



The Journal of Diving History



Volume 21, Issue 2

Spring 2013, Number 75



THE HISTORY OF **SPONGE DIVING**

The Santa Barbara Underwater Film Festival
&
The Historical Diving Society

Present

A Tribute To Ernie Brooks

A Benefit for the Historical Diving Society and the Santa Barbara Maritime Museum.

Confirmed Presenters:

Zale Parry, Stan Waterman, Howard & Michele Hall, Rodney Fox, David Doubilet, Louis Prezelin, Chuck Davis, Ralph Clevenger, Richard Salas, Tim Angulo, Remembering Mike deGruy, a film by Dick Anderson, and Ernie Brooks.

Introductions by:

Wyland, Dan Orr, Bret Gilliam, Douglas Cummings and Surprise Guests
Master of Ceremonies: Leslie Leaney

VIP Reception

Friday, September 13, 2013, 7:00 pm
Santa Barbara Maritime Museum

Saturday, September 14, 2013, 7:00 pm
The Arlington Theatre
Santa Barbara, California

**JUST ADDED TO THE PROGRAM:
Valerie Taylor and Laurent Ballesta**

VIP Reception and Film Festival Reserved Seating: \$150 (limited)
Film Festival General Admission: \$38
Film Festival Students & Children: \$25
Order Tickets by Calling the Arlington Ticket Agency: (805) 963-4408
Hotel Information: www.santabarbaraca.com

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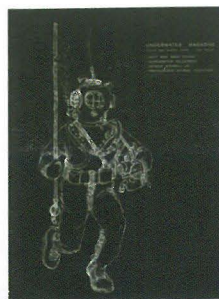
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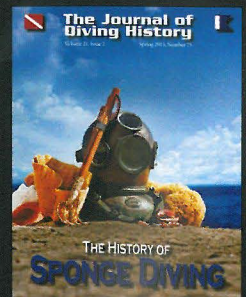
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ON THE COVER

A circa 1905-1910 Antonio Averginos sponge diving helmet made in Tarpon Springs, Florida, is shown with sponges and shells. The photo is the cover of the new book, *20,000 Divers Under The Sea*, by Torrance R. Parker, an edited chapter of which is the lead article in this issue. Photo by Media 27. ©2013 T. Parker. All Rights Reserved.





Saying Goodbye to Giants

The major historical event of the Society quarter that we record here is the sad passing of two of our Advisory Board members: Professor Hans Hass and Bob Meistrell. In an odd coincidence, they both passed away on the same day, June 16, 2013: Fathers Day in America. This issue is dedicated to the memory of both of these influential HDS members.

Hans, who started his career diving in 1937, has been called the Pioneer of the Pioneers. No review of the origins of scientific and recreational diving, underwater film and photography, and 20th century ocean exploration would be relevant if it did not include references to his pioneering career, parts of which have been featured in



this publication during its 20-year history. We will pay tribute to Hans's career in the next issue.

Bob was the ever-active face of Body Glove, a company he developed with his late brother, Billy, which became an industry leader in both diving and surfing. He was one of those "once met, never forgotten" characters that are such an infrequent encounter in the industry of today. I never met him without his telling me about some "latest adventure" or some great new product Body Glove was launching.

The last time we met was at the California Wreck Divers annual banquet in Los Angeles, California, on March 2nd. He was still excited about his recent submarine dives and was geared up for the coming warmer water dive season. Senior divers Bob Marx, Glen Egstrom, Torrance Parker and Bud Weiser were also at the banquet and gave the evening a suitable historical tone. Those who were there will never forget it. Even at almost 85 years of age, Bob's energy, humor and enthusiasm still lit up the room.

Both Hans and Bob assisted the HDS by allowing us to use their career "celebrity" to further the goals of the Society. Hans came back to America in 1998 for the HDS Hans and Lotte Hass Film Festival, which was organized and operated by Ed Stetson and his all-volunteer group of supporters. The Festival sold all 2,000 seats, which was a pretty surprising feat for a stand-alone underwater film festival. Ed and his team look on track to do the same with the Ernie Brooks Tribute Film Festival in September.

Bob and Body Glove were early HDS corporate sponsors, and HDS is proud of that relationship, which continues today. Bob gave freely of his time and support for the 2009 HDS great White Shark Dive, in which he teamed up with his old Dive N' Surf partner, Bev Morgan. Together they led the expedition, with Bob constantly in and out of cages during the day and motivating everyone on board. In the evenings he held court with a stream of sea-stories from his diving adventures.

As Society Advisory Board members, both Hans and Bob served the HDS well, and their support gave our young non-profit a level of credibility that it might not otherwise have had. Having Hans and Bob involved in the work of the HDS provided our members with the opportunity to meet, talk and socialize with them. Although they were both accomplished divers in their different fields, they never lost the camaraderie traditionally found among members of dive clubs, and divers in general.

They kept within themselves the "spirit" of diving, and kept alive its "flame of adventure," which they lit for us so many decades ago. They will both be greatly missed. 🐻

—Leslie Leaney, Executive Editor

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In Memory of
HDS Advisory Board Member



Professor Hans Hass

23 January 1919 - 16 June 2013

In Memory of
HDS Advisory Board Member



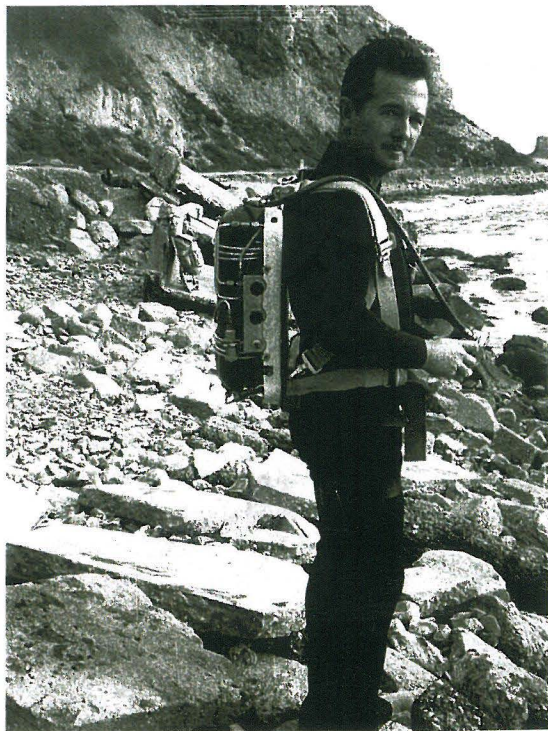
Bob Meistrell

July 31, 1928 - June 16, 2013

Nick Icorn Honored with 2013 HDS Pioneer Award



Images courtesy Digital Duo.



The Board of Directors are pleased to announce that former Society Director Nick Icorn is the recipient of the 2013 Historical Diving Society Pioneer Award.

Nick has been called the “Keeper of the Flame” for preserving diving’s illustrious history through his collection and exhibition of sports diving gear. His diving career includes experience in numerous aspects of diving, including working as a design engineer with US Divers, Healthways, Cavalero, Airco Cryogenics, Sherwood Selpac, and Ocean Dynamics. After serving in WWII Nick was accepted for training as a Swimmer Scout in the 1st Beach Reconnaissance Platoon of the Marine Corps. In 1950 he began his recreational diving career and was part of the first formal underwater instructors course conducted at Scripps Institute of Oceanography in 1953. The following year Nick began working with the Los Angeles County Instructor training program and served on its board of directors for twelve years. He continued with his education in diving and was certified as an instructor by NAUI, SSI, YMCA and NASDS, providing him with a very wide perspective on the quality and content of all the training programs in the United States.

In 1970 Nick became PADI’s first and only executive director. At the time, PADI had only 234 instructors, a number that increased to 12,000 worldwide under his watch. The next year he conducted a survey of diving classes throughout the U.S. and wrote the first “Standards and Procedures Manual” for instructors, followed very shortly by his manual “The Basic Scuba Course,” which was a step-by-step comprehensive training manual for basic diving certification.

Nick’s third manual, “Open Water Training,” probably changed diver training more than any other publication. It was the first effort to incorporate multiple open water dives in the training process, which was key to making the sport safer.

Nick formulated a dive training program for PADI consisting of five open water dives and then implemented it under the new certification of “Open Water Diver.” He went on to write a series of specialty courses for those who wanted more advanced or specialized training, but who were not necessarily interested to proceed on the path to instructor. The industry benefited enormously from the influx of more experienced, confident divers who were safe in open water conditions and continued diving and training throughout their lives.

Over the years, Nick has assembled a museum of historical scuba diving equipment that is considered unequalled. The Historical Diving Society recognised Nick’s immeasurable contributions by creating The HDS Nick Icorn Diving Heritage Award, which is presented annually. Nick is the recipient of numerous national awards and was inducted into the International Scuba Diving Hall of Fame in 2010.

The Society congratulates Nick on this significant career recognition. 🐬

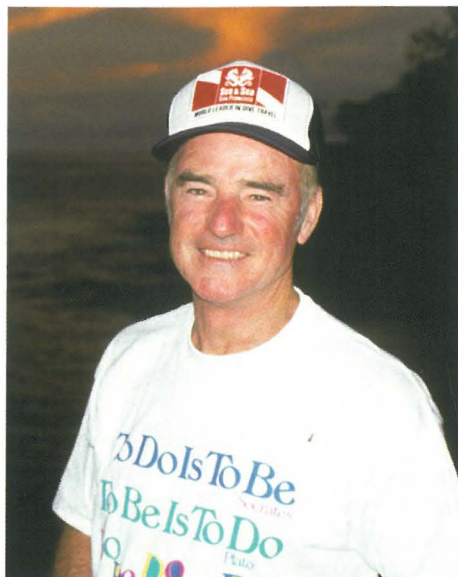
Beaver, Roessler & Selisky Added to HDS Advisory Board

The Historical Diving Society's Board of Directors is pleased to announce the appointment of former HDS Directors Tim Beaver, Carl Roessler and Lee Selisky to the Advisory Board



TIM BEAVER

Tim is a founder and the current President of Global Diving of Seattle, Washington, which has additional offices in the San Francisco Bay area (Rio Vista and Richmond), Anchorage, Alaska and Houston Texas. Founded in 1979 as a diving and marine contractor, services include; Commercial Diving, Marine Construction, Casualty / Emergency Response, Upland Remediation, Marine Environmental Services, and Offshore Energy Support. Capabilities include saturation dive systems (to 1,000 feet), mixed gas / surface diving, remotely operated vehicles, marine salvage and emergency response. Tim began diving commercially in 1977, and made dives on a regular basis for the subsequent 30 years. His in-water experience includes ship repair, salvage, marine construction, pipeline installation, and other services utilizing air, mixed gas, and saturation diving techniques. He has served as the Chairman of the Historical Diving Society, President of the American Salvage Association and as a Director of the Association of Diving Contractors International. Tim holds a Bachelor of Arts from the University of Utah and with his Global Diving partner John Graham, was Ernst & Young's Entrepreneur Of The Year 2011 for the Pacific Northwest region. 🌐



CARL ROESSLER

Carl's diving career spans the last half of the 20th century and although now retired, he has continued to volunteer his time and resources to diving organizations. Working at See & Sea Travel with his friend Dewey Bergman, Carl researched and established many of the world's exotic international diving tourism destinations. He was a pioneer of live-aboard diving, fly and dive tourism, and with Valerie and Ron Taylor, and Rodney Fox, pioneered great white shark cage diving. More recently he has served as a Director of the Historical Diving Society, and his career achievements have been recognized by the AUAS NOGI Award for Service, the Beneath The Sea Diver of the Year, and induction into the International Scuba Diving Hall of Fame. Internationally recognized as one of the founders of world dive tourism, many of his adventures and accomplishments can be found on his extensive site at www.divxpert.com. 🌐



LEE SELISKY

Lee Selisky is a former Board Member and President of the Diving Equipment and Marketing Association (DEMA) and an active voice in the scuba industry. He is an avid boater and diver with a special interest in the shipwrecks of Lake Superior. His interest in the history of diving equipment, especially that of commercial hardhat equipment, lead him to become a very early member of the HDS. In 1998 he became HDS Chairman and served on the Board of Directors for 12 years, overseeing the rapid growth of the Society. During that time he personally sponsored several HDS events and was a pivotal player in bringing the original Deane smoke helmet and the original Rouquayrol Denayrouze scuba equipment to America for exhibit. He is the founder of Sea Pearls, and has served on the Board of Governors of the International Scuba Diving Hall of Fame. Among his industry awards are the AUAS NOGI for Service, the Beneath The Sea Diver Of The Year, and the HDS E.R. Cross Award. Lee is currently the Chairman of Divers Alert Network Foundation. 🌐



Valerie Taylor and Laurent Ballesta Added to HDS Ernie Brooks Tribute Film Festival Program

HDS Advisory Board member Valerie Taylor and 2013 Hans Hass Fifty Fathom Award recipient Laurent Ballesta have been added to the HDS and Santa Barbara Underwater Film Festival Tribute to Ernie Brooks, on Saturday September 14. Valerie will join Rodney Fox and Stan Waterman on stage for a retrospective look



at their work on the movie, *Blue Water White Death*. "This will be a very special moment in our diving history," said Tribute co-organizer Ed Stetson. "We are very fortunate to be able to reunite this team again." The addition of French biologist, diver, and photographer to the presenters roster will provide a unique glimpse into photographing and filming at depths down to 200 meters, which is the region

Laurent and his team descent to when filming the extremely rare coelacanth. "The tribute to Ernie will feature some of the greatest film and photography of two generations of divers by some of the best in the field," said co-organizer Leslie Leaney. "What Laurent will show is what lays ahead. His generation. Our future. A free-swimming diver taking amazing images of an amazing creature at an amazing depth. He is in a completely different world, and one that only a few divers have ever seen. They'll see it here."

ADCI West Coast Chapter Annual Conference 2013

This year's West Coast Conference will be held at the Town and Country Hotel and Convention Center, San Diego, California, on Friday, September 27, 2013. The Conference will be an addition to the OCEANS 13 week. ADCI is a Co-Participating Society of the conference, and ADCI members receive all the great benefits, discounts, and room rates - through conference week and weekend. The OCEANS conference is jointly sponsored by the IEEE Oceanic Engineering Society (IEEE/OES) and the Marine Technology Society (MTS). This international conference is a major forum for scientists, engineers and those with an interest in the oceans to gather and exchange their knowledge and ideas regarding the future of the world's oceans. Registration is available for the full conference, single day, or tutorials. For questions regarding registration please email oceansreg@ieee.org or call 1-800-810-4333.

Underwater Intervention Call For Papers

Underwater Intervention will be held in New Orleans, LA, February 11-13, 2014 at the Morial Convention Center. The Underwater Intervention Technical Program Committee is now accepting presentation abstracts for the 2014 conference program. Technical papers, PowerPoint presentations, Field Studies, Case Studies, Project Overviews are all acceptable under these general topics: Commercial Diving, Manned Submersibles, Work Class ROVs, Instruments and Sensors, Marine Education, Decommissioning of Structures, Inspection Class ROVs, Ocean Research and Archaeology, Deepwater Field Development, AUV Technology. Call for Papers Inquiries may be addressed to: UITech@underwaterintervention.com.

U.S. Navy Divers Reunion 2014

The 2014 11th Bi-Annual Navy Divers Reunion will be held at the Holiday Inn San Diego Bayside on May 4 – 8, 2014. At press time the following groups have indicated they will be in attendance: Navy Divers Association – NDA, Harbor Clearance Unit ONE (HCU-1) Vietnam Association, SEA LAB – Man-In-The Sea Program. Hotel reservations can be made by calling 619-224-3621 or 800-650-6660 or 800-662-8899 and identifying yourself as attending the Navy Divers Reunion to receive the special Reunion room rate. For further information log on to www.navydivers.net or contact David Ball at home (619) 225-0304, cell (619) 733-3804, or email davidball@cox.net.

International Vintage Underwater Camera Systems Meeting 2014

Andres Claros is in the initial planning stages of the International Vintage Underwater Camera Systems Meeting, which is scheduled to be held in Barcelona, Spain during the summer of 2014. The meeting will focus on the careers of pioneering underwater photographers, particularly that of Hans Hass who recently passed away. The 60th anniversary of the Hans Hass System Rolleimarin housing will be celebrated, and the meeting will be connected with an exhibition of underwater cameras taking place at the Barcelona Maritime Museum. Sid Macken featured Andres and some of his colleagues in his Submarine Lens column

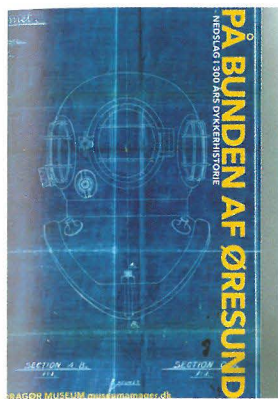
Thank You Ernie Brooks!
 From all your Friends at
 the Historical Diving Society
 (above & below the sea)

Ernie Brooks & Bella
 PHOTO: Richard Salas

2014 HDS Great White Shark Charters
 October 19-24, 2014: Special Guest: Sylvia Earle
 October 24-29, 2014: Special Guest TBA
 An Annual Benefit Charter /
 All Proceeds Donated to the Historical Diving Society
 Information: Ed@StetsonDiving.com

titled "The Old 504," which appeared in issue # 71 of the *Journal*. Contact Andres at andresclaros@hotmail.com.

HDS Denmark Catalog and Poster Sale



Niels Sejr Oxenvad, of HDS Denmark, contacted the Society with information regarding the availability of a catalog and reproduction Royal Danish Navy posters from the 2013 HDS Denmark Exhibition at the Dragoer Museum near Copenhagen. The items can be viewed on Youtube at <http://youtu.be/HOVPHL8btw> and youtu.be/GYf3eldGbtY. These items may be ordered from Museum Director Ingeborg Philipsen at ip@museumamager.dk.

Leonard Greenstone Donation

The recent passing of Leonard Greenstone, the motivating force behind the California Chino State Prison Diving program, was a sad event for many members who knew or had worked with Leonard. After his passing the Society was contacted by the Executor of Leonard's Estate who informed Society representatives that Leonard had left several items relating to his career to the HDS. Among these were several boxes of slides and ephemera associated to the Chino State program, an authentic US Navy Mark V diving helmet, and the original Leonard Greenstone Award. After meeting with the Executor's representatives and signing the legal transfers for custody of the items, the HDS took possession. While the ephemeral items from the collection are being assessed, the USN Mark V helmet will be placed on display at the Santa Barbara Maritime Museum. Society Chairman Dan Orr, President Sid Macken and Society Co-Founder Leslie Leaney are reviewing the criteria and history of the Greenstone award, the presentation of which was suspended and then withdrawn by Leonard in 1996, with a view of possibly re-establishing the award through an HDS Committee.

G. Carleton Ray Confirmed as the First NOGI Fellow for the Environment

The Board of Directors of the Academy of Underwater Arts & Sciences has selected G. Carleton Ray, Ph.D., to be the first recipient of the new category of NOGI for the environment. Ray has had a lengthy and distinguished career in the environmental field, working with the development of the Marine Mammal Protection Act, the Coastal Zone Management, and Marine Sanctuaries Acts, and helping to form the World Conservation Strategy through the IUCN. The award will be presented at the AUAS Awards Banquet at the DEMA show on November 7, 2013.

Amelia Earhart in Diving Equipment

The photo here of famed pilot Amelia Earhart dressed in a US Navy Mark V outfit was forwarded to us by member Jack C. Stewart. Earhart was an American aviation pioneer who was the first female pilot to fly solo across the Atlantic Ocean.

She received the U.S. Distinguished Flying Cross for this record. She set many other records, wrote best-selling books about her flying experiences and was instrumental in the formation of The Ninety-Nines, an organization for female pilots. Earhart joined the faculty of the Purdue University aviation department in 1935 as a visiting faculty member to counsel women on careers and help inspire others with her love for aviation. She was also a member of the National Woman's Party, and an early supporter of the Equal Rights



Amendment. During an attempt to make a circumnavigational flight of the globe in a Purdue-funded Lockheed Model 10 Electra, Earhart disappeared on July 2 1937 over the central Pacific Ocean near Howland Island. Fascination with her life, career and disappearance continues to this day with the search for Earhart's missing plane recently in the headlines. 📍

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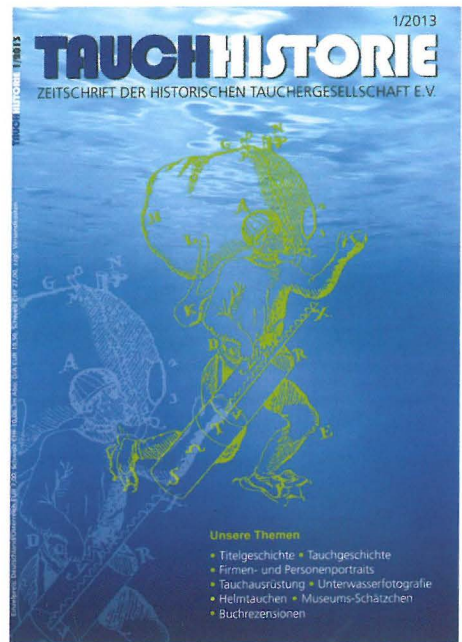
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HDS Asia Releases *Dive The Big Blue: An Historical Affair*

HDS Asia launched at the ADEX Show in Singapore in April, and celebrated with the release of their first book on diving history, *Dive The Big Blue: An Historical Affair, Volume 1*. The book features the work of Ernest H. Brooks II, who was the President of Honor at ADEX, and has a Foreword by Jean Michel Cousteau. The content includes a 26 page section on *The Evolution of Underwater Photography and Videography*, by Mathieu Meur, a 43 page *Portfolio of a Pioneer* featuring some of the classic images of Ernie Brooks II, and a 50 page time line of some important milestones in the history of diving in a section titled *The Maturation of Scuba Diving*, by Lulu M. Contained are numerous historical images of equipment and pioneer divers and inventors. The book was published by Asian Diver and is of very high quality. HDS USA expects to have this title in stock shortly. 📖

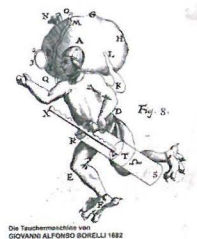


HDS Germany Publishes the First Issue of Its Magazine, *TAUCHHISTORIE*

The progress of the new HDS Germany has been regularly recorded in the Journal and we are pleased to report that the first edition of their membership magazine is now in print. Edited by Wolfgang Freihein the issue contains 56 pages in full color and is the German language. The issue is very professionally presented and has full-page sponsorship from Draeger, L&W Compressors and Scubapro. The content features the following articles:

The Borelli File, by Norbert Gierschner. The story of the equipment of Giovanni Alfonso Borelli from the 1600's, which allowed humans to dive for several hours.

