 10:00-2:00. FREE.

Women's History Month in March we have scheduled new volunteer **Darlene Iskra** who will speak about her book and sign copies.