One Hundred Years of Dräger Helmet Diving Gear from 1912 up to Today, by Dr. Thomas Müller



The First Helmet Diving in the Netherlands, by Andre Helgers

The First Underwater Colour Photographs from Hans Hass, by Michael Jung.

The System Hans Hass and the Development of Rolleimarin, by Franz Rothbrust. The English language translation of this article appeared in issue 74.

The Advantages and Disadvantages of the Rolleimarin, by Wolfgang Freihein

Museum Treasures, by Wolfgang Freihein. Highlighting some of the equipment of Kurt Schafer and the early camera collection of the Aquazoo, Dusseldorf.

Calypso - Phot & Co, by Wolfgang Freihein. The successful story of the development of this amphibious camera.

The 50th Anniversary of Scubapro, by Frank Werthwein. Containing numerous interesting facts about the Scubapro company.

The Development of Breathing Regulators, by Wolfgang Freihein

The Founding of the Historical Diving Society in Germany, by Wolfgang Freihein and Franz Rothbrust

Who is Norbert Gierschner, by Wolfgang Freihein.

For further information log on to www.historische-Tauchergesellschaft.de. 📖



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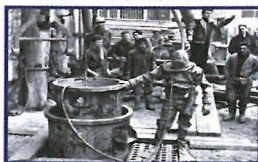


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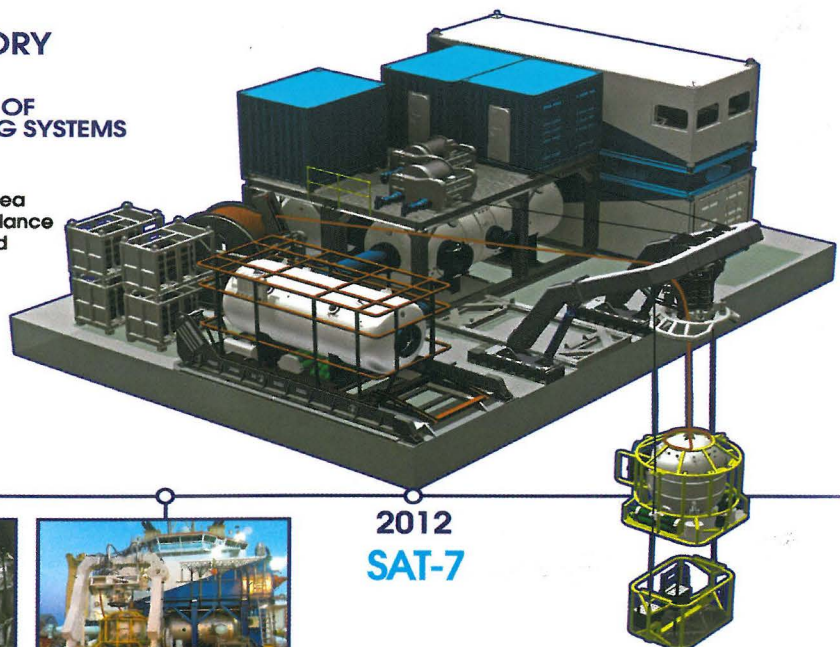


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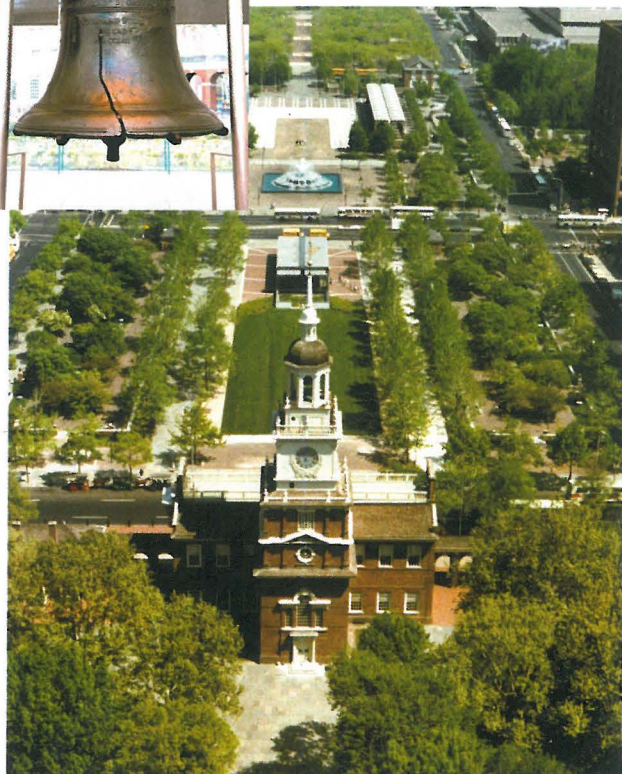
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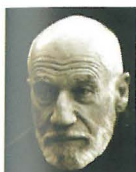
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ROBERT CROFT

The Navy Diver Submariner

Bob is introducing his book, *Bob Croft, The Navy Diver Submariner. Father of American*



Freediving. His presentation is autobiographical covering his life as a free-diver who, in 1967, became the first person to free-dive beyond the depth of 200 feet while

breath-holding. Croft was a US Navy diving instructor in 1962 at the US Naval Submarine Base New London submarine school in Groton, Connecticut. Bob has inside stories and exciting history to share about training prospective submariners how to escape from a disabled submarine, which could be resting on the sea bottom.

Bob Croft's 23 years in the US Navy encompassed 12 years on submarines and 10 years as a diver. NAUI and PADI certified, he has taught Navy SCUBA divers and is personally qualified in both deep sea air and deep sea mixed gas diving. He served on six submarines, two small submersibles, the X-1, a four-man submarine and as support crew for the bathyscaph, *Trieste II*.

GEORGANN AND MIKE WACHTER

Armored Warriors of the Deep

Early helmet divers called their dive suits dive armor. This program tells the story of the development of diving, and the influence it had on Great Lakes treasure and salvage work. Soon diving developed into underwater



construction jobs that could be hazardous, as one Chicago commercial diver found out. A demonstration of some commercial equipment

completes this presentation.

Mike and Georgann Wachter are well known as the authors of *Erie Wrecks and Lights*, *Erie Wrecks East*, and *Erie Wrecks West*. In addition to their books, Mike and Georgann have recently published a Lake Erie shipwreck map listing over 300 GPS wreck coordinates for divers. They have been diving around the world since the mid 1970s. However, nowhere else in the world have they discovered the kind of pristine and perfectly preserved shipwrecks that lie in the fresh waters of the Great Lakes. This has resulted in the discovery or rediscovery of 30 wreck sites.

BERNIE CHOWDHURY

Salvage at Scapa Flow, Scotland

Scapa Flow, in Scotland's Orkney Islands, remains the world's cold water diving "Truk Lagoon" and is Europe's most popular cold water wreck diving site. In June 1919, 74 German warships from the World War I High Seas Fleet scuttled themselves rather



than be captured by the British. The ensuing salvage of these ships – many of which had fought at the Battle of Jutland – remains unprecedented. Seven of the major wrecks, as well as many others, remain for divers to explore in this unique destination.

Former HDS Director Bernie Chowdhury is best known for his critically acclaimed, international top-selling book, *The Last Dive*, which has been published in eleven languages, an audio version and as an e-book. He was the founder and co-publisher of *Immersed International Diving Magazine* for nine years, and has served as editor of *Historical Diver*, as well as editor of Canada's *DIVER* magazine.

DAVE KENYON and GLENN BUTLER

The History of the Union Carbide – Ocean Systems Laboratory

Dave and Glenn's presentation will focus on the history of the Union Carbide - Ocean



Systems Laboratory and their research with the late Dr. Bill Hamilton.

They will discuss decompression table development, Rapid Compression to 31 Atmospheres, Underwater Habitat living, the development of NOAA NITROX tables, using Nitrox to repair the Hubble Space Telescope as well as the future of Hyperbarics in Deep Underground Tunneling using Helium / Neon gas mixtures.

Glenn Butler is President and Chief Executive Officer of Life Support Technologies (LST). He has more than 40 years experience in military, commercial diving, and clinical hyperbaric operations. He has developed and or operated over a dozen major hospital-based Hyperbaric Medicine programs internationally.

David Kenyon is a senior mechanical and systems engineer with over 40 years engineering/scientific experience, as well as over 30 years of pharmaceutical and 20 years medical device design experience.

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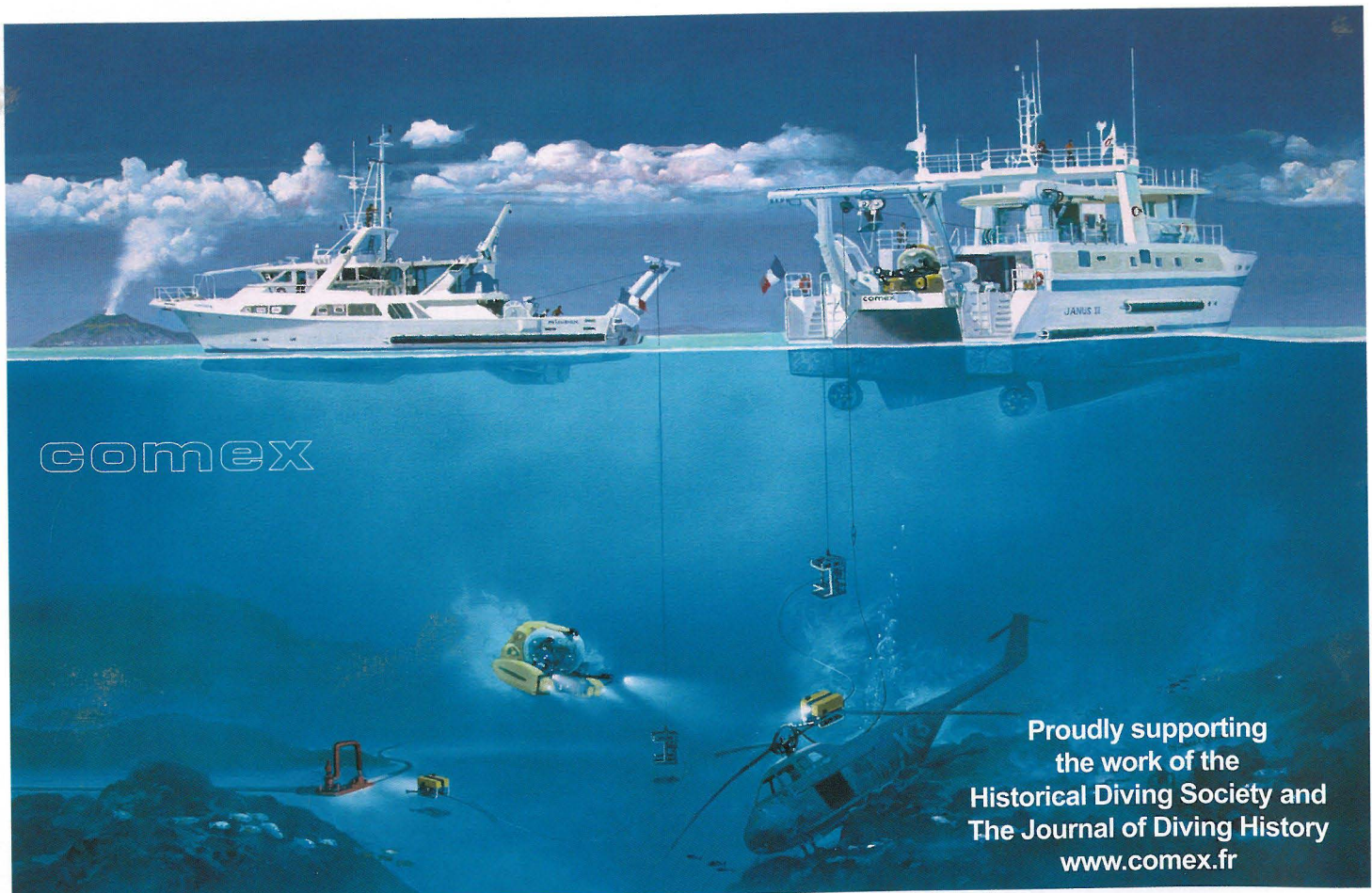


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The History of Sponge Diving

By Torrance R. Parker

The following article is edited from a chapter of my new book, *20,000 Divers Under the Sea: A History of the Mediterranean and Western Atlantic Sponge Trades With an Account of Early Deep Diving*. This book tells the story of a mass migration of Greeks who brought a trade/culture to America during the first decade of the twentieth century. They came because enormous sponge grounds were discovered in the Gulf of Mexico offshore the mouth of Florida's Anclote River. There, in an anchorage near the river's mouth on its southern bank, they established America's largest community of divers in a settlement called Tarpon Springs.

It's also a history of sponge diving's beginnings in the Aegean and Mediterranean Seas, and how the harvesting, processing, and marketing of sponges became a significant trade worldwide during the industrial revolution. From the very beginning, the Greeks dominated the trade with their seafaring abilities, diving, and sponging skills. It tells of entire fleets of Greek spongers making open-sea voyages across the Mediterranean to harvest them off the coast of North Africa—of the terrible hardships they endured, and the enormously high death rate of the divers. Additionally, I relate my personal part in this history—how I first learned to dive with the Greeks in Florida as a young boy, and then later founded the Parker Diving Service, Inc., now the oldest continuously operating commercial diving company in California.

As implied by the book's title, *20,000 Divers Under the Sea*, the sponge trade has used more naked and compressed air divers combined since its beginnings than any

other field of diving until oilfield diving and recreational SCUBA became widespread in the 1950s. Indisputably, the number of divers who worked in the sponge industry is staggering. Their extremely high death rate is also a staggering number. Particularly when you consider that within a period of less than 40 years more than 5,000 sponge divers were killed by the bends working in canvas suits and copper helmets. Countless more thousands were paralyzed and incapacitated breathing compressed air before the development of stage decompression tables in the early twentieth century. But even after the introduction of decompression, the high death rate and diver's paralysis continued for many more decades.

Much has been written about sponge diving. Most of it, however, deals with specific incidents or regions, which only tell a fragmented history. In contrast, I have gathered many of the fragments together for Part 1 of this book, much like you would for the pieces of a puzzle, arranging them in a chronological timeline to tell this history. In Part 2, I tell my story of working as a crewmember on a sponge diving boat operating out of Tarpon Springs during the 1940s. Moreover, Part 2 is a collection of interviews with Greek-American spongers still living in Tarpon Springs during the late 1990s. All those I interviewed had actually worked in the trade as producers, processors, and buyers. Wherever possible, I have recounted the interviews using the sponger's own words from my audio transcripts, not only to achieve accuracy, but also to give the reader a sense of the storyteller. It is my hope these stories leave a living history of this ancient trade.

—Torrance R. Parker

In the old world of Europe, the Greeks had been harvesting sponges for centuries. As new immigrants from Greece flowed into the United States of America at the beginning of the 20th century, they heralded many changes. Their migration would lead to the center of the world's sponge industry moving from Greece, across Europe and the Atlantic Ocean, to Tarpon Springs, Florida.

During the first decade of the 1900s, growing numbers of hook boats were harvesting sponges from Florida's Gulf coast far north of Key West, then brought many of them up the Anclote River for marketing in and around Bailey's Bluff. It was the beginning of Florida's sponge fisheries boom years.

JOHN CHEYNEY BRINGS SPONGE TRADE TO TARPON SPRINGS

With the trade booming, John Cheyney's attachment to the "game," as he called it, inspired him to expand his operation. In 1902, he began construction of a new facility to replace his Sponge Harbor packinghouse destroyed in the hurricane six-and-a-half years before. During a visit to his New York customers just prior to completion of his new packing house (this time located farther upriver in the little town of Tarpon Springs), a buyer told him that his packing was unfinished . . . that he needed to bleach his sponges as the Mediterranean processors did if he intended to stay in the business.

This newly developing art of bleaching gave the sponge a better appearance and made them more marketable, but how were they bleached, and where could he find the person who knew the process? The buyer suggested he talk with a bleaching specialist, a Greek he knew who worked in a New York packinghouse for the Lembesis Sponge Company on Canal Street with his three younger brothers. The specialist turned out to be John Cocoris, whom Cheyney had already met years previously at auctions in Tarpon Springs, Bailey's Bluff, and Key West. Their meeting again in New York resulted in Cocoris agreeing to work for Cheyney at his new plant, but only on the condition that his brothers would come with him as his assistants.¹ A year prior to this meeting, twenty-five year old Cocoris had revisited his home and birthplace in Leonidion, Greece, with its adjoining seaport where his people had sailed out of for centuries to work in the sponge trade. While in Leonidion, he married his sweetheart Anna Nicoloulia.² A year later when Cocoris went to work for Cheyney, she became the first Greek woman to live in Tarpon Springs.

While Cheyney was busy getting his new place organized in Tarpon Springs, there were other sponge houses being built nearby (fig. 4.1). Ernest Meres, who had come to Tarpon Springs with his parents in 1883, was building a sponge house of corrugated iron in Tarpon Springs. Meres had been dealing in sponges at Baillie's Bluff off-and-on since the 1890s, besides working with Cheyney on real estate projects. A short distance down river from Tarpon Springs, at Anclote Village, W. W. K. Decker was also building a sponge processing and packinghouse where many hook boats anchored nearby. Both the sponge producers and buyers were finding the Anclote a good place to work out of, and by the early 1900s there was a lot of sponge-trading beginning to take place.

Cheyney erected his new packinghouse in Tarpon Springs near Spring Bayou. A 1903 article in the *Tampa*



Fig. 4.1 Early Tarpon Springs sponge house. Greek immigrant Drosos Alanouzou processed and shipped sponges from this facility at 122 Roosevelt Boulevard to his Gulf of Mexico Sponge Company headquartered in Philadelphia until the end of World War II, when the Kousaleous family bought the business. Michael Kousaleous, former president of Tarpon Springs Sponge Exchange, ran the business for several decades, and in 2004 donated the structure to the Heritage Village Museum in Largo, Florida.

"There's enough sponge in these beds
to supply the whole world."
—Demosthenes Kavasilas, after they took
his helmet off aboard the diving boat *Elpis*,
anchored off the Anclote Keys, June 18, 1905.



Figure 4.2 The production and processing of sponges is a very labor-intensive business, but these men love their work—so most conversation in a packinghouse centers around the sponge industry.



Figure 4.3 This is how Demosthenes Kavalas must have looked in his diving gear that historic Day in 1905, when he descended to the bottom of the Gulf of Mexico.

Morning Tribune tells us:

The Main building is 40 x 80 feet, and will be used for the clipping and packing of sponges. Alongside this are two other smaller buildings 20 x 40, and 30 x 40 feet, respectively. One of these buildings is known as the bleachery, and is thoroughly equipped for bleaching the new product. The other is known as a drying room, and has a glass roof for the utilization of the rays of the sun in drying the product. The building is also steam heated. Some distance from these buildings is located a fire and burglar-proof stock room, 20 x 30 feet. It is a brick building with cement floor and corrugated iron roof, and will be used for the storage of the bailed sponges previous to being shipped. As much as \$20,000 worth of sponges is often stored in the stock room at one time.³

JOHN COCORIS TRANSFORMS TARPON SPRINGS

Cocoris sent for his brothers George, Constantine "Gus," and Ilias shortly after he began working for Cheyney. Everyday at the new plant the Cocoris boys showed Cheyney their formulas for chemical bleaching, and the various methods of processing and packing they had learned while in New York. Many discussions took place too about the actual production of sponges and the centuries-old technique of breath-hold diving with a stone off the steep rocky shorelines of the Dodecanese Islands. Talks, too, about the hardships of long voyages to the Barbary Coast to gather sponges in deep-water, and the high-death toll of divers during these voyages . . . of when Cocoris was just a boy . . . and how he worked with his uncle Panagos Vlahopoulos off the Island of Hydra on a machine diving boat. It was then, Cocoris told Cheyney, that he learned men in helmets with glass windows wearing watertight suits could stay down for hours walking the bottom for miles—loading sack after sack with sponge as they came across them, then send them up on a rope tended from a



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boat above. With the “machine,” he said, a man could pick the more valuable sponges found in the deeper depths, and when gathered by hand they were not damaged like those pierced by a hook. A machine diver could even work bottom in low visibility conditions, unlike a man on the surface searching through a glass bottom bucket. All of this sponge lore was the daily conversation in Cheyney’s new packinghouse (fig. 4.2).

The Cocoris brothers spent their spare time when not employed by Cheyney gathering sponges from local waters to acquire financial funding for a future enterprise. After two years, Cocoris told his boss that his wife Anna was expecting a child, that he was going into business for himself, and he needed to go to New York to carry out his plan. He was convinced there were enormous amounts of untouched sponge in the deeper depths the hookers could not reach with their poles and hooks.

While selling their sponges in New York, Cocoris met Spyros Vouteris who was making his annual business visit there. Vouteris, an Aegina Island sponge trader, knew most of the people of the Dodecanese Islands and western Mediterranean that worked in the trade. Cocoris told Vouteris about his plan to bring Greek divers to America, and commissioned him to ship a diving outfit, including air pumping apparatus, with two expert sponge divers and their crew to Tarpon Springs. Meanwhile, Cocoris’s brother George was in Tarpon Springs buying a boat named Pandora from William Low that they then rechristened Elpis meaning, “Hope.”⁴ (Tarpon Springs now has a street by that name.) While all this was going on, Cocoris’s wife Anna gave birth to a baby boy they named Michael.

All of the diving gear Cocoris had ordered, and the professional crew, arrived in Tarpon Springs in the summer of 1905. The divers were Demosthenes Kavasilas and Stellos Bessis, accompanied by their trusted line-tender Eleftherios Moutsatsas. Pavlos Moutsatsas was the captain. Milton Stathes worked as cook and deckhand. All of them came from the island of Aegina. Interestingly, old records of one of America’s oldest manufacturers of diving apparatus named Andrew J. Morse & Son indicate that in 1905 Ernest Meres (an early sponge buyer of the Baillies Bluff days) ordered three diver’s deep-water hand pumps for shipment to Tarpon Springs. The air pump crew was hired out of Tarpon Springs.

On June 18, 1905, the Elpis sailed out into the Gulf anchoring over a bar off Anclote Key.⁵ With her anchor down and holding, the Elpis swung into the wind riding the Gulf swell. Helmet and gear rigged, Demosthenes Kavasilas climbed down the ladder and descended toward the bottom, his crew turning the pump’s big two iron flywheels to force fresh air through a hose into his helmet (fig. 4.3). Eleftherios tended his lines, and it’s said that baskets were being sent up every ten minutes. After Kavasilas surfaced and proclaimed, “There’s enough sponge in these beds to supply the whole world” the town of Tarpon Springs was changed forever.

Within a few weeks the Elpis brought in over six thousand dollars worth of sponge. John Cocoris quickly communicated their success to the foremost sponge merchants and producers in the industry. At the same time the Thermopylae (a widely circulated Greek language newspaper) reported that the Gulf of Mexico’s near-shore waters off middle Florida was a gold mine for those who knew about sponge fishing. As the news continued to spread, other Greek newspapers began reporting about the fabulous find. Aegina Islanders began receiving letters from crewmembers of the Elpis to come to Tarpon Springs and participate in the Gulf’s fabulous jackpot of sponges they had found under the Gulf of Mexico. Here in this new land was a diver’s paradise, sponges practically littering the sea-bed just waiting to be picked, and unlike the dangerous deep-water off

Figure 4.4 The lovely Anna Cocoris. First Greek woman to live in Tarpon Springs.



(Above) Figure 4.5 After divers found huge deep-water sponge beds on the Gulf of Mexico’s sea floor, the town of Tarpon Springs took on the look and feel of a gold rush town.

(Below) Figure 4.6 Machine diving boats hauled out along Tarpon Springs unpaved Anclote Boulevard, which was later renamed Dodecanese Boulevard.



North Africa, there were plenty of them in water as shallow as five and six fathoms deep they were told.

GREEKS POUR INTO TARPON SPRINGS

News of the bonanza spread fast throughout the Aegean Islands lying off the southwestern coast of Asia Minor. Five hundred Greek spongers were in Tarpon Springs by the end of 1905, with many of the Mediterranean's foremost spongermen among the newly arrived immigrants. Divers, captains, line-tenders and boatmen came from the islands of Aegina, Symi, Kalymnos, Hydra, Halki, and the Eastern Mediterranean. With them also came talented individuals who brought their entrepreneurial skills learned working in the leading sponge-houses of Paris, Symi, and London. Many went on to become brokers, packers, wholesalers and financiers in America's developing sponge trade. All of them were unmarried and without women, excepting John Cocoris, whose wife Anna was the first Greek woman to live in Tarpon Springs (fig. 4.4).

Besides the lure of a rich bonanza, another factor in their coming was that the Greeks of the Dodecanese Islands had been under the domination of the Turks for centuries, and as a result both the political and economic conditions were extremely restrictive for them. When learning of the new sponge grounds, most of those able to leave did. During the following year, nearly a thousand more Hellenes came. By 1910, there were more than two thousand Greeks living in Tarpon Springs, and more than two hundred sponging vessels (figs. 4.5-9). Many of the islanders came with the intent to stay in America for only a few years, and then return home with a lot of money. In reality, the majority stayed in Tarpon Springs thirty, forty, or more years. Some went home only to marry a Greek girl and return, as the little port community was becoming a fine place to raise a family. By 1927, the town had built its first hospital. A room with bath cost \$8 a day; an operating room was \$10, and if with an anesthetic, \$10 more.⁶ Also, for the spongers, the city had built new sponge docks.

SPONGE DIVING BOATS

According to a turn of the century news article, it appears the very first Greek boats built specifically to work out of Tarpon Springs to dive for sponges were constructed across the state in Jacksonville. A *Times-Union*⁷ newspaper article dated January 22, 1906, reports the following:

First of Seven Sponge Fishing Boats Now Being Constructed in Jacksonville. The first of the seven sponge fishing boats for the Greek sponge fishermen is now being constructed at the Merrill-Stevens shipyards. The frame has been set up and the work is progressing rapidly. These boats are of a peculiar model, deep draft and short, exactly on the style of the Greek sponge fishing crafts. The Merrill-Stevens Company will rush the construction of these crafts, as the Greeks are anxious to commence their sponge fishing industry off the coast of Florida.

In talking with many of the descendants of the Greeks who first came to Tarpon Springs they confirmed there were initially no shipyards nearby so the early boats were built along the banks of the Anclote wherever it was convenient. The newly arrived Greeks constructed them as they had traditionally done in the Dodecanese Islands, that is, without a scale drawing or plan to conform to. Rather, the framing and hull design was done by eye, having been handed down from father to son from generations past.

Fortunately, boatbuilding materials were plentiful in and around Tarpon Springs. The local woods growing near the Anclote supplied the long-leaf pine for laying out the boat's keel. Also growing there was the native oak they carefully



(Above) Fig. 4.10 A sponge fleet mother boat with her crew sails for home.

(Below) Figure 4.11 Schooner Telegram with her "machine diving" boats Pelagis and Androniki. Later sold in 1921, the Telegram was shipwrecked off the coast of Mexico.

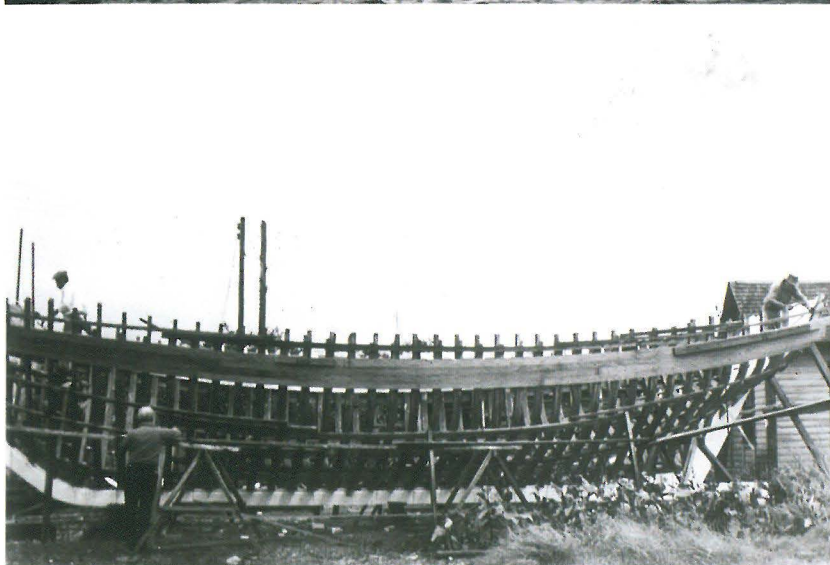
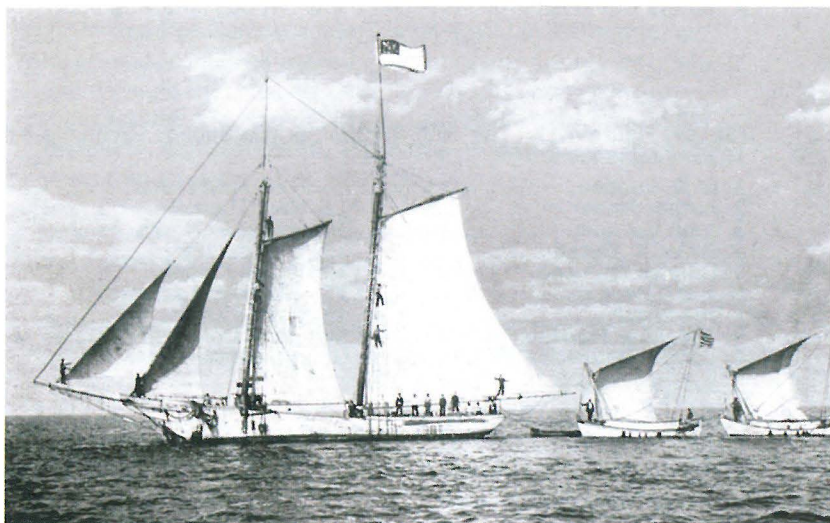


Figure 4.12 Shipbuilding in Tarpon Springs. This diving boat was designed for engine power.



Figure 4.9 This photo made while filming *16 Fathoms Deep*. A camera tripod is partly visible on the wharf behind diving boat.

(Below) Figure 4.17 The 1906 Tarpon Springs Sponge Exchange, circa 1915. People identified:

- | | |
|----------------------|----------------------------------------------------|
| 1. G. A. Louden | 10. Maul Macrenaris |
| 2. Author Pinder | 11. Maul Themelis |
| 3. John Cocoras | 12. Ernest R. Meres |
| 4. W. W. K. Decker | 13. James Skleris |
| 5. Duncan Morrison | 14. James Kafalis |
| 6. J. B. Cowsert | 15. Antony Bleranis |
| 7. Joe Smith | 16. Costas Kanis |
| 8. Theadore Petdzold | Seated in front: Nick Arfaras and George Emmanuel. |
| 9. Lon Fernald | |

selected for the framing. For the craft's planking, they cut down cypress trees and hauled the logs to sawmills for milling. Captain John Maillis spoke of the *Poseidon*, "A beautiful diving boat with no caulking in its seams. They let her hull swell up in the water," he told me.

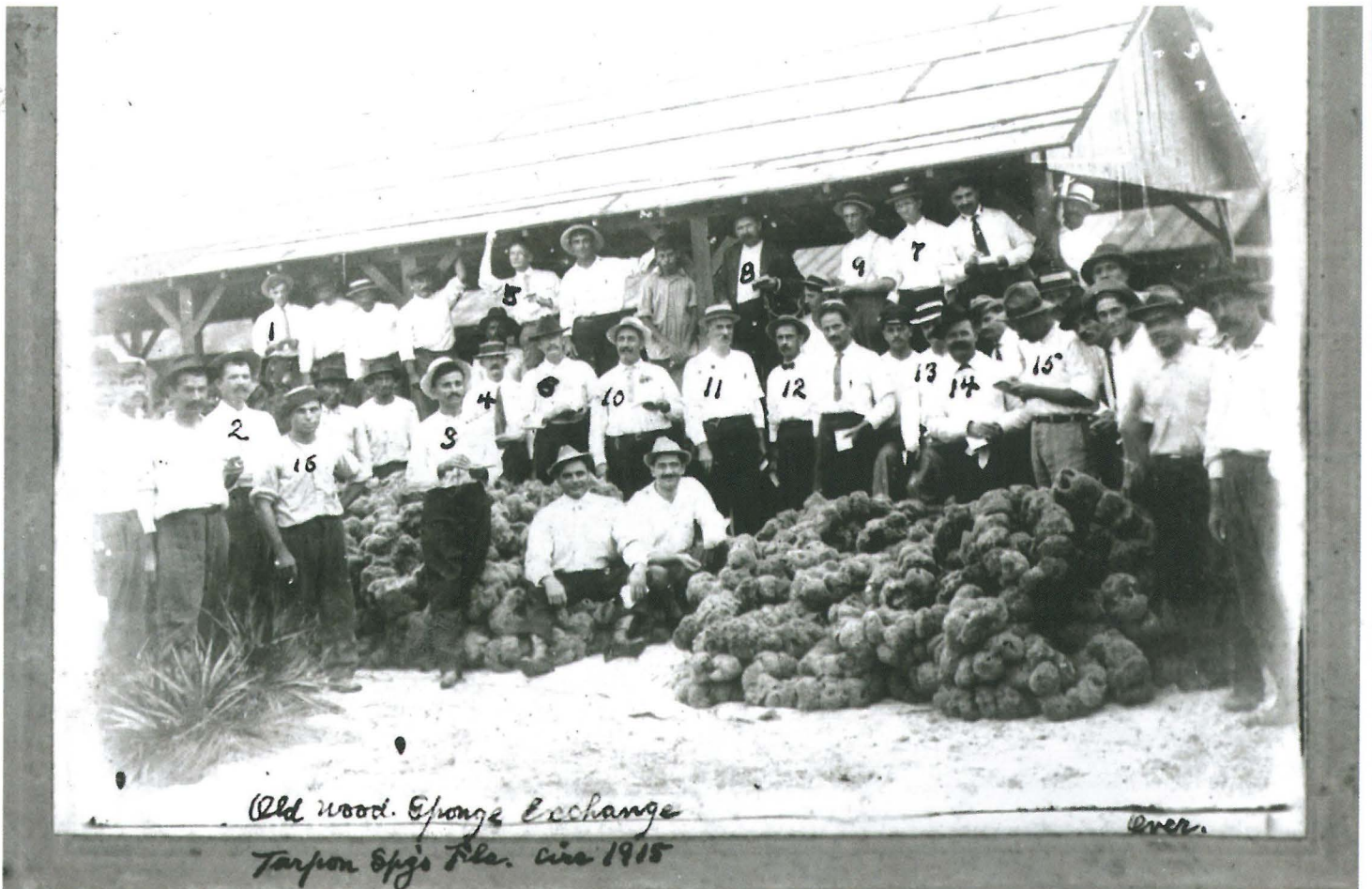
Launchings were primitive affairs before the Anclote had shipyards; when the boat was ready for the water they slid it into the river on improvised cradle skids atop greased logs. Bill Lappin, writing in a 1980 issue of Florida's *Suncoast News* wrote the following:

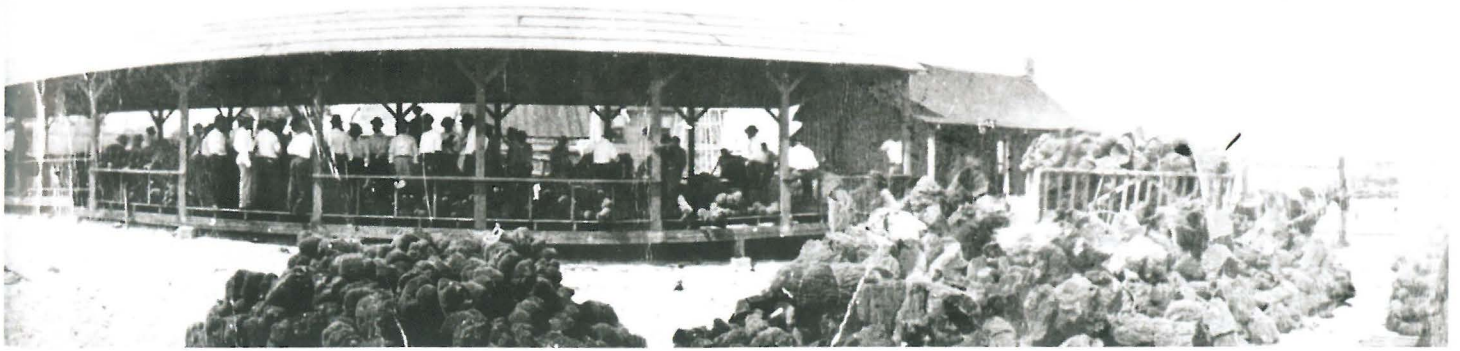
The first Greek vessels built around the early 1900s were of a Greek style called *salcoleve*, a full-bodied caravel-built (smooth planked) boat, similar to the Turkish "Taka," except in the stern profile and forward topside flare. All boats built during this period were sail or man powered. Bill Lappin further reported: The old country design was soon modified from a deep draft vessel, and converted to a round-bottom configuration for navigating the shallow waters of the Gulf.

LONG VOYAGES BECOME SHORTER

When Tarpon Spring's diving boats first slid into the water on greased logs during those early times, their voyages were divided into two seasonal trips. Each trip lasted four to five months. The first sponging season began after Epiphany on January 6th, and ended after June 29th, the day celebrating the Holy Apostles, Peter and Paul. The second sponging season followed between the months of July and Christmas. Of course, voyages were subject to weather conditions, financing, and the readiness of each boat and its crew.

In the beginning, the trips were patterned after the





lengthy voyages that worked the coast of North Africa. Large schooners operated by the Kavouklis family accompanied the diving boats as supportive mother ships (figs. 4.10-11). The schooners carried the needed equipment, supplies, and foodstuffs, stored the sponges, and provided food and quarters for the diving crews that worked the smaller boats.

Having no refrigeration, food had to be non-perishable or else taken from the sea. When drinking water ran low, the schooner's captain would anchor his ship off one of the Gulf's many rivers having a fresh water spring. The smaller boats were then rowed upriver carrying barrels to be filled at the spring. After filling the barrels, the boats were rowed back to the schooner anchored offshore, sometimes a distance of eight or more miles round-trip.⁸ Cooking was done primarily with charcoal so when it ran low, trips ashore like those for water had to be made. Only instead of barrels for water, axes were taken to chop trees into firewood to resupply the schooner's cooking fuel.

When Florida's west coast natural harbors were developed with water and supplies, the captains began building bigger dive boats with engines to replace the lateen sail so the schooners were no longer needed (figs. 4.12-13). Instead of having to make long-drawn-out voyages, captains began making trips lasting only two to three weeks, then motored to Tarpon Springs or a nearby port to take on fuel, fresh supplies, and rest the crew for a few days before the next trip. These shorter trips became known as "ganzas" (figs.

4.14-15). It was during this time too, that the sponge fleet began converting from charcoal to bottled gas to fuel their stoves.

TARPON SPRINGS SPONGE EXCHANGE

In 1906, with large amounts of money from the sponge trade starting to circulate through the town, the Tarpon Springs Sponge Bank was established. The very same year, John Cheyney, Ernest Meres, and D. Morrison paid \$900 to W. P. and Lucy Wilson of Philadelphia, Pennsylvania for the purchase of a piece of property across the street from the boat docks bordering Anclote Boulevard (later renamed Dodecanese Boulevard).

It was the idea of the new landowners to establish a nearby market place where sponges could easily be carried from the boat

docks to the property, safely stored, and on scheduled intervals, sold at competitive prices. In 1908, a shareholding company was organized for the property with a limited number of stockholders, and a board of directors consisting of a President, Vice-President, seven or eight directors, and a Secretary. They called it the "Sponge Exchange" (figs. 4.17-19).

Its first President was John Cheyney, and in the beginning its grounds contained a small wooden office enclosed by brick and wrought iron fencing. Later, in 1939, the older structure was replaced with a system of iron and concrete lockers around the periphery of the courtyard. The exchange was entered from the street through a large iron gate (fig. 4.20).

WHY TARPON SPRINGS BECAME THE SPONGE CAPITOL OF THE WORLD

During an interview with legendary sponge merchant George Billiris, I remarked that Tarpon Springs was considered the sponge capital of the world, yet other places in the world had produced greater amounts of sponge. He replied:

Now what does this mean? Sponge capital of the world meaning that we were better organized, we had a sponge exchange which acted as a storage place for the boats when they came in . . . a focal point, a point to do business. No other country in the world had this—so finely refined that we had here in Tarpon Springs. It was a very effective business. The end result of it was that we had gained the reputation of being the sponge capital of the world simply because

we had more sponge come into Tarpon Springs (some imported) and go out of Tarpon Springs than any other particular port in the entire world! Now what it did, it put 2,500 people to work. In the later part of the 1930s and early 1940s, it became a 4 million dollar industry, and 4 million dollars in those years was quite a bit of money.¹⁸

Three-quarters of a century after it's founding the exchange was no longer doing business. Michael Louis Pappas then purchased the Sponge Exchange property in 1981, and the Pappas family converted the 2-acre property into a shopping plaza featuring a full size sponge boat in its remodeled courtyard. Adjoining the iron gates that still frame its street-side entrance is a marble and stone monument honoring the pioneering work of

Figure 4.19 View from west side of the old wood sponge exchange with the Anclote River in the background.



The History of Sponge Diving

John Cheyney and John Cocoris (figs. 4.22-23).

John Cheyney got out of sponging at the end of the First World War to return to the real-estate business. In an interview by Louis Adamic he was asked why the withdrawal of the old-time Americans from the industry in favor of the Greeks.

The reason is, he said, the Greeks' unquestionable superior ability when it comes to sponges. Sponges are their work. They have been at it for two thousand years. We old-time Americans, as you call us, were novices. We had no business in it, not really, though some of us made money at it at first. Also, the Greeks were willing and able to work harder than some of us. So now the sponge business is theirs. Well and good. I am glad. They won it fairly, according to the rules of the business world. They belong in it, it belongs to them . . . They are a great people, these Greeks. I am happy I had a hand in bringing them here. Fine citizens . . . Johnny Cocoris comes to see me once in a while.¹⁹

John Cheyney died in Tarpon Springs, Florida, at the age of eighty-one shortly after the above interview in 1939. John Cocoris passed away in Jacksonville, Florida, at the age of sixty-eight in 1944. ●



Figure 4.23 The John M. Cocoris memorial at Tarpon Springs Sponge Exchange entrance gate.



NOTES AND REFERENCES

This article is edited from Chapter 4 of Torrance R. Parker's book, *20,000 Divers Under the Sea: A History of the Mediterranean and Western Atlantic Sponge Trades With an Account of Early Deep Diving*. It is reprinted with permission.

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THE SUBMARINE LENS

A Mar-Vel'ous Pair

By Sid Macken

1. Original photos: Author
2. Fenjohn photos, patent drawing: Author's Collection
3. M&E Marine Supply ad: www.skindivinghistory.com/mfg_retailers/m/index.html

One of the earliest and longest surviving diving equipment suppliers in the United States was the M&E Marine Supply Company of New Jersey. Founded by friends Pat Madison (the M) and Everett Edmund (the E) in 1947 as a supplier of war surplus marine equipment, M&E became one of the largest suppliers of diving equipment in the United States. As sport diving took hold of the post-war population, M&E also served as the model for all dive shops to come.

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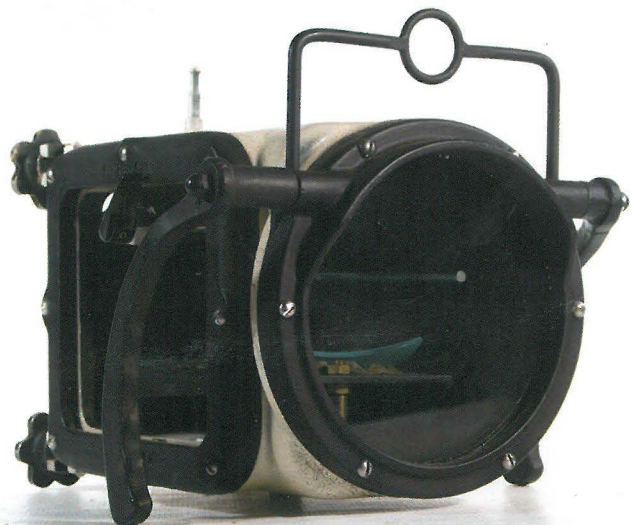
Heavy cast aluminum lifetime case "O" Ring seals, adjustable handles, full view side window, polished 3/8" plate glass front lens—lens shade—camera mounts on cover for instant film servicing—handle on cover—through case sighting—optional topsight—tripod drilled—film wind and trigger standard, and you may use several cameras in this one case. Ask your favorite dealer to show it to you.

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SERVING DIVERS SINCE 1947
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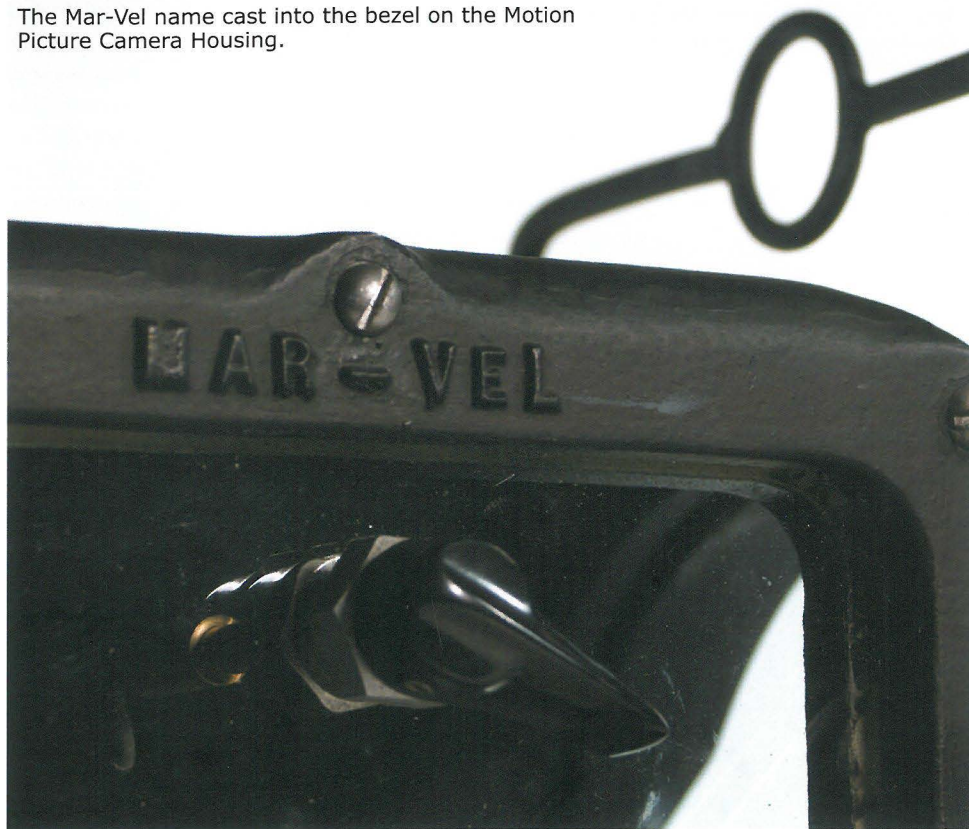
(Above) An M&E Marine Supply ad showing the Mar-Vel Motion Picture Camera Housing and the Universal Camera Housing.

(Right top and bottom) Two views of the Mar-Vel Motion Picture Camera Housing.

As with almost every other sport-diving related venture of that era, underwater cameras and camera housings became popular items on the store shelves. The pair of housings pictured here, one for motion picture cameras and one for still cameras, were marketed by M&E under the brand name Mar-Vel. They provide a glimpse into the underwater photo industry of the mid-1950s. Referred to as universal housings, they were designed to fit a wide range of cameras—unlike today's housings, which generally are designed to accommodate one specific camera model. Mar-Vel began offering these housings for sale around 1956. In this review we will take a look at the still camera housing first.

From the accompanying patent drawing, we can see that the housing was designed by George Dennis. The patent was filed in May, 1959 and awarded in July, 1960. As with many other patented inventions, the housing was actually available from Mar-Vel

The Mar-Vel name cast into the bezel on the Motion Picture Camera Housing.



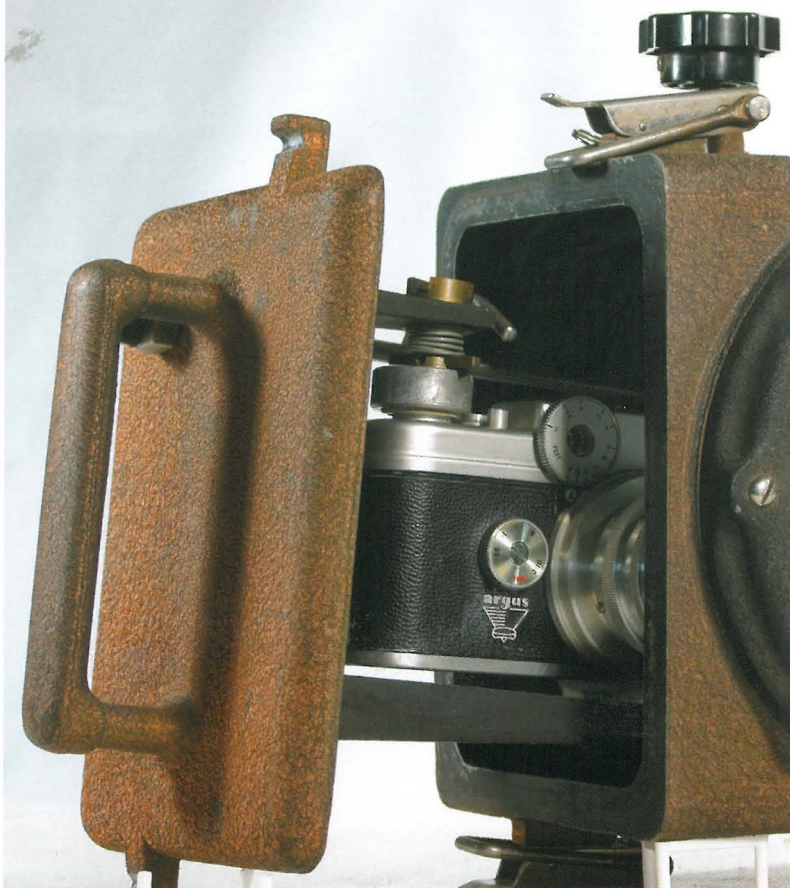
The Mar-Vel name cast into the bezel on the Universal Camera Housing.



The left side of the Mar-Vel Universal Camera Housing showing the portion of the handle which was cut away to accommodate the flash connection.



The camera mounts onto a tray, which is part of the right hand side plate.



several years before the patent was filed.

Listed as the Universal Camera Housing, this housing features several adjustments, which would allow it to accommodate a variety of cameras. The cast aluminum body had a large lens port on the front side, a closed end with a handle, and a removable end-cap, which incorporated another handle and an adjustable camera-mounting tray. The tray could be raised or lowered within the housing and the camera position adjusted right or left to align with the film advance knob. The spring loaded shutter release arm could be adjusted along a shaft to align with the camera's shutter release button. The end cap was sealed by a very thick O-ring gasket, and held by spring-loaded clamps. The film advance linkage could be fitted to both a lever or knob type film wind mechanism. A small ring at the top of the lens port bezel acts as the front sight, and a pin at the rear of the housing is the rear sight.

In its simplest form the housing contained only the shutter release and film advance controls. The example pictured here has had a focus control and flash attachment adapter added. You will see from the photos that a portion of the handle was machined away to provide clearance for the flash connector, and a mount for the flash arm has been added.

It is interesting to note that Fenjohn, another very early dive and photo supplier, carried very similar housings in their catalog but under the Fenjohn name. A housing similar in design but distinctly different in appearance to the Mar-Vel housing pictured here appeared in the 1956 Fenjohn catalog. The Fenjohn housing was missing from the 1957 catalog, but reappears, in an updated form, in a later catalog. As the two companies were only a few miles apart (Fenjohn in Ardmore, Pennsylvania and Mar-Vel in Camden, New Jersey) it may have been that they either had a business arrangement regarding the housings or both purchased



The camera can be positioned to line up with the film wind knob, and the shutter release control can be adjusted to reach the camera's shutter release. These two controls came standard on the housing.

them from George Dennis.

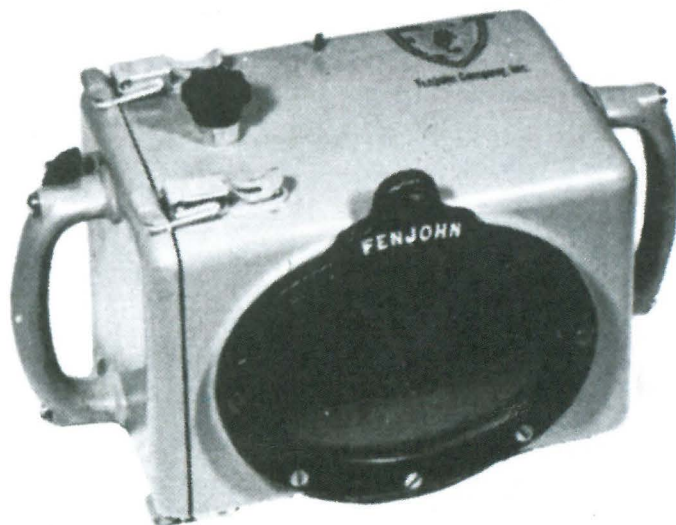
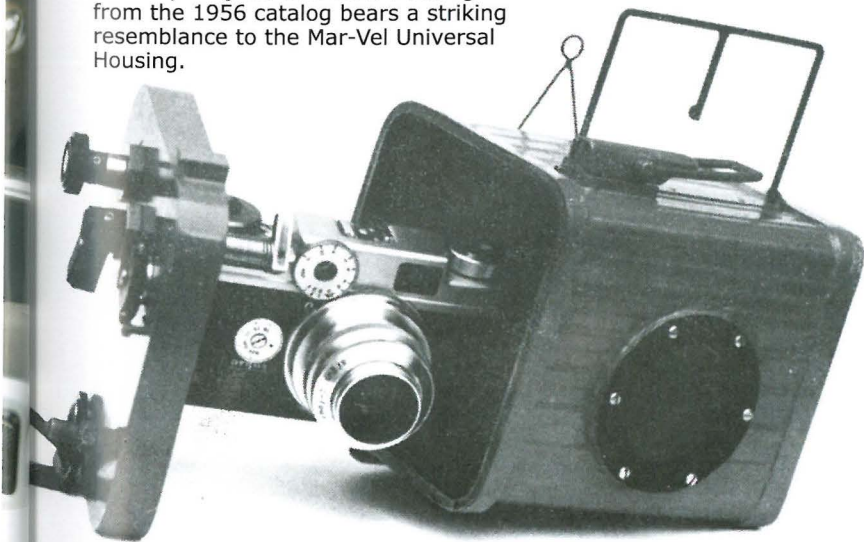
You can note from the photographs that there were at least three variations on the same basic design, varying mainly in the location of controls, type of handles, and number of clamps.

The second housing is the Mar-Vel Motion Picture Camera Housing. This housing also was designed to fit a variety of cameras, both 8 and 16-millimeter models. A nice feature here is the Plexiglas side plate in addition to the front port. Although it creates a potential leak by adding another seal, the clear side would make positioning controls easy, and to fit different cameras you only had to replace the Plexiglas and reposition the controls. The Mar-Vel name is cast prominently into the top of the bezel above the side plate, and there is a small viewing port on the rear plate along with a handle. On this example, a long control shaft extends from the rear plate almost to the front of the housing, either for a focus or aperture control. The camera mounting plate is fixed to the inside of the rear plate, very similar to the still camera housing. A post at the rear and a ring at the front make up the viewfinder. This particular housing was apparently for an electrically driven camera as there is no film wind control. The shutter release can be seen mounted on the Plexiglas side plate just behind the handle. This is an odd location for a shutter release, and it makes me curious about what type of camera fit inside.

In today's world of rapidly changing camera designs, and camera-specific housings, it is easy to appreciate the simplicity of these housing designs. Simple, durable, and adaptable they helped move the art of underwater photography forward.

For a detailed history of M&E Marine Supply Company, see *Historical Diver Magazine*, Volume 11 Issue 3, Number 36. 📍

An early Fenjohn Universal Housing from the 1956 catalog bears a striking resemblance to the Mar-Vel Universal Housing.



Other than the name on the lens port bezel and the sticker, this Fenjohn housing, which appeared in an undated catalog printed after 1957, is identical to later Mar-Vel housings.



(Left) Here you can see the focus control, flash connection, and flash arm mount which were added to this housing.



(Below) The Mar-Vel Universal Camera Housing was claimed to fit 100 different types of 35mm still cameras.



Lutz Droessler

HDS VINTAGE DIVERS MEETING IN EAST GERMANY



Some dive ready double hose regulators on display including a IDA 71 rebreather from Russia, a MEDI Hydromat equipment, a MEDI "Nixe" rebreather and other homemade gear.



A MEDI Hydromat, homemade double-hose regulators, MEDI full-face mask, and a MEDI 713 (their first sports diver rig, called "Horse lung" due to the breathing work it required).

(Below) Preparing for a dive are Lutz Droessler, Helmut Giersch, Uwe Busch, Michael Müller, and Jürgen Hofmann. An IDA 71 and a homemade rebreather are shown in front.



In May 2013 members of HDS Germany who live in East Germany organized the first regional meeting for those who are interested in diving, maintaining and collecting vintage diving gear. The annual international HDS Germany meeting is held at Neustadt and Lake Marx, which are located in southern Germany. These are quite far away, so a local meeting in East Germany was more convenient for many of us.

We invited about 20 friends from old times and promoted the meeting through various media outlets, and finally on the Saturday in May about 15 divers appeared at Florian dive center, which is located at Kulkwitzsee, near Leipzig.

The attendees brought several treasures from their collections including rebuilt/built historical diving equipment. The focus of course was on the units of MEDI/MLW Leipzig, since it was the only diving equipment manufacturer in former East Germany. During the DDR period of control in East Germany it was very hard to buy or even find diving equipment, so a lot of gear that was displayed was home-made, and had been constructed with a lot of enthusiasm and creativity.

Besides the lovingly restored MEDI devices, which started with a MEDI 713 and ended with their last single hose regulator Hydromat 66, many other interesting models of equipment were displayed.

Included among these was a wonderfully



(Left) Czech full-face mask with window wiper. The same mask is shown in the HDS Czech Republic logo.



(Right) Dräger full-face mask with MEDI Hydromat double-hose regulator.

reconstructed MEDI Nixe oxygen rebreather from the 1950s, a self-made rebreather by Michael Mueller, another perfectly self-made rebreather by Lutz Drössler, and a Soviet IDA71 rebreather that had been restored by Uwe Busch.

Of course dives were made with these beautiful devices in Kulkwitzsee, which is a well-known diving site in this region. The water temperature was still rather low at this time of the year but it did not deter any of the participants who dove their classic equipment.

All participating divers and visitors enjoyed the contact with like-minded persons who share the common interest of their sport diving history. Many new contacts with other enthusiasts were made, and new ideas for their own projects taken home. We are scheduling another meeting for this fall, and details will appear on the HDS Germany website (<http://forum.historische-tauchergesellschaft.de>). The Florian Dive Shop can be visited at www.tauchshop-florian.de.



(Left) Working replica of a MEDI "Nixe" O2 rebreather made by Michael Mueller. The Nixe was the very first product of MEDI manufactured in the 1950s .

THE AUTHOR

Dr. Lothar Seveke, of Dresden, Germany, is founding member and the treasurer of HDS Germany. Lothar maintains and dives his collection of double hose regulators. His website is a treasure for all vintage divers: www.altes.tauchen.seveke.de.

(Below left & right) Self-made rebreather with Poseidon regulator as bailout, made by Lutz Droessler, who is shown preparing his rebreather for a dive.





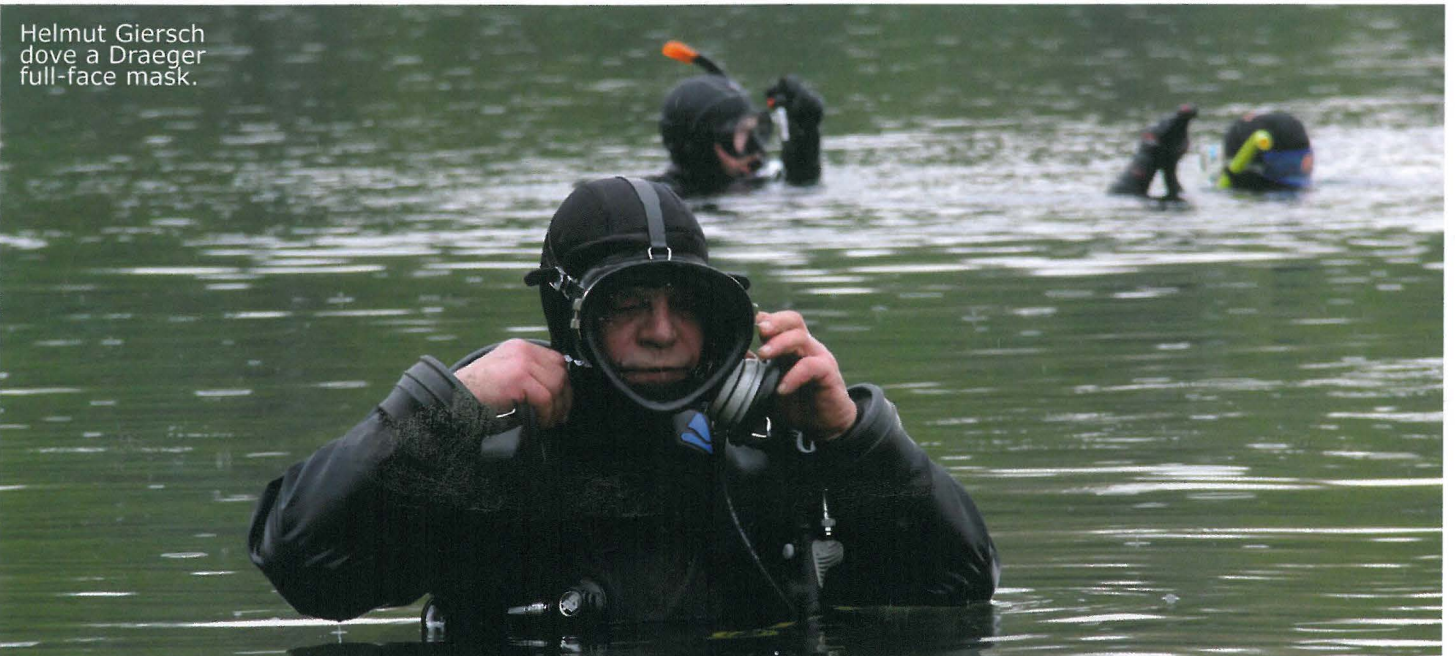
(Left) Uwe Busch's open IDA-71.

(Right) Old homemade single-hose regulator from Uwe Mattern, with Hydromat double-hose regulator first stage (1960s).



(Below left) Droessler, Hofmann, and Mueller preparing for a dive.

(Below right) Uwe Busch diving with his self-restored Russian IDA-71.



Helmut Giersch dove a Draeger full-face mask.



(Above left) Jürgen Hofmann with a Hydromat double-hose regulator, horse collar, and oval Mask 25IDA-71.

(Above right) Mueller diving with the Nixe.

(Left and below) Uwe Busch & his IDA 71.



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George C. Wiswell and Marine Contracting International



The reprinting of the 1966 article, "Hydro-Therm Theory," by Paul Tzimoulis, in the previous issue raised some interest in the hot-water suits developed by George Wiswell. Advisory Board members Mike Hughes and Tim Beaver had both been in contact with Wiswell, who lives in the northeastern United States. To enhance information on Wiswell, his company, and their suits, we are reprinting the following article from Volume 1, number 3, of *Underwater Magazine*, which was based out of Arlington, Massachusetts, and edited by Phillip E. Holt. The magazine is ©1972, six years after the Tzimoulis article.

- Leslie Leaney

George C. Wiswell, Jr., at 45 is the innovative and energetic President of Marine Contracting International, Inc., an underwater contracting firm headquartered in Southport, Connecticut. Born in Arlington, Massachusetts, and living his early life in Winchester a few miles away, young Wiswell at the age of 15 built his own diving rig which had a maximum operating depth of about 20 feet. His bucket-with-a-window with air supplied by a surface hand pump was the envy of his neighborhood comrades.

With the start of World War II, Wiswell found himself training to be a diver in the Navy. Training as a diver had a few incentives: Wiswell recalls that "They promised a leave for everyone who completed the diving course. I guess that I finished that course faster than any man in the Navy."

After being trained as a hard-hat diver, Wiswell converted a Mark IV gas mask for diving. An old Navy Petty Officer was leery about the conversion and bet Wiswell \$100 that he could not make it down to 100 feet. Wiswell raised the stakes to \$100 plus an additional dollar for every foot deeper than 100 feet that he reached. The day of the test came and Wiswell collected \$110.

The creative talents and engineering skill George Wiswell demonstrated in making his own rig as a boy, and the conversion of a gas mask in the Navy were to be the sources of his success as founder of his own diving firm. After the war Wiswell entered Colby College in Waterville, Maine, majoring in psychology and business administration. After graduating from Colby he joined his father's advertising firm of Chambers and Wiswell in Boston. Wiswell later sold the agency and joined another advertising firm in New York after his father's death.

Commuting to New York by train from Connecticut, and the Madison Avenue life-style became too much for Wiswell, so he quit his job. At that point the only thing besides advertising that he knew how to do for an immediate income was diving. In the spring of 1962, he started a one-man operation, using conventional scuba gear, to perform underwater repairs, inspection and cleaning. The stop-gap move for immediate income grew, and he found that he soon had no time to follow up the leads for other business ventures.

He founded Marine Contracting International which was incorporated in December, 1962. Recalling his first job, Wiswell said, "The job was simply to clean out the branches, leaves, and other accumulated debris from an intake canal and dam for a utility company. Cleaning off the racks wasn't a hard job, but the water was very cold. In the utility complex there was a steam room and I often went there to warm up when I got really cold.

"While warming up I frequently talked to one of the foremen that worked there. The foreman asked me how the job was going, and I told him that it would go much faster if I had our sandblaster that was out for repairs. The foreman just looked at me and asked if the sandblaster I was leaning against would do. I said it would do just fine. Needless to say, I didn't know how to operate a sandblaster and had never seen one before.

"With seemingly fearless confidence I gave directions, and we loaded it onto a truck. When asked what kind of sand I wanted in it, I said, 'Give me the toughest stuff you have.' While they unloaded the sandblaster from the truck, I studied the machine and finally figured out how to operate it. When I got it working, I took it underwater not knowing what to expect. To my joyful surprise, it worked like a charm.

"I did learn one thing — never get anything between the nozzle and the object you're spraying. At one point, I stuck my knee in front of the nozzle and ripped a section of neoprene from my suit."

Those early days of the sandblasting incident must seem like medieval history to Wiswell. Since then he and his company have advanced commercial diving techniques in many areas. To call Marine Contracting International an underwater contractor is to do them a great injustice. In their own literature they refer to themselves as "underwater specialists". And specialists they are. If the job is difficult, or even looks impossible, Marine Contracting International will be glad to tackle it.

Their innovative, almost bold attitude and their imagination have resulted in an impressive list of underwater firsts. One good example is their development of the use of ROC-LOC, a polyester



Wiswell, shown above wearing one of his heated wet suits, examines the old Mark V hard-hat diving rig that he used in starting Marine Contracting International.

resin manufactured by American Cyanamid and originally designed for use in damp mines.

"Rotten cement is the worse thing to work with underwater. As you go further back into a structure the quality of the cement gets worse. We developed an underwater application of ROC-LOC for anchoring bolts and hooks to underwater concrete pilings and foundations," Wiswell said.

To use various kinds of equipment underwater, Wiswell was faced with the problem of how to waterproof them. Starting with ultrasonic testing equipment, he has waterproofed just about everything that can be used by divers. Marine Contracting International has also developed the underwater application of an epoxy that was developed by the Shell Company and manufactured by the Pittsburgh Plate Glass Company. With the successful application of epoxy in its various uses, business rapidly improved. "We have applied epoxy from Portland, Maine, to Bremer-ton, Washington, by way of the Gulf of Mexico. Since then, we've probably applied more epoxy on and under water than any other company in the world," Wiswell commented.

Studied Love Life of Horseshoe Crab

Wiswell once studied the love-life of the horseshoe crab in order to solve an underwater problem for a client. The current at the water intake of a utility company's power plant was not strong enough to lift a horseshoe crab from the river bottom, but at a certain time each year the water system intake would get clogged with thousands of these primordial animals.



Above photo shows Marine Contracting's Southport, Conn. headquarters. Dark, round chimney-like structure at right center is MCI's diving tower used for experiments, training and equipment development.

Wiswell's study showed that during the mating season both the male and female horseshoe crabs leave the river bottom in something that could be called a lover's leap, and were then being drawn into the company's intake system. By building a simple retaining fence the problem was solved.

From rack-and-tunnel-cleaning for utility companies in New England, Wiswell expanded operations to Louisiana and Texas with the offshore oil industry. He then secured a contract to replace damaged trash racks at the base of the Appalachian Power Smith Dam in Virginia.

The history-making Smith Dam job was the first known commercial use of saturation diving techniques and yielded 800 bottom-hours of work in a period of three months. The deepest rack was in 205 feet of water and the water temperature was 40 degrees. Maximum dives lasted almost four and one-half hours. One of the important pieces of new equipment that allowed divers to work under these adverse conditions was the heated wet suit that Wiswell developed.

The concept of Wiswell's heated suit began with a job he had in Boston working for a utility company. "We were cold and suited up, trying to warm up in a hot shower. We had attached a garden hose to a wet suit to heat the diver more rapidly. After that we designed a wet suit with built-in capillaries and pumped hot water to the diver from the surface.

"There will be a lot of developments in the area of heated suits," Wiswell added. "A company that now produces space suits has adapted a Gemini space suit for divers. The outside layering is nylon, and it uses a Mark IV rebreather. However, in addition to its high cost, the suit presents many of the traditional problems of a dry suit." Because of their demonstrated advantages and their future potential, the U.S. Navy has ordered a complete system consisting of a heating unit, controls, pumps, hose and heated wet suits.

With the proven commercial application of saturation diving, and the development of heated wet suits, Marine Contracting International's business further expanded. In March, 1966, Hurricane Betsy overturned two oil-production platforms in the Gulf of Mexico off the Louisiana coast. Again using the Westinghouse Cachalot diving system as they had on the Smith Dam job, Marine Contracting International set about the arduous task assigned them.

Sixteen wells which had previously been operating in 200 and 220 feet of water had to be killed, capped and the remaining thousands of tons of wreckage had to be salvaged. To cap the wells, divers had to burrow into the mud, sometimes as deep as 35 feet. With the job complete, Wiswell and Marine Contracting International had passed



MCI engages in research and design in the area of heated diving suits. Shown above is one of MCI's heated wet suit designs. Hoses at bottom are supply and return for heated fluid which circulates through capillaries built into wet suit. Heated fluid is surface-supplied.

another commercial diving milestone in the use of saturation diving techniques.

What are some of the factors that have made Marine Contracting International a success? Wiswell says that their sound engineering approach to the entire business is just one factor. "We have always created an air of credibility to our work. The commercial diver has sometimes had the image and reputation of being a bum. Since a great deal of our work is based on our reputation, we must always find the most qualified divers that are

available, and offer the fastest and best service. In addition, we document our work using underwater television, ultrasonic testing, and even putting the contractor's engineers down there, with us. Sometimes we train the engineers to dive; other times we provide a capsule for the engineer so they can make on-site inspections of our work. We are also engaged in the research and manufacturing of tools, helmets, heated suits and other diving equipment. All of these factors have played a role in the success we enjoy."

Recalling his early jobs, Wiswell said, "We got stung on our very first job. Now we serve only top-notch companies. We've done work for every major electric utility company in the Northeast, most major construction companies, other select clients, as well as some major oil companies."

What's the Job Like?

Wiswell's job requires that he be an underwater troubleshooter. Although his office closes officially at 5:00 p.m., life at home with his wife Harriet and three sons is often interrupted by a phone call late at night. Within a few minutes Wiswell is back at his desk, phoning divers and making arrangements to get them and needed equipment to the trouble spot as soon as possible. This responsiveness is all in a day's work for an underwater troubleshooter.

Once, while working on the Newport-Narragansett Bay Bridge in Rhode Island, the clients' engineers wanted Wiswell's divers to use closed-circuit television to assist in the inspection of the sub-structure that Marine Contracting International was building. At that time Wiswell's closed-circuit television equipment was being used on a job for an oil company on an offshore platform in the Gulf of Mexico. Wiswell called the manufacturer of the unit, and a new one was shipped via commercial air freight the night of Friday, July 1. When the shipment arrived at Kennedy Airport early the next morning, Wiswell flew down in his private plane, transferred the shipment, and before the morning was over the equipment was in operation in 175 feet of water.

Everything up to the arrival of the underwater television at Kennedy Airport was routine in almost any business. The last 200 miles by private plane on the July 4th weekend would be a little more unusual for most other companies, but not for Wiswell and Marine Contracting International.

Most of the jobs are not glamorous: more often than not they consist of cleaning out tunnels for utility companies, and repairing or inspecting underwater portions of structures like piers, docks, dams, offshore petroleum production platforms and bridges. One job on the Neches River required that Wiswell and his divers fortify more than 1,000 piles supporting an oil refinery pier. Marine Contracting International started 15 feet below the mud line and covered every column with interlocking shields which enveloped the entire length of the column. When the shielding was complete, fresh cement was pumped into the gap between each shield and pile. To ensure that no water was trapped in the enclosed area, the cement was pumped into the gap from the bottom up.

Being an underwater troubleshooter has its exciting moments too. A water gate in the Holyoke

Water Power Company's dam system broke, and Wiswell was called in to solve the problem. Working a straight 48 hours in a rapid current, he put up a temporary gate to handle the uncontrollable water. With that task completed a new, replacement gate was installed and the problem was permanently corrected.

What's ahead for Marine Contracting International: the company that started with a used \$150 Mark V hard hat and hand pump and had several million dollars in sales last year? Wiswell's innovative company has many hot irons in the fire. Named "Man of the Year" by *Engineering News Record*, Wiswell looks forward to further development of his heated wet suits. He has already spent considerable time and money on developing the most advanced total saturation chamber complex. With the plans already on paper, Wiswell commented, "Because of our experience with saturation diving (we've done more commercial saturation diving than any other company), we've designed the most advanced chamber complex. It can handle four, six or eight men and it will cost only about \$250,000." What about the approach to breathing underwater? Wiswell says, "Today's concepts of breathing underwater will be obsolete tomorrow." Marine Contracting International is working on that too. ●





In the late 1940s a small group of divers came together to discover a way to continue spearfishing throughout the winter. They put together what would become the first dry suit. And today, in the new millennium, Aquala is still here, expanding and developing dry suits from sport and commercial divers.

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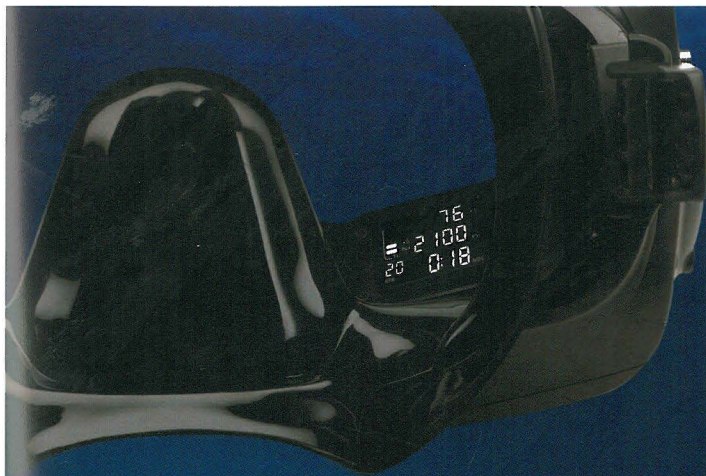
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**Elmo Italiano
Officine, F. Longobardo & C
Spezia, Italy circa 1926**

By Leslie Leaney

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The original concept of this column was to feature helmets that did not appear in Leon Lyon's book, *Helmets of the Deep*, and I think we have done a pretty good job of that with the constant assistance of Leon himself, David Dekker, and a few other members. It started back in issue 7, Spring, 1996, when we featured a superb Cabirol helmet that Leon had acquired, and this prompted me to start a regular column called Helmets of the Deep in the next issue.

As we await the second edition of the book, which according to Leon now has 1,600 pages, trying to locate manufacturers and helmets not featured in the book or this column is becoming increasingly harder.

However, once in a while something turns up that I have not seen or heard of before. Such is the case here with this Italian helmet. It is featured in a recent book titled, *Palombari della Marina Militare Italiana*, by Fabio Vitale and Gianfranco Betro, which was given to me as a gift by Giancarlo Bartolli of the Galeazzi company during a visit to his works.

The book is stunning, with fabulous color images of many different items of diving equipment used by the Italian Navy. These have been collected and preserved by various naval units and by individual collectors, several of whom are members of HDS Italy.

Most of us are familiar with the Italian helmets of Galeazzi and Salvas, which turn up in internet auctions, and who seem to have been the prime manufacturers. This book shows several other manufacturers, and this one in particular caught my attention as it had a supporting photograph showing it in a group photo of Italian military divers circa 1934.

The text throughout the book is in Italian, which I cannot translate in the short time I have to put this column together. So, I am going to let these images speak for themselves, and am happy to publish any additional information in a future issue of the *Journal*. 🐬



Images of History

William Walker

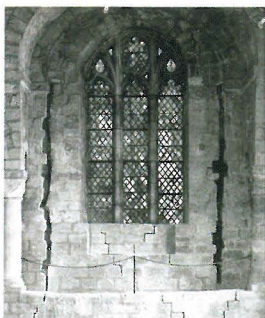
The Construction Diver Who Saved a Cathedral

The subject photograph for this issue is a series of firsts in this column; the first 20th century photograph, the first photograph of an identified diver, and the first photograph in which we know exactly what the diver was doing. This real photo postcard of William Walker measures 3 ½ by 5 ½ inches. On the back of the postcard is the statement "Photographed by Charles E. Beloe, 8 Arthur Road, Winchester." The front of the real photo postcard shows William Walker posing in front of Winchester Cathedral, complete with all of his Siebe Gorman diving equipment including the diving dress, chest weight, knife, helmet, air hose, and life line. His face with mustache is depicted through the helmet window. At the bottom of the postcard is the statement "Weight of Dress 200 LBS. The Diver at Winchester Cathedral."

William Walker was born in 1869 in Walworth, England. While serving in the Royal Navy, he trained to become a First Class Diver in 1890. Several years later after his Navy discharge, he landed a job as a commercial diver with the Siebe Gorman Company of London. Eventually he became the company's Chief Diver and worked in Loch Long in Scotland, Gibraltar, and at the Victoria Docks, London.

The Problems at Winchester Cathedral

Construction on Winchester Cathedral was started by the Normans in 1079 and was completed about thirty years later, near the southern coast of England in Hampshire on what turned out to be an area with a high water table. By the turn of the twentieth century, cracks appeared in walls, blocks fell from the roof, and some walls at the east end started to lean. An inspection by an architect named J.B. Colson concluded that the foundations holding up the



walls needed to be strengthened. Another architect by the name of Thomas Jackson was brought in for further consultation. He directed the work crew to excavate an exploratory trench adjacent to the south wall, which revealed the foundation consisted of beech logs on top of natural peat. About twenty-four feet from ground level, was a bed of natural hard gravel. A consulting engineer by the name of Francis Fox was then brought in and he recommended that the walls should be

underpinned down to the hard gravel. This required that the beech logs be removed, along with the peat all the way down to the gravel bed. The new foundation would then be constructed from the gravel on up with cement, concrete blocks, and bricks. However, when the work crews removed the beech logs and the peat, the entire excavation trench filled up with water, which seeped up from the gravel. Since a pump was unable to keep the water out of the trench, a new solution was necessary.

A Diver Becomes the Solution

Francis Fox decided that perhaps a diver could be brought in to perform the work while the trench was full of water, so he contacted the Siebe Gorman Company to provide the best diver they had. William Walker was selected to



perform the tasks of removing the beech logs and peat, and then installing sacks of concrete over the gravel bed, all while underwater. The work was all done by William Walker, as it appeared that he could perform these tasks alone in pitch black water with only his assistant on the surface pumping down the air. Once the logs and peat were removed and the concrete sacks were installed over the gravel, the water could be pumped out and the construction crew could begin to build the new foundation up to the existing cathedral walls. Sealing the gravel bed with concrete sacks sealed the trench from the water. William Walker worked on the cathedral project from May 1906 until August 1911, six hours per day, and five days per week. In 1912, the entire reinforcement project was completed.

After the work was completed, the Dean of the Cathedral presented Walker with a silver rose bowl with the inscription: Presented to Mr. W.R. Walker, diver, by the Dean and Chapter of Winchester, in grateful recognition of his valuable service in the work of underpinning the walls of the cathedral, 1906-1911. Later, King George V invited Walker to Buckingham Palace to receive the Royal Victorian Order. Today, Winchester Cathedral has a statuette bust of William Walker on the south side of the retro choir.

Real Photo Postcards

Real Photo Postcards (known as RPPC among collectors) are actual photographs which have been developed directly on postcard size photographic paper. The reverse side has normal postcard printing, including an area for a message as well as a stamp. They usually date from 1903 until the 1950s. 📷

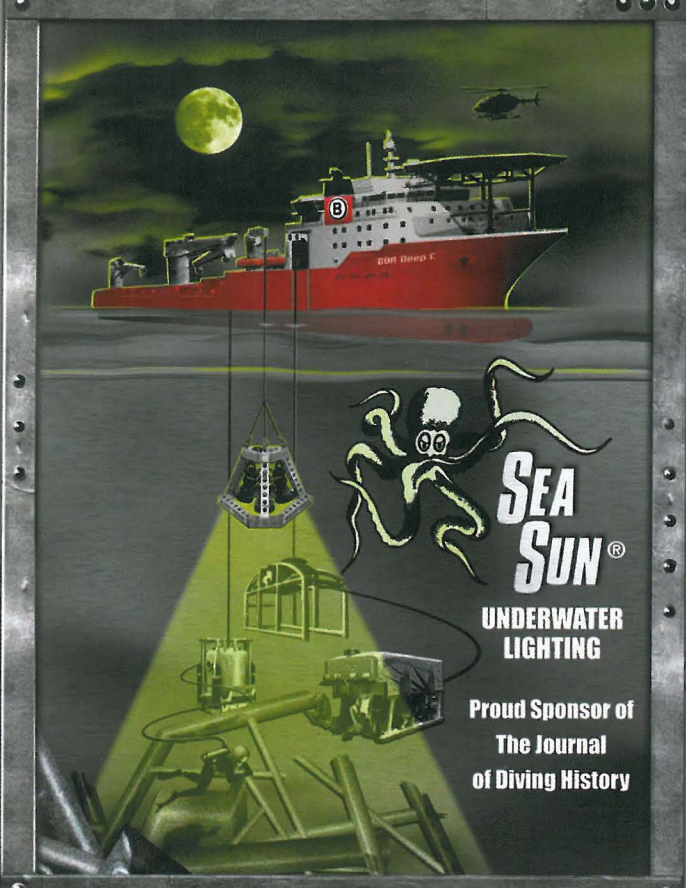


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HDS Members Bring Beebe and Barton's Historic Bathysphere To Beneath The Sea



By Beth Ritter with Bob Rusnak

Every seemingly impossible or far-fetched idea that eventually becomes reality begins in someone's head. The story of bringing the historic Bathysphere of Beebe and Barton from the New York Aquarium to the 2013 Beneath the Sea (BTS) Exhibition began in the mind of Bob Rusnak.

"The idea came to me two years ago," said Rusnak, East Coast Representative of the Historical Diving Society. "We needed something spectacular for the center booth next to HDS." Certainly the two-ton-plus, two-man historical dive bell that set a world depth record would fit that description. At the 2012 BTS show Rusnak approached Gene Ritter of the Cultural Research Divers with his idea of bringing the Bathysphere to the show. "I knew Gene had many dealings with the New York Aquarium and he was a good starting point for me," said Rusnak, asking him, "Wouldn't it be great to have the Bathysphere here on display? After all, the dive in the Bathysphere set the world record in 1934 to over 3,000 feet: the deepest dive man had ever made at the time."

They discussed the possibility with Armand "Zig" Zigahn, the founder and Executive Director of BTS, who was very excited about the idea, but a little skeptical. "The first thing Zig said to me was, 'The Bathysphere?' not really believing I wanted to do this," said Rusnak. "Could that be possible?" he asked Ritter, who replied he would contact Aquarium Director Jon Dohlin and request permission to borrow it for the show. "I first approached Kate Fitzgerald, their Manager of Community Affairs, with a very enthusiastic point of view," said Ritter, adding that it would be great exposure for the Aquarium and exciting for everyone there.

There was no instant "Yes," clearly indicating that Aquarium officials were not really thrilled with the idea. "It had never been done," explained Ritter of their reluctance to have the large, heavy object transported out of a place where it had been either displayed or stored for over fifty years. There was obviously a huge risk and liability involved with the project. Still, Ritter persisted in trying to convince Fitzgerald and Dohlin that he could in fact pull off the project. Months passed but the most Ritter and Rusnak received was a tentative, unofficial, but not definite, "Yes."

In the fall of 2012, Kaiser Park in Coney Island, New York, was host to an event called Beyond the Sea, which included participation by representatives from Beneath the Sea, the Historical Diving Society, Cultural Research Divers, the Divers Academy International, as well as dozens of other top local organizations. Here Ritter offered Dohlin the opportunity to be one of the USN Mark V divers during the historic hard hat diving exhibit. Dohlin loved the idea and was very excited about doing it. Ritter recalled,

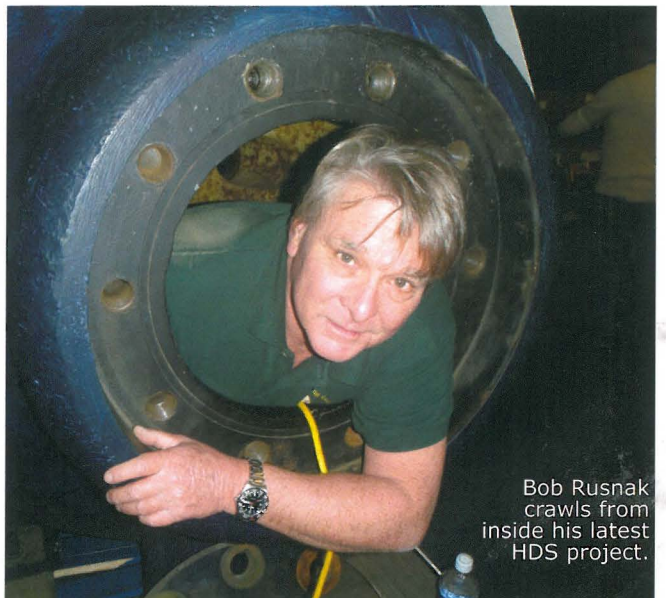
"Just as Jon was being dressed in the rig for the dive, Bob Rusnak went up to him and asked, 'Oh, it's your turn to dive, Jon?' Jon was half-dressed in the rig and eager to go. Bob joked, 'Well, if you want to go in, we want the Bathysphere for the Beneath the Sea show.' At that moment, Bob told him he was not going to put him in unless he agreed. Of course they were all laughing, but it was understood that this was a bargaining chip."

Dohlin kiddingly asked if he could let them know after the dive, implying he'd have to be alive to answer. His first Mark V dive was very successful, and Dohlin, with a beaming smile, agreed to let the team borrow the Bathysphere.

Enter hurricane Sandy a little over a week after the Kaiser Park dive event, causing devastation to the eastern U.S. Coastline, including Coney Island and the New York Aquarium. This put all talk of the Bathysphere venture on hold, due to the huge undertaking of repairing the devastated Aquarium. Even as the BTS show got



HDS Director Janice Raber is OK with the Bathysphere.



Bob Rusnak crawls inside his latest HDS project.



DAN Foundations' Virginia Parker and DAN Rolex Diver of the Year Frank Chapman.

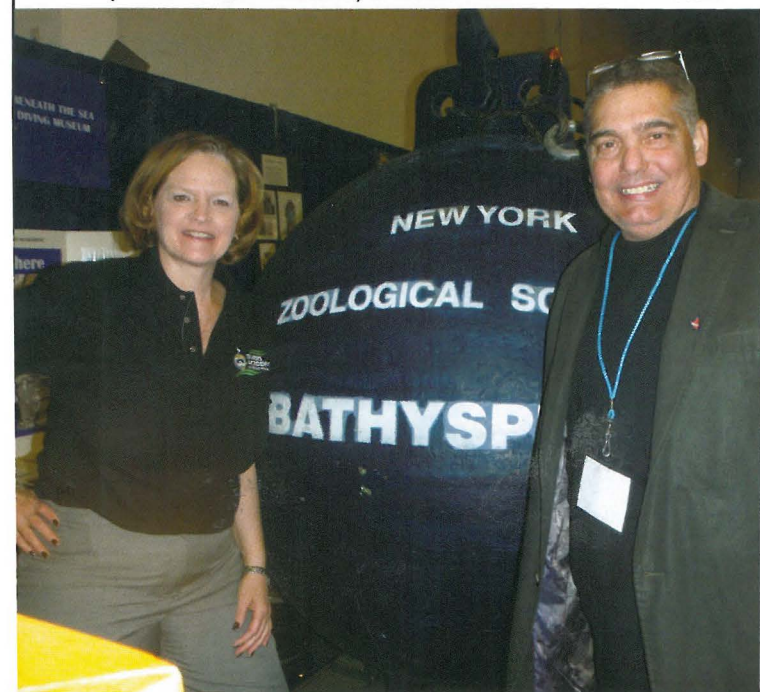


BTS President
JoAnn Zigahn.



(Above) The Bathysphere on Gene Ritter's trailer.

(Below) Diver's Academy's Tamara Brown and Gene Ritter.



closer, Ritter felt it was awkward to talk to them about the project, although they had agreed to do it. He waited as long as he could, but in February, with BTS only a month away, he again brought up the subject. "The delay gave the Aquarium officials a little more time to heal some of the wounds inflicted by Sandy, but it gave us a lot less time to prepare," said Ritter. Dohlin warned him, "You can't fail. You can't screw this up, Gene." Ritter assured him that failure here was not an option, and upon hearing the final "Yes," he quickly went to work.

Now what was needed was to have the proper graphics and posters made up. Rusnak had already completed the historical research on the Bathysphere with archaeologist Glen Williams. "Then John Chominsky stepped up and put all the images in a format so posters were printed. This was within a few days," Bob recalled. There was little time between the final approval of the loan of the Bathysphere and its scheduled arrival at the show.

Transporting an historical object weighing upwards of 4,000 pounds was not something to be taken lightly. Ritter spent countless hours drawing up the plans. "Since failure was not an option, I had to make sure I covered every single bit of ground to be certain the Bathysphere would be transported safely to the BTS show and back." A 6,000-pound trailer was rented and plenty of heavy-duty rigging secured. Ritter and the Aquarium crew loaded the Bathysphere onto the flatbed trailer, using a forklift. Two ratchets were used to tighten two crossed heavy chains, and a six-inch, 30-foot truck strap, tied the top of the Bathysphere to the bottom of the trailer. Ritter explained the twofold importance of the strap. Firstly it was to hold the load with a downward force onto the flatbed truck, and keep it from spinning. And secondly to stop the momentum to the top, which is the longitudinal load on the trailer. This rigging was all done on the Wednesday before the show, to ensure plenty of time.

As everyone knows, it is wise to leave time for the unexpected, and in this case it was a flat tire on the flat bed, which became apparent as soon as the Bathysphere was placed on top of it. Not willing to gamble with a slow leak, the tire was investigated, revealing that two small nails had penetrated the tire and it was quickly changed.

Ritter left the Aquarium at 5:00 a.m. Thursday March 21st to allow plenty of time to get to Secaucus, New Jersey before the rush hour traffic through Manhattan. After one final check, everything tied down, good tires, and flashing yellow lights working, he was ready to go, but not without some trepidation. Ritter recalled, "I was cautious. The load did feel a little top-heavy. I couldn't go more than forty miles an hour without seeing some wobbling, so it was kind of a slow crawl all the way. The big question was: would police stop me at the Brooklyn Battery Tunnel? Pull me over to say, 'what the hell is that thing?' I pulled over to the truck stop and the cop said, 'What the hell is that thing?'" Ritter pulled out an old HDS magazine with a picture of the Bathysphere. "I told him the whole story in ten seconds," he laughed. "He actually enjoyed it."

Ritter recalled feeling absolutely thrilled when he and the historical artifact arrived safely at the BTS loading zone. He described the unloading process as a game of balance. The Convention Hall crew unloaded the Bathysphere using two forklifts; one in order to hold the other forklift down. Then, once they lifted it off the flatbed, they needed some guys to stand on the back of the forklift to prevent it from tipping. Once they got it into the convention center, Richard Blankfein, the Aquarium's Dive Safety Officer, reviewed the Bathysphere in its new, unfamiliar location. He seemed pleased—possibly relieved—that it had made it there safely.

A new chapter of the Bathysphere's history had been written in transporting it to the show, and now another began as show attendees discovered the amazing, history-filled object. "It is impressive when you think of what this thing stands for, that these two explorers Beebe and Barton in the 1930s actually set world records—to go the deepest man had ever gone!" marveled Ritter.

Many show attendees asked to be put inside the Bathysphere. Once inside, some looked around and questioned, "Two guys fit in this thing?" which often prompted Rusnak to enthusiastically share the story of the two explorers.

It was difficult to tell who had more fun, Wayne Gerhartz, John Chominsky and Fred Barthes, who tirelessly put many attendees inside the Bathysphere, enjoying their reactions, or the ones who experienced going into the claustrophobic, three-windowed steel ball, laughing as they emerged. Or maybe it was Bob Rusnak, who against some big odds, saw his unlikely vision of the Bathysphere exhibited at BTS become a reality. Rusnak wore an "it doesn't get any better than this," smile, as did so many attendees who had the opportunity to go inside an actual piece of diving history. Some wanted to come right out; most were happy to experience the confined environment, and stayed in as long as allowed. Ritter noted, "Maybe a hundred people went inside the Bathysphere at the show, which included many from the Women Divers Hall of Fame." For all of their being ahead of their time, this might have surprised explorers William Beebe and Otis Barton.

According to Ritter, there's a saying: "A diver gets paid, not to go down, but to come back up. The journey taking the Bathysphere there and back was almost like the planning to put it in the water." An integral part of the whole plan was Ritter's checklist, which he said seemed as long as the depth that Beebe and Barton dove. Once all was safely secured, Ritter took the slow trip back to the Aquarium, and supervised the offloading and placement of the Bathysphere. It was back in the exact same spot, as if it had never left.

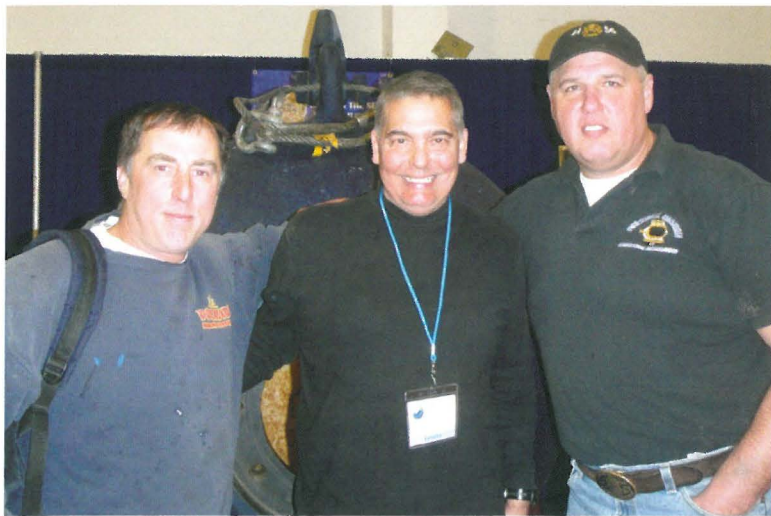
Seeing it back home safe and sound was a good thing. Ritter commented, "A lot of stress was relieved. I was glad it went as planned, and I think John Dohlin was relieved also." As for Rusnak, his memories of BTS 2013 will likely always be associated with his vision—then reality—of a big, blue Bathysphere on display: a real piece of our diving history on exhibit for all to see and appreciate. Which is, according to Rusnak, as it should be.

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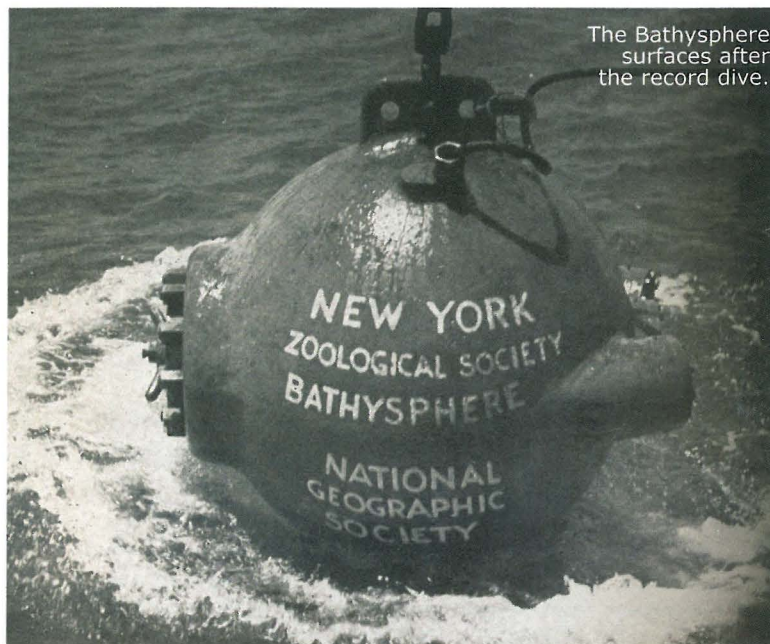
Further information on the Bathysphere can be found on the website of the New York Aquarium for Wildlife Conservation. The history of the Bathysphere can be found in *Descent: The Heroic Discovery of the Abyss*, by Brad Matsen, 2005, Pantheon Books, New York, and *Half Mile Down*, by William Beebe, 1934, Harcourt, Brace and Company, New York. Brad Matsen's account of how he discovered the Bathysphere under the Cyclone roller coaster at Coney Island in 2004 is recorded in *Beebe and Barton's "Bathysphere Discovered,"* by Brad Matsen, *Historical Diver Magazine*, issue 49, Fall 2006.



(L-R) WDHOF members Sally Wahrmann, Vreni Roduner, Maureen Langevin, Mary Connelly, Janice Raber and Ronni Gilligan.



Union Commercial Divers Fred Mcmanus, Gene Ritter, and Bob Rieche.



The Bathysphere surfaces after the record dive.

20,000 Divers Under the Sea

*A History of the Mediterranean and Western Atlantic Sponge Trades
With an Account of Early Deep Diving*

Written by Torrance R. Parker
Reviewed by Leslie Leaney

Torrance Parker began his lengthy and successful diving career back in 1945 aboard a sponge diving boat out of Tarpon Springs, Florida. His time spent among these hard working Greek immigrants left an indelible impression on him, and now, almost 70 years later, he has produced a highly detailed history of this fisheries diving industry that launched his career.

The title accurately describes the journey of the Greeks from the original east Mediterranean diving industry of the mid 1800s across the Atlantic to what would become the new world center for sponges; - Tarpon Springs, Florida. The story is presented in two parts. The Introduction to Part 1, 1400 – 1900, covers the history of the earliest known sponge trade that began in the late Middle Ages and reports on its development chronologically to its peak in the twentieth century. Part 2 contains first hand accounts of the industry by some of the people who worked in it and its more recent history.

Employing the same attention to historical accuracy and detail that were the hallmarks of his first book, Torrance records the foundation of the industry in the Aegean Sea, Dodecanese Islands, and eastern Mediterranean Sea.

References to Greek sponge diving dating back to 600 B.C. start the historical journey which progresses to the decree by Suleiman the Magnificent granting exceptional privileges to the people of the Dodecanese Islands. They repaid his courtesy with a large consignment of sponges, 5,000 of which were for his harem. Tools, methods and statistics are noted in the first chapter, including a record from 1858 of the number of boats working around the islands.

The development of the industry off North Africa, Bahamas, Gulf of Mexico and the Caribbean Sea highlights the development of those regional industries using hooks, trident harpoons, trawls and naked divers.

The efforts of the early naked divers are eventually surpassed by the introduction of the diving dress and it is this section of the book that contains the diving history that is of the broadest

interest to divers. Torrance explains how in 1863 Fotis Mastoridis returned home to Symi from the East Indies with a deep-sea diving apparatus, thereby revolutionizing the industry, but at a massive cost of life and limb.

International diving historians will have an interest in the development of equipment and the crew allocations for specific boats. For example, the French Rouquayrol & Denayrouze company established a Society for Sponge Fishing using their scaphandra equipment, and the use of compressed air equipment became known as Machine Diving. The traditionally oriented Greeks were slow to adapt to this new technology but, without the knowledge of physics, once they did, the "Machine" swiftly took a toll of those pioneer divers who were diving long and deep before the world understood the need for decompression.

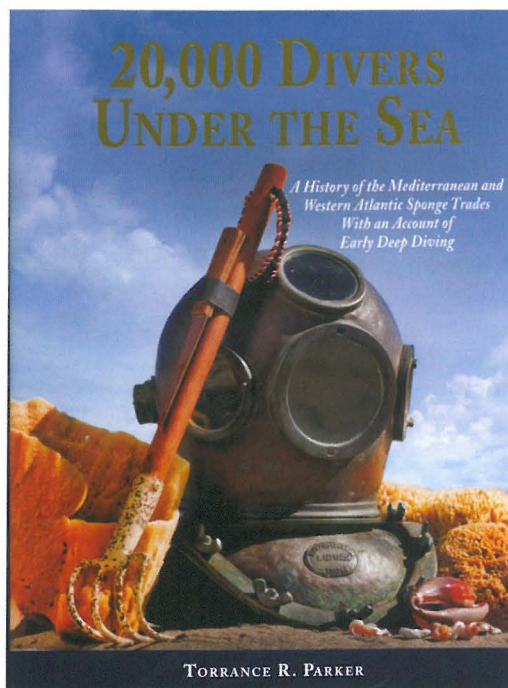
"Records show that in 1867, four years after Mastoridis brought his gear to Symi, there were only 12 diving boats with suits manned by 24 Greek divers on the Island of Symi. Two divers per suit were used, and they alternated using the scaphandra all day long, making dives as deep as 25 fathoms. Out of the 24 divers, there were 10 deaths.

A year later, 10 boats from Kalymnos were equipped with diving apparatus and air pumps by their captains. The diver's injury rate exploded, but the financial returns were so great that by 1875 there were 300 boats using the new diving gear."

The book records specific incidents of lengthy dives with fatal consequences and references a March 1910 report by H.F. Moore for the Bureau of Fisheries that states ".....further, that during the thirty nine years upward of 5,100 sponge diver were killed by their work and 2,100 were so paralyzed as to be incapacitated."

In addition to recording these, and other, staggering figures, the book advances through the solutions of Haldane's staged decompression, the discovery of nitrogen narcosis, the circumstances around a diver's squeeze and the hazards of diving with the hand pump.

The dramas and death of the Mediterranean are eventually replaced by the vibrant opportunity of the New World as Torrance records the history of the Western Atlantic industry. In covering the period from the 1840s through to the early 1900s, the book



details the characters and locations that formed the base of the regions industry. Central to the story is the small town of Tarpon Springs that will eventually become the Sponge Capital of the World.

Following sponge industry business leaders John King Cheney and John M. Cocoris, the book tells of the transformation of the industry from hookers to compressed air diving. On June 18, 1905 diver Demosthenes Kavasilas surfaced from his dive on a bar off Anclote Key and stated "There's enough sponge in these beds to supply the whole world." And he was right.

The section details the life and culture of Tarpon Springs, its sponge divers and sponge industry workers, during this early period, when it must have seemed something like a Greek Gold Rush. Auctions, sales, blights and the general overall development of this new American industry are woven into the story line.

Part II of the book covers the period from 1900 to 2012 and starts with a chapter on Sponge Diving gear. The author notes that he particularly wanted to preserve the techniques of the sponge diver as the rigging of their helmet diving equipment is different from other diving trades, and he has done an excellent job. There are well-illustrated sections on the different pieces of equipment required to rig for sponge diving and they are supported by the author's first hand comments.

Also in Part II are first-person stories from several people involved in the sponge industry who were still alive when the author was doing his research. This section provides a most valuable insight, for as the author notes, "Soon, no living person will be left to tell this story in his or her own words. Even now, as this is being written in the second decade of the twenty-first century, few people remain who worked in the trade during its "Golden Years" more than a half century ago."

Prior to undertaking this book project Torrance made numerous trips back to Tarpon Springs, retracing parts of his journey as a young man entering the diving industry. Not simply content to walk the sponge docks and visit old friends, he undertook a survey of some of the sponge beds using surface supplied helmet equipment. His first survey was in 1999, the second in 2000, and the third in 2001, with primarily the same crew for each survey. The results are published in the book and accompanied by several photos of the team in action.

The last section of the book is filled with period photos of divers with the Diving Exhibition Boats, People, Places, and Spongers of Tarpon Springs, which all add to the flavor and historical richness of this excellent and culturally important book.

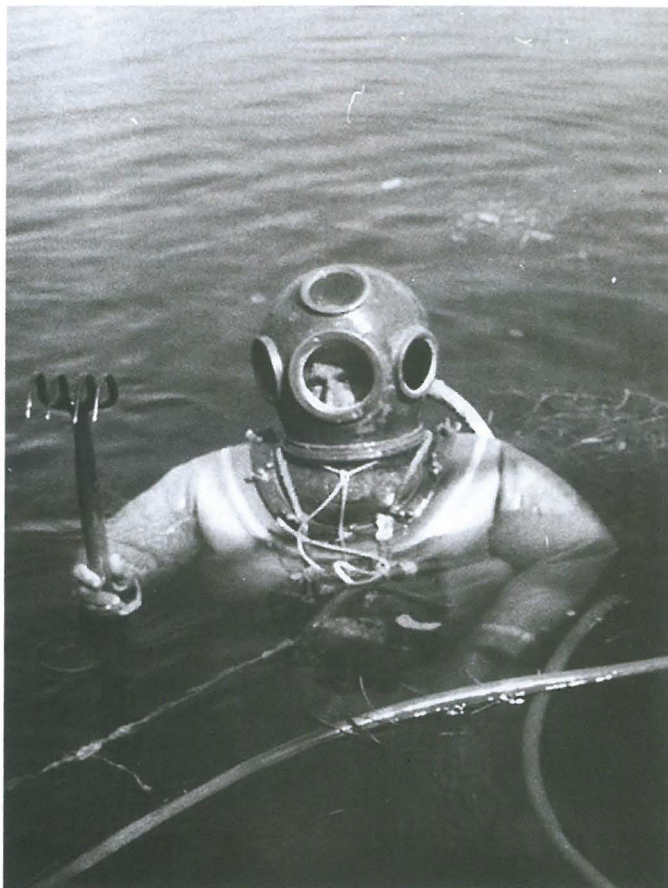
This book follows *20,000 Jobs Under the Sea*, the author's highly successful book on the commercial diving industry. That title sold out two complete print runs and is now offered on the collectible and used book market for prices north of \$500. At only 1,075 copies this important title will without a doubt will be equally successful, as it also has a huge appeal to the nation's immigrant Greek community, as well as us divers. 🍷

ABOUT THE BOOK

Hardbound with color dust jacket. 247 pages, b&w photos, illustrations, maps, index, appendix, notes, credits. Price: \$87. CA residents add 8.25% sales tax. USPS Priority Mail \$13 (up to 3 books in a box), USPS Media Mail \$7 (1 book to a box).

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(Above) A working sponge diver at the surface.

(Below) Mike Billiris working with the family sponge diving exhibit in 1956. Photo courtesy Pete Berdzar.



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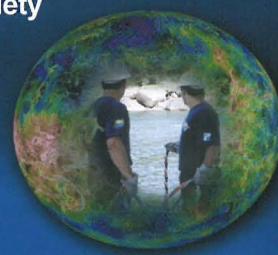
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Attire: Party attire or 1960's attire

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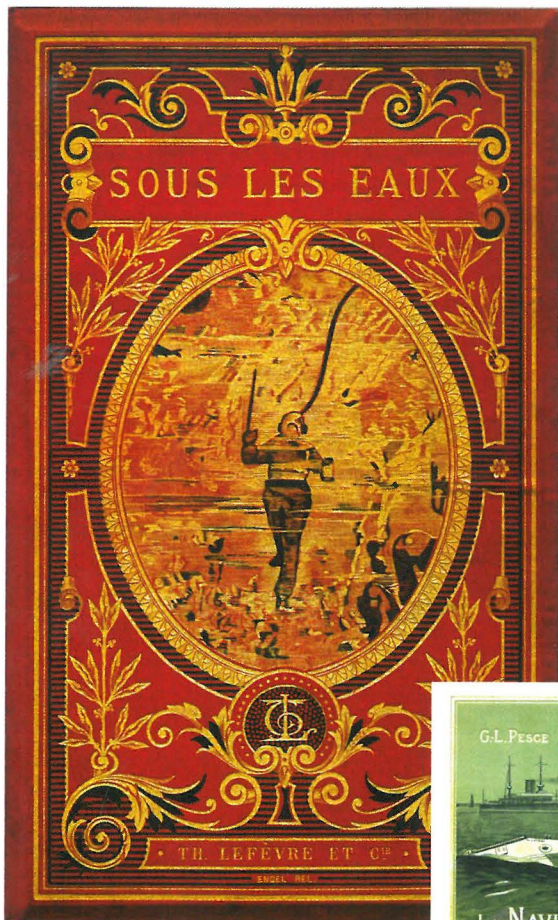
ANNUAL INDUSTRY CELEBRATION • 6:30PM • NOVEMBER 8, 2013

Tickets are \$85 on or before 10/11/13, \$105 after 10/11/13 (while supplies last). For sponsorship opportunities, VIP suites for groups up to 30, and reserved seating for tables of 10, please contact Colleen Vasquez cvasquez@dema.org.

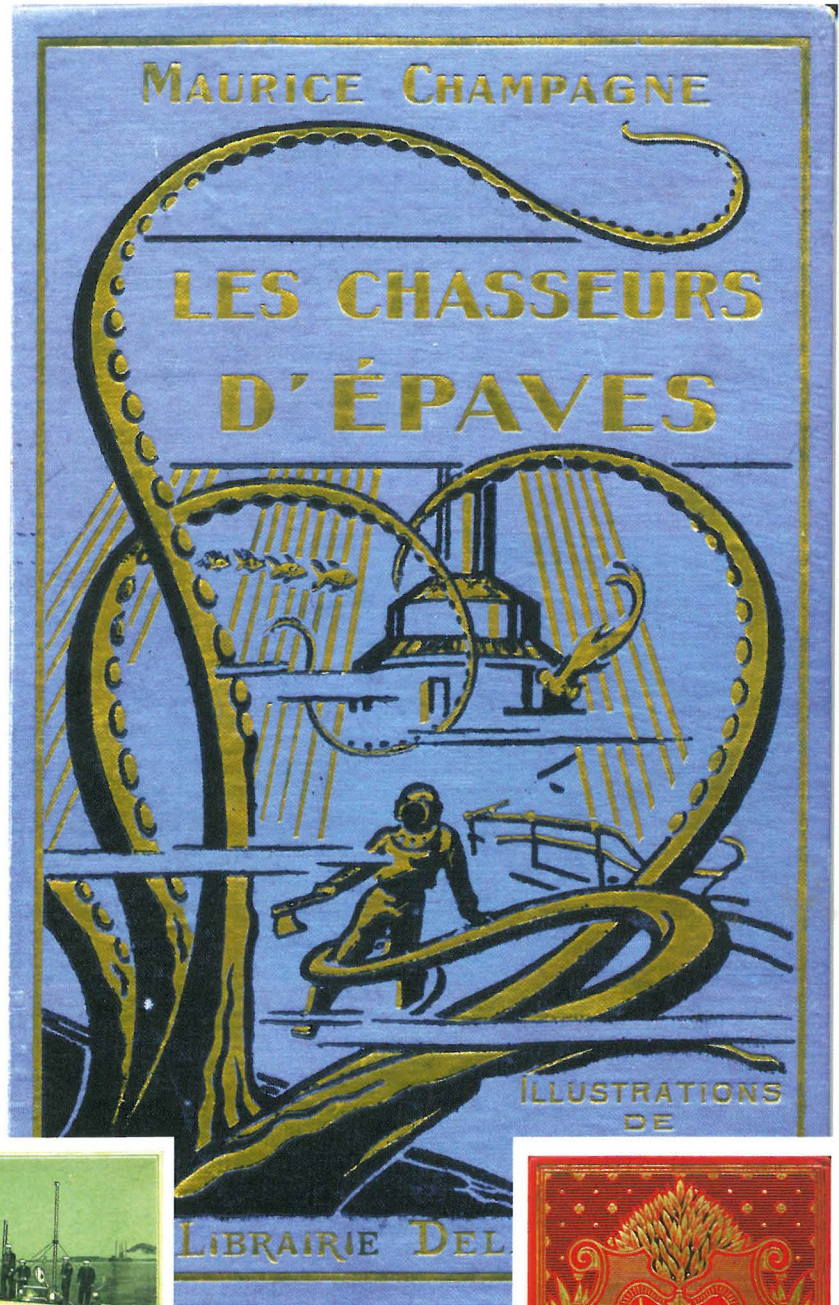
The French Collection II

By Peter Jackson

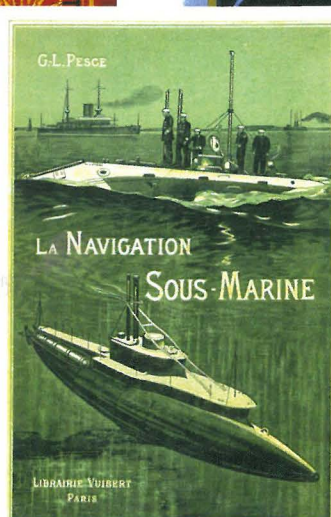
In this edition we continue with a further selection of "French Fancies," books with lavishly gilded covers that only the French could produce so beautifully. The last of these, *Huit Millions Sous Les Flots*, is difficult to reproduce clearly, being overloaded with gold. It depicts a diver with a lamp on the top of his helmet, completely entwined with a giant octopus, which he is attacking with a knife – a very familiar scene! I hope you like them.



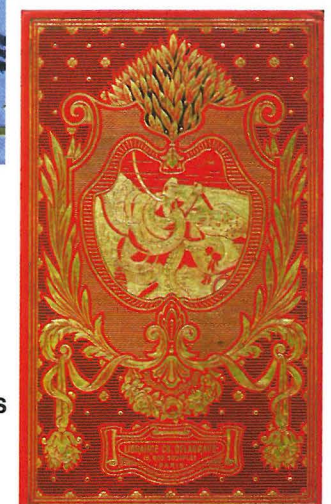
(Above) *SOUS LES EAUX*, by H. de La Blanchère. Librairie Théodore Lefèvre et Cie. Paris 1883



(Above) *LES CHASSEURS D'ÉPAVES*, by Maurice Champagne. Librairie Delagrave. Paris 1927



(Right) *LA NAVIGATION SOUS-MARINE* (2nd edition), by G. L. Pesce. Librairie Vuibert. Paris 1911



(Right) *HUIT MILLIONS SOUS LES FLOTS* (6th edition), by Maurice Champagne. Librairie Ch. Delagrave. Paris 1912

G.W. Smith's Diving Apparatus

By James Vorosmarti, MD

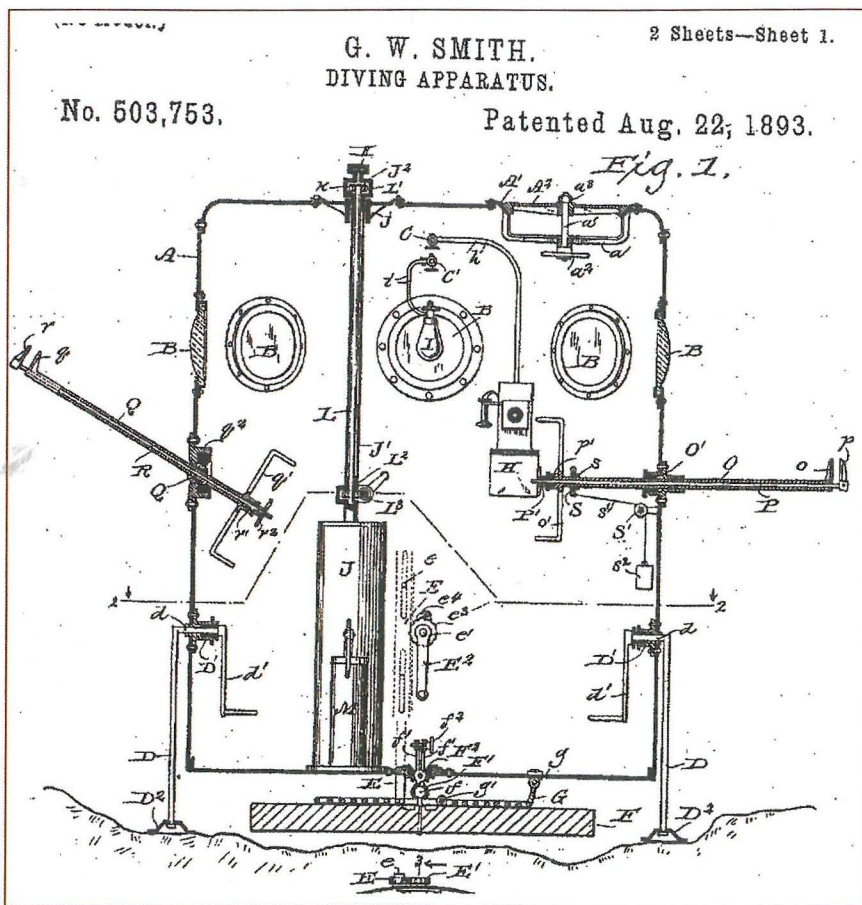
George Worden Smith of Milwaukee, WI applied for a patent on 10 October 1892 for his "New and Useful Improvements in Diving Apparatus." The patent was granted on 22 August, 1893 and assigned number 503,753.

His diving apparatus is a closed diving bell, the basis of which is a simple cylinder with a man-hole on the top for operator access. The patent

Two legs (D) were positioned opposite each other outside the bell with pads on their ends to rest on the bottom. They were fixed on the upper ends to a shaft extending through the hull to a crank (d¹) inside the bell. The stated purpose of these was so that "the legs may be vibrated in an obvious manner to move the shell along the ground as desired." How this would work is certainly not obvious to me. Also provided were two other legs (E), which were to be mounted on exterior racks so they could be moved up or down via a pinion gear connected to an internal crank. These were to be used to level the bell and help stabilize it.

The bell was designed to be buoyant and to counteract this, a large weight (F) was provided. A ball-shaped piece was fastened to the top of the weight, which would fit into a double hemispherical connector, which could be tightened around the ball from inside the bell. This assembly allowed the weight to be released when needed. It also allowed the bell to be rotated while still attached to the weight, apparently by "vibrating the legs" (D). To the weight was fastened a cable or rope (G). This was to be of a length needed to reach the surface and was coiled onto the top of the weight. This was to allow recovery of the weight after the bell was released and on the surface. Communications were provided via what appears to be a standard telephone of the day, with the wiring for this led through one of the air hoses. Electrical power was also supplied for an internal use via wiring in one of the air hoses.

To handle heavy material a crane was provided on top of the bell by a system that could rotate, raise and lower, and move the crane horizontally along its length. The figure shows only the end view of the crane, apparently an I-beam. The outer end of this crane had a large hook on it. To operate the crane a piston (J) was vertically fastened in the bell. Rod (J¹) extended through the hull and was fastened to a transverse guide in which the beam could slide. A rack (k) on the beam was attached to a hollow shaft (L) in which (J) was contained. At the upper end of shaft (L) was a gear to mesh with the rack on the beam. At the bottom of this rod was another gear and worm assembly with a crank so that the beam could be extended or retracted. A lever (not shown) was attached to the piston



does not give any particulars of the materials used in the construction, nor the size of the bell, but a newspaper article (1) stated that it was built of one inch thick steel and was six feet in diameter and eight feet in height. The hatch was made so that it could be opened from either inside or outside. According to the drawing, it did not seal with pressure but was clamped to the opening from inside the bell. Multiple "bull's eyes" were provided in the sides made of one inch glass. Two hoses handled the supply and exhaust of air (not shown).

rod and was used to rotate the beam. The entire crane could be raised or lowered by using a pump (M) to force seawater into the cylinder or allow water in the piston to be released. Two hull penetrations were provided for smaller operating arms. These were not new designs, but similar to designs previously used. The arm on the left in the figure had a ball and socket joint allowing the arm to be moved in any direction as well as extending or retracting it. The arm on the right had a simple straight through penetration allowing the arm only to be moved in or out or rotated. This arm had a collar near the inner end fixed to the shaft, to which a cable or rope was attached and then run through a pulley to a counter weight to help balance the arm and help hold it steady. Both arms had a system operated through a crank on the inner end to tighten the jaws.

There is nothing revolutionary in this design: it is a simple straightforward bell with all systems operated manually. The importance of the bell is that it was actually built and used extensively for salvaging tons of copper from the wreck of the Pewabic. The Pewabic sank in 1866 after a collision with the Meteor while attempting to exchange mail. This occurred in Thunder Bay of Lake Huron and the Pewabic sank in 180 feet of water. She was carrying a large cargo of copper and, of course, supposedly had a large amount of cash in her safe. The bell was built in a foundry in Milwaukee and first tested in April 1896⁽²⁾ in 220 feet of water. Later that summer another test took place with six men aboard at a depth of 250 feet of water for a period of six hours. Smith and several others founded the American Salvage and Wrecking Company and leased the steamer H.A. Root to operate from. In the summer of 1897 operations began and on 15

July it was reported that the wreck of the Pewabic had been found⁽³⁾. Later that month a newspaper article⁽⁴⁾ reported that clearing the wreck was going slowly and that one mass of copper being lifted fell and missed the bell by only a foot. There is no further information until October 1897 when it was reported that the H.A. Root had arrived in Milwaukee with 600 tons of copper⁽⁵⁾. Work on the wreck continued until June 1898 when George Campbell and Peter Olson drowned in the bell as a result of a glass port failing⁽⁶⁾. The day before the glass in that port had cracked and it was replaced but apparently not properly. Not mentioned in the patent but reported in this article, there were exterior metal shutters designed to close automatically should a port fail. It was known that the shutter on that port was inoperable before the dive. Smith offered the use of the bell to the U.S. Navy in February 1898 for investigating the wreck of the USS Maine in Havana harbor but the Navy refused the offer. I have found no other evidence that the bell was used after the flooding accident. Campbell and Olsen were divers three and four who had died on the wreck. The first was William Hike of Buffalo who reportedly died of "exposure" following a dive in 1865. Oliver Pelkey died in 1891 while using his newly patented diving apparatus. More of him in a later column. ♣

REFERENCES

1. *Boston Daily Globe*, 26 August, 1898
2. *Fort Wayne News*, 24 April, 1896
3. *The Independent*, Massillon, OH, 15 July 1874. *Fort Wayne News*, 24 April 1897
5. *Gazette*, Cedar Falls, IA, 5 Oct., 1897
6. *Weekly Wisconsin*, Milwaukee, 25 June 1898



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By Leslie Leaney

A review of recent internet auction results. While every effort is made to accurately describe the lots, vendors' opinions of what the items are, and what their condition is, are not consistent. These results are published in good faith for the interest of members, and the HDS and JoDH are not responsible for any errors in descriptions, listings, or realized prices.

Ladies First! 1890-era Celluloid Pinback Button MADAM DOT Female Deep Sea Diver

I have to thank Leon Lyons for alerting me to this very unusual item, which, according to the listing, shows one Madam Dot (dressed in Morse diving equipment) circa 1890. The listing stated: This listing is for a wonderful celluloid button showing Madam Dot "The only lady deep sea diver in the world." Button measures 1-1/2" diameter and had no foxing. Fresh from an estate. Excellent condition. See pictures for condition specifics. Our ladies in diving gear are a rare find and Madam Dot thus proved to be a siren for eight different bidders who took her pin from an opening bid of \$19.99 up to \$738.58. So someone REALLY loved her. In rushing to put this column together I have not had the time to check my files, but the photographic studio scene and the Morse diving equipment look similar to that which was used to promote Captain Louis Sorcho, who, according to a series of promotional postcards around the turn of the 19th century was the "Champion Deep Sea Diver of the World." (I am not really sure who he beat in what contest to become the Champion, so perhaps we'll investigate that some other time.) My recall is that Captain Louis also featured his diving wife in his exhibitions and promotions, so Madam Dot here may also be Mrs. Sorcho. In fact Janice Raber refers to Mrs. Sorcho in her article *History Rings Out*, in issue 62 of this publication. Whatever the story is, it seems a pretty high price for a divers pin!



2-Bolt Helmet

Listed as an antique Danish Peter Hansen Hessing 3-light, 2-Bolt Divers Air Helmet. It is unusual to find this style of helmet available in North America as it was primarily used in Scandinavia and the domestic market here was for basically 12-bolt helmets. This one was offered out of Seattle but was critically missing the 2-bolt strap that would fit underneath the breastplate. If that part had been included the potential was there for the selling price to have been doubled. The seller provided minimal detail but eight excellent photos that showed great detail. The helmet was hand formed and showed signs of wear and some repairs. Opening at \$3,200 it sold for \$4,150.



Russian Helium Helmet

A Russian Helium helmet manufactured in 1981 in what appeared to be excellent condition. The seller provided a minimal description but had a very good series of photographs that shows minimal wear on the helmet. Hopefully the photos here speak for themselves. Located in Napa Valley, California, the helmet sold with 25 bids for \$1,828, which seemed to some collectors a very soft price.



Reproduction Siebe Gorman 12-bolt Helmet

This helmet exemplifies the old saying "If it looks too good to be true, then it probably isn't." The listing states, "I'm offering a 12-bolt, 3-light British Standard Diving Helmet." What was actually being offered was a recently manufactured Polish copy of a Siebe Gorman 12-bolt, 3-light helmet. It was offered out of Germany by an eBay seller with 1,012 registered transactions and 100% positive feedback. Described as "Completely tinned." The helmet has no company name tag and also no (serial) numbers. The helmet has never been in the water." The subject of miss, or dis, information regarding diving helmets has very recently become a very, very, hot topic in Europe, with knowledgeable sources starting to face off with alleged fakers and forgers. The bonnet had no air channels in it and this was clearly shown by the seller. Bidders on this helmet seemed to know what it actually was, and it sold for \$1,525, which is probably some where between 15% - 25% of what an authentic model in this unused condition with the manufacturers plaque and matched serial numbers would have sold for.



Sponge Diving Helmet

This unmarked helmet was minimally described but a good series of photos told its story. Of interest was the crown of the bonnet, which appeared to a straight-line brazing as opposed to the usual castellated crown of most hand-formed helmets. I have seen sponge diving helmets made in Turkey that were formed in the same way so this may be Turkish. It had a broken top port glass, tears in the shell, the inlet elbow had been removed and it was missing a stud, all four straps and all 12 nuts. With all those issues and possibly a few more, it would make a good restoration project for a metalworker. It received 30 bids and sold for \$1,133.





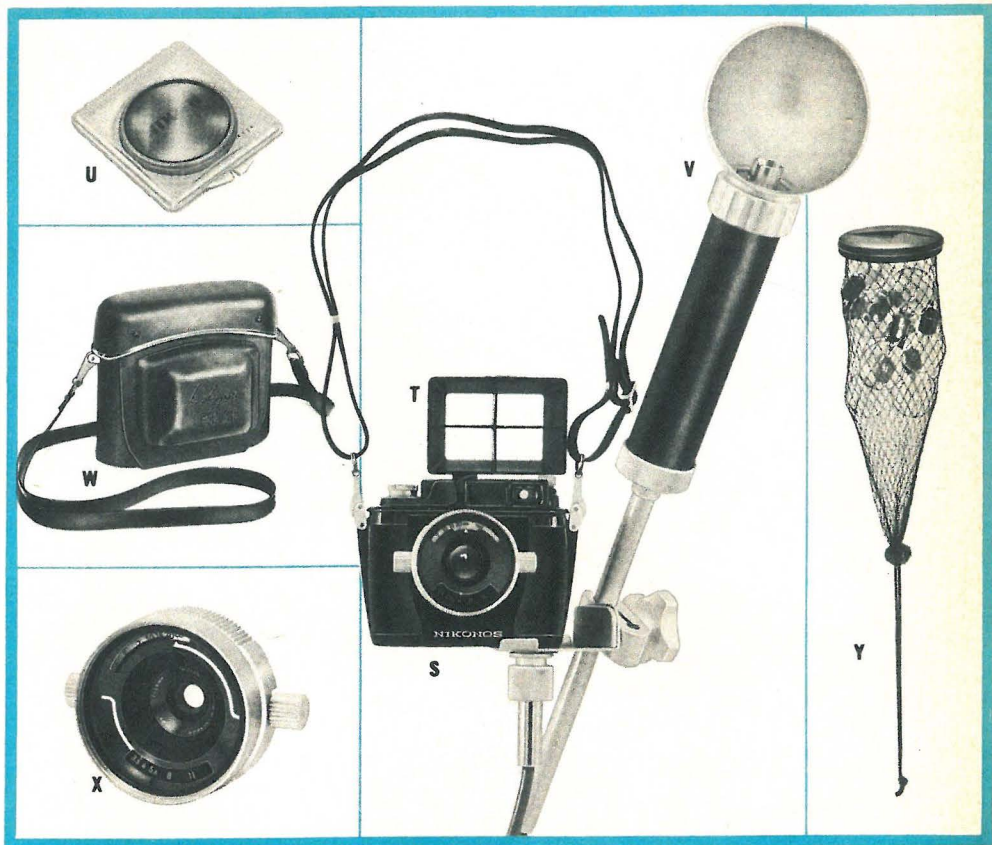
By Ed LaRochelle

A review of recent internet auction results. While every effort is made to accurately describe the lots, vendor's opinions of what the items are, and what their condition is, are not consistent. These results are published in good faith for the interest of members, and the HDS and JoDH are not responsible for any errors in descriptions, listings, or realized prices.

CAMERAS

(Right) Calypso camera accessories are in high demand.

(Beklow) This early Calypso view-finder sold for \$261.



(Left) The Calypso camera case was available in the U.S. Divers catalog for two years, 1965 and 1966. The case shown here sold for \$539.



(Right) This early camera lens and cover sold for \$417.



WATCHES

The 1950's Enicar 100 Fathom watch was custom for Healthways, and is a highly collectible watch. The watch was not only available through Healthways, but also through other outlets such as authorized catalog companies, like the Aquafun Company in Davenport, Iowa. This watch sold for \$525.



100 FATHOM WATCH—see page 23

49.95 plus 10% Federal Excise Tax TOTAL PRICE \$54.95

Aquafun
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DAVENPORT, IOWA





REGULATORS



The first Sportsways two-hose regulator was the Waterlung "Dual-Air," introduced in 1961, and available through 1962. The Dual-Air is an upstream system with a built-in overpressure safety relief valve. The low pressure tilt valve mechanism also has a venture action for a more direct air flow. This Dual-Air serial number D-10378 is all original with excellent condition chrome and decal. Sold for \$299.



"DUAL AIR" WATERLUNG

Furtherst advanced, easiest breathing, most reliable Two-Hose, Two-Stage Regulator ever manufactured! Features the celebrated WATERLUNG First Stage with a compact Second Stage housing that encases a specially large Diaphragm with Sportsways advanced Tilt Valve and Venturi action design . . . affording unequalled breathing sensitivity.

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1325 "DUAL AIR" WATERLUNG \$ 90.00
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"HYDRO-TWIN"

A new two-hose regulator design featuring solid one-piece forging and refined "downstream" second stage valve design. Oversize demand diaphragm provides super-sensitive response. Stainless steel parts throughout. Additional features include: Sea-Vue Gauge connector, Hookah attachment, and easy access to high pressure valve.

1350 "HYDRO-TWIN" WATERLUNG REGULATOR \$90.00
1351 "HYDRO-TWIN" with Sea-Vue Gauge 109.95

The Sportsways Waterlung "Hydro-Twin" was manufactured one year only, in 1963. The Sportsways engineering team redesigned the Dual-Air regulator to a "downstream" system, which removed the need for the overpressure safety valve and they renamed it the Hydro-Twin. This Hydro-Twin regulator serial number H-00172 was listed as incomplete and in fair condition and sold for \$372.

MISCELLANEOUS

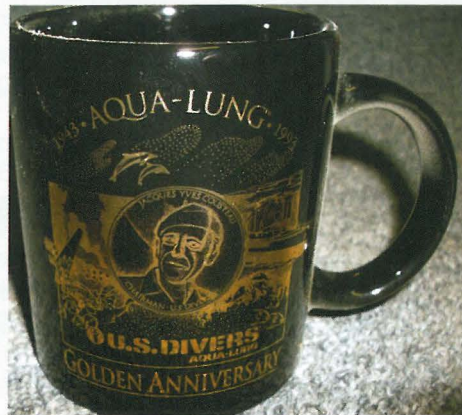
Vintage scuba plaque during the late 1950's and into 1960's by FenJohn Co. Not very many show up at auction, and this one sold for \$77.



Divers Accessories



1963—FenJohn license plate medallions for scuba divers. These light weight aluminum medallions act as identification for clubs, civil defense units, etc., who are continually supplying community service in rescue and recovery work. Very popular. Specify type desired. \$1.95



50th Anniversary mug that US Divers gave to attendees of the 1993 Diving Equipment Manufacturers Association, (DEMA) show. Now 20 years later they are a collector's item. This one sold for \$31.



This 1963 ScubaPro catalog, from the company's first year. It sold for \$160.



HISTORICAL DIVING SOCIETY USA QUARTERLY REPORT



www.hds.org

By Sid Macken, President

Full Fall Schedule Features Brooks Tribute

The Long Beach Scuba Show in California was the only dive show the HDS attended during the second quarter, but it was very productive. Besides signing up numerous new members, we were able to visit with many old friends including Nick Icorn and his daughter, Tina, Ben Hellwarth, Wyland, Dr. Sam Miller, and Dr. Inge Kendall Maranto. The booth was ably staffed by volunteers Larry and Rebecca Breazale, Mark Howell, and Past Presidents Leslie Leaney and Steve Kushner. This was my first time at the Scuba Show, and it was a lot of fun.

Looking forward for the third quarter and beyond, there will be a lot going on HDS-wise. The upcoming HDS/Santa Barbara Underwater Film Festival Tribute to Ernie Brooks starts on September 13th with a VIP reception at the Santa Barbara Maritime Museum (SBMM), and the main Tribute Film Festival at the Arlington on the 14th.

A description of the event and information on issuing tickets can be found elsewhere in this issue and at www.hds.org. Tickets are going fast, so if you want to attend, you had better move quickly. I'd like personally thanks Ed Stetson and Leslie Leaney, Don Barthelemess, Steve Barsky, Bonnie Toth, and a host of volunteers for again putting this event together for the benefit of HDS and SBMM.

Speaking of Leslie, he is due congratulations for his induction into the California Wreck Divers Hall of Fame for: "His efforts in preserving commercial and recreational diving history, as the co-founder of HDSUSA, and his continued support for CWD Inc."

Three weeks after the star-studded tribute to Ernie Brooks, the HDS will hold its annual conference at Divers Academy International in Erial, NJ, and we have our own star lineup for the weekend. Speakers include Geogann and Mike Wachter (Armored Warriors of the Deep), Glenn Butler and Dave Kenyon (History of the Union Carbide - Ocean Systems Laboratory and research with the late Dr. Bill Hamilton), Bernie Chowdhury (Salvage at Scapa Flow, Scotland),

Bob Rusnak (Vintage Equipment Diving), and Bob Croft (Navy Diver, Submariner and breath hold diving pioneer).

After a trip to the West Coast for the Brooks tribute in Santa Barbara, Stan Waterman will join us aboard the Battleship *USS New Jersey* as our evening speaker for the HDS annual banquet. The presenters will have something for just about everybody, and Stan is always an informative and entertaining speaker. Diving demonstrations at Diver's Academy, tours of the *USS New Jersey* and Independence Hall in Philadelphia will be available to complete your weekend. Go to the HDS website, www.hds.org, for details on schedule, hotels, transportation, and admission.

Ten days after the conference, Bob Hollis leads the annual HDS Great White Shark Expedition to Mexico and that is followed a few weeks later by the DEMA show in November.

The HDS will soon be issuing membership cards to all current, individual members. The cards will be issued upon joining or renewing and will be valid for one, two, or three years, depending on the duration of your membership/renewal. This is part of a developing membership benefit program. Check future issues of this *Journal* for updates as they occur. 🐠



"Bud" Weiser and Torrance Parker flank Leslie Leaney with his California Wreck Divers Award.



HDS USA Donors

The HDS Board of Directors wishes to acknowledge the following members for their generous contributions to the Society, and to the 2012 year-end fundraising campaign. The Society is able, in part, to continue its research, publications, and website growth through the additional and vital support of these members.

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Anonymous

\$1,000 to \$2,000
Howard & Michelle Hall

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Ernest Brooks II • James Caldwell, Sr.

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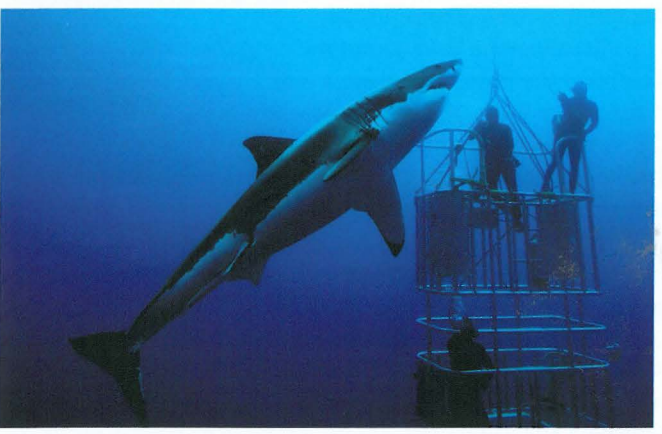
\$100 - \$199	
Eugene Adams	Capt. T.R. Johnson
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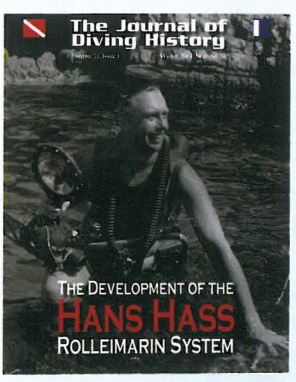
Corrections from Issue #74

In our rush to complete issue #74, we failed to correctly credit two of the photos in the "HDS Great White Shark Dive 2012, Waterman Down" article. All images were credited to Bret Gilliam, but the two shown here were taken by HDS member Cindy Rhodes. The *Journal* staff apologizes to Cindy, and are pleased she handled our mistake in a very professional manner. We hope this printed correction sets the record straight. Both images shown here are ©2012 Cindy Rhodes. All Rights Reserved. CindyRhodes1@gmail.com.



On The Cover #74

Bob Evans, of Force Fin, pointed out that we did not publish any detail on the cover photo and we apologize for this omission. The photo shows Hans Hass with the first homemade housing (Rolleimarin 1) for the twin-lens Rolleiflex, 6 x 6 camera, as supplied by Franke & Heidecke during the second expedition to the Red Sea, April – November 1950. © Hans Hass Institute. All Rights Reserved.



Bob Meistrell

1928 - 2013

"Do what you love, love what you do."

HDS Advisory Board member and Body Glove Co-Founder Bob Meistrell passed away on June 16, 2013. He was 84 years old.

Bob was working on the engines of his 70-foot yacht, the *Disappearance*, anchored offshore of Catalina Island, California, when he suffered a heart attack while changing the fuel filters. The *Disappearance* was scheduled to lead the field in the Rock 2 Rock paddleboard race from Catalina to San Pedro. Meistrell's grand-nephew Daley was participating in the race, and a big contingent of the Meistrell clan were there for support. His son Robbie and nephews Stephen and Billy were on hand to perform CPR while the crew waited for emergency help but their efforts were unsuccessful.

Bob was born in Boonville, Missouri. He was an identical twin with his brother Bill, but they were born on separate days a few hours apart. Throughout their entire childhood the boys were always interested in the water. When the twins were four years old, their father was murdered by a former business partner, so their mother had to raise seven children by herself. The boys' older brother, Joe, was a lifeguard at the local pool. With Joe's help Bob and Bill became accomplished swimmers. "We just joined the Boy Scouts every year to swim for them, then would quit after the meet."

The boys were interested in deep sea diving, so at the age of 14 they built their own diving helmet. "We got a five gallon vegetable can, cut out the bottom and had a guy solder shoulder pads on it so it didn't cut into us. We put a piece of glass on the front and used tar as a seal around the glass. We had enough sense to put in a check valve, made from a marble and a spring so the air wouldn't come out when we stopped pumping. One of us would wear this thing in the swimming pool, sit down on the bottom and read magazines, while the other pumped air on the surface with a tire pump. The pump would get so hot that you would have to dip it in the water to cool it off. You'd feel the water coming up to your nose. I can't tell you how many times we had to bail out of that thing. It's a wonder we didn't get air embolism. We used to mark around in some of the local lakes at depths of about 15 feet."

In 1944, the Meistrell family moved to Manhattan Beach, California, and fell in love with the ocean, despite the pollution problem. "At Manhattan Beach you couldn't swim because it was so polluted," said Bob.

They got into surfing just when balsa boards were starting to catch on, and were among the first to apply fiberglass to protect

the nose of the foam-filled plywood boards.

During high school the boys bought a genuine diving helmet for \$25, after the owner was killed using it. "We marched all over the breakwater with that thing, one at a time while the other would be pumping. There were no wetsuits in those days so we would be freezing. The helmet was just good for looking around. You couldn't lean over and grab anything. Maximum depth was 20 feet. There was clear water with a white sandy bottom and lots of fish. A whole other world!"

After graduation the Meistrell twins became full-time lifeguards, but Bill was soon drafted into the Army. Bob, thinking he would be deferred because of his broken back sustained while playing football, was drafted in the Army two months after he was married. They said, "You're warm, you're breathing, you're in the Army now." Bill went to Korea where he received a Bronze Star and Bob stayed in the reception center in Monterey. "I lived in Santa Cruz

and hitchhiked back and forth to the Monterey Army Base. I lived one block from the beach at Pleasure Point and surfed by car light without a wetsuit almost nightly. There were no other people, but a little seal would sometimes jump up on my board and surf into the beach with me at the river mouth."

Like many other watermen of the 1940s and 1950s Bob and Bill needed to find a way to combat California's cold water. They tried a variety of ideas, including electrically heated flyers' suits from war surplus, but those would burn up and wool sweaters lasted only as long as they were dry, which wasn't too long. In the early 1950s their friend Bev Morgan had partnered with Hap Jacobs and opened a shop named after Morgan's two main passions, Dive N' Surf.

In doing research for his new business Morgan visited the Scripps library and discovered a de-classified report by Hugh Bradner that basically endorsed foam neoprene as the best material for making a suit that would insulate a body in the water. Bradner called it a "wet suit" and Morgan quickly acquired some foam neoprene and built himself his first suit, which worked very well. Spurred on by his initial success, Morgan started building suits for his dive buddies and soon wet suit manufacture became part of the business at Dive N' Surf, along with the full line of U.S. Divers dive gear and shaping and fiber glassing surf boards.

Jacobs soon decided to open a pure surfing shop and wanted to sell his share of the business. In 1953 Morgan offered the Meistrells a three-way equal partnership in Dive N' Surf and they entered the business by borrowing the required \$1800 from their



© Connie Morgan

mother. During the first few years bringing in \$100 a day was a goal, not a reality. To keep themselves afloat the twins continued lifeguarding on a part-time basis.

In 1955, Bob was part of the UICC (Underwater Instructors Certification Course) class #1. Some of the other people in the class were: Bev Morgan, Al Tillman, Ramsey Parks, Andy Rechnitzer, Bill Walker, E.R. Cross and Herb Barthels. Bob's certification number was 1UICC #13.

In 1957 Morgan sold out his Dive N' Surf share to the Meistrells and they became the sole owners. They provided equipment and custom wetsuits for Sea Hunt, the television show that made Lloyd Bridges a star. The custom wetsuit sported by Bridges was integral to his character. They were involved in dozens of movies thereafter. Bill and Bob taught the entire Bridges family to dive, as well as Gary Cooper, Hugh O'Brien, Charlton Heston, Jill St. John, and Richard Harris.

In 1959 Morgan started a wet-suit manufacturing business aimed solely at the Southern California surfing market, which had rejected the use of wet suits as "chicken." Through savvy marketing Morgan opened up the surfing market, but his business partners were divers and did not want to build suits, which Morgan had branded as Thermocline, for surfers.

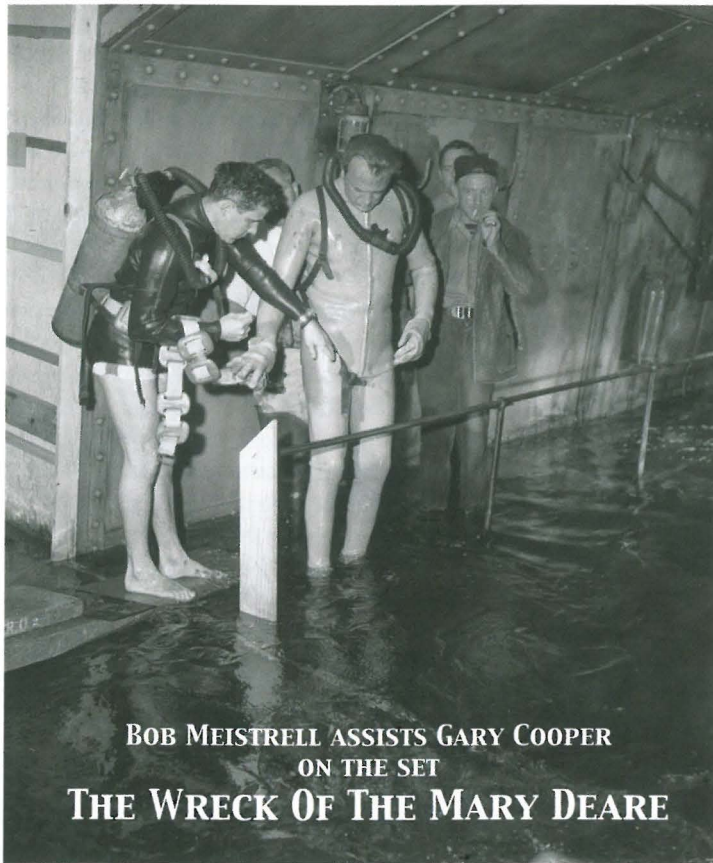
Morgan later recalled, "So, I packed up the whole thing up on the truck and I drove up to the Meistrells (at Dive N' Surf) and said, "Look, I want to sell you my new surfing wet suit business." They weren't making surf suits at the time because nobody knew how to crack that market, except for O'Neil up north because of the cold water. Anyway, I took a sewing machine, a batch of rubber and by then 2,000 orders to Billy, and he said, "I don't know." I wanted \$3,000 for the whole package, business and all. He ended up buying it. They called me a couple of months later to say they were making \$5,000 profit a day each on this deal."

The Meistrells didn't like the Thermocline name and eventually hired a marketing consultant, Duke Boyd. Duke asked about the characteristics of the suits and Billy said, "They fit like a glove," so Duke came up with the name Body Glove. "We paid him \$200 to get a logo designed. He found a guy who did it for \$35. Years later, this guy's son came into the store and said "My dad did that." He was living in Hawaii and we sent him a whole bunch of Body Glove stuff."

The Meistrell brothers also owned a company called Dive N' Surf Marine Photography. Here they did commercial diving down to 225 feet on straight air and used to swim through half-mile salt water intake pipes for Southern California Edison Company.

Their interest went even deeper however: submarines! Bob and Bill were involved in a company called Undersea Graphics. The company had a single man, 750 foot capability sub and a two-man 2,000 foot capability sub. They did pipeline inspection and recovered objects lost in deep water. During the course of his lifetime Bob owned four submarines and 45 boats.

Throughout the years Body Glove wetsuit sales grew bigger and bigger and eventually the twins bought a building just to manufacture their popular Body Glove wetsuits. Not only were they making wetsuits for surfing and diving, but for the other water recreational sports also. The business wasn't the only thing growing; the families were growing too. Bob now has three sons, Robbie, Randy and Ronnie and Bill has a son Billy, and a daughter Julie. The children grew up with the business and throughout their childhood and adult years held several different jobs within the company. "We all started out sweeping floors," says Ronnie. "We grew up with the business." By the early 1980s, the company reached a point where it had supported both families comfortably for 30 years. By 1982, Dive N' Surf's sales topped \$1.7 million, Body Glove was selling \$2 million a year. Throughout the following years the children (second generation)



BOB MEISTRELL ASSISTS GARY COOPER
ON THE SET
THE WRECK OF THE MARY DEARE

received more and more control of the marketing of the company. Now the company, owned almost entirely by family members, does more than \$200 million in business annually, marketing not just wetsuits but swimsuits, snorkels, sportswear and niche items like cellphone cases and icepack wraps.

Bill Meistrell died of Parkinson's disease in 2006, but Bob remained constantly active, diving well into his eighties and continued to appear at several diving shows and events. In 2008 he headed up the HDS Great White Shark expedition with his old friend Bev Morgan. Reflecting on Body Glove, Bob once said that its success went beyond "the wilder of our wilder dreams."

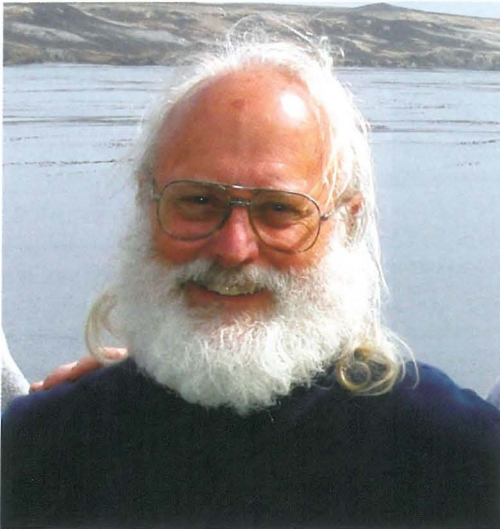
In 1990, Bob and Bill were inducted into both the Diving Hall of Fame and the Pioneers of Surfing.

"The most important thing that I think that we can learn from both my grandpa and Uncle Bob is to do what you love and love what you do, because if you are not enjoying life then you really aren't living," said Jenna Meistrell, Bob's grand-niece. "This last weekend at Catalina with Uncle Bob was one of the best weekends I have had with him. He was in his element and I hope when I think of Uncle Bob I always look back at how happy he was." ●

Sourced and edited primarily from History of Body Glove at www.divinghistory.com, with additional material edited from Surfer Magazine, and from the files of Leslie Leaney and Bret Gilliam.

Dennis Divins

1943 - 2013



The scientific research community lost an outstanding leader with the passing of Dennis "Denny" Divins on May 14, 2013, one day before his 70th birthday.

Certified as a scuba diver in 1961, Dennis spent the next five decades becoming progressively more involved with diving in the underwater sciences. He would train thousands of divers, spend countless hours underwater conducting research dives in locales ranging from tropical coral reefs to the Antarctic ice shelf, make valuable contributions to the professionalization and management of scientific diving programs, all while helping to transform a small regional university marine laboratory into a world-renowned institute. A well-earned collegial recognition of his accomplishments came in 2012 when Dennis received the American Academy of Underwater Sciences' (AAUS) Conrad Limbaugh Memorial Award for Scientific Diving Leadership.

In the mid-1960s, Dennis worked at a number of marine-related jobs, including collecting marine organisms for the newly established University of California Santa Barbara (UCSB) marine laboratory. In 1967, he received a scientific diver certification from the UCSB Diving Safety Officer (DSO) Don Duckett. For the next two years, Dennis worked as a diver in the interpretation program at the Undersea Gardens, a floating marine aquarium in the Santa Barbara Harbor.

Dennis's affiliation with UCSB diving program started in 1970 when as a newly-designated NAUI diving instructor, he became the university's DSO. Within three years, he completed certification as an American Red Cross CPR instructor and obtained certification as a scuba diving instructor from two additional organizations, PADI and NASDS. During the NASDS certification course, friend and fellow scuba instructor Bernie Campoli recalled, "Dennis became the course's 'Honor Man' after rescuing a few other instructor candidates from the mid-west who had never before been in the ocean."

Throughout the 1970s, the UCSB DSO was a part-time position. Dennis, in addition to his duties as the DSO, worked as a university ambulance attendant and Santa Barbara County firefighter until the DSO became a full-time position in 1979. The following year, he testified at the Los Angeles hearings conducted by the Occupational Safety and Health Administration on establishment of the scientific diving exemption from commercial diving regulations. Creation of the exemption and the expanding opportunities for ocean science research caused proliferation of scientific diving programs. Through his work with AAUS, Dennis contributed greatly to the practice and administration of scientific diving.

For the next quarter century, Dennis worked as a tireless advocate for the UCSB diving program, adapting evolving technologies and techniques into the program to ensure operations were conducted safely. While his work took him to a variety of locales, the Santa Barbara Channel Islands were his very favorite because of their wide variety of species and overall beauty. As a consummate waterman, he had a unique appreciation of the aquatic environment's nuances. Shane Anderson, a retired UCSB staff diver, recollected that during dives at the Channel Islands to gauge the recovery of Giant black sea bass (*Stereolepis gigas*), Dennis could seemingly summon the fish by rhythmically rapping a dive knife against the base of his scuba tank and have them remain motionless for the longest time.

Dennis's greatest contribution may be the thousands of rigorously-trained, disciplined scientific and sport divers (including his wife Sherry). His legacy is the way he inspired countless young scientists to pursue their careers and the influence he brought to so many of the people he befriended. Dennis not only instilled safe diving practices in people, he infused an appreciation and enjoyment of all aspects of diving and the ocean.

Dennis is survived by his wife Sherry, daughter Christy Divins-Campbell, sister Mikel Divins Sedoo, three grandchildren and a great-grand daughter. ●

Submitted by Eric Hessell.

William H. Dover

1928 - 2013

Longtime HDS member and professional diver William "Bill" H. Dover passed away on March 10, 2013, aged 84. He was an early member of the Historical Diving Society, and a long-standing member of the Association of Diving Contractors International and active in the Midwest Chapter.

According to Bill, he successfully enlisted in the U.S. Navy under age. This was caught after not too much time and he was told to come back when he was old enough. When he did, he became a machinist's mate and had his first exposure to hard hat diving. Bill would remain interested in diving for the rest of his life. After leaving the navy he was a machinist by trade at Universal Match Co. and also learnt to fly.

By 1962 Bill was a scuba instructor and operated West End Diving, a successful St. Louis Scuba shop. Bill had a passion for diving and trained countless scuba divers, some of whom remained life-long friends. He led several trips to Caribbean dive locations like the Cayman Islands. His interest in underwater photography led him to build several camera housings. Before Bill's exit from West End he would investigate Bonne Terre Lead Mine as a possible scuba diving attraction, but dismissed the location as being an unworkable money pit.

In the mid-1960s Bill started to take calls out of West End scuba shop for commercial work and he had an interest in salvage diving. Although this was hardly the dawn of the commercial diving craft, it was however early indeed for inland commercial diving. At that time commercial hard hat diving was mainly regarded as deep-sea diving, and was done in the ocean and in coastal areas on docks and harbors. Many if not most of the ocean going divers of "The Big Blue" had little interest in zero visibility river work. Bill read and researched salvage diving and was mentored by a friend who was a navy diver.

Bill decided to go into commercial diving full time in 1971. He quit his job at the machine shop and incorporated his company American Underwater Contractors. However, he had become known locally as Dover the Diver and his company as Dover's Divers. Bill sold out West End Diving to his then business partner Doug Jergens, who he had taught to dive and who had worked at West End when he was young. Interestingly, Jergens was later quite successful with Bonne Terre Mine and it has become a well know scuba attraction.

During his career as a commercial diver Bill did work at locations from Alaska to the Gulf of Mexico. Much of his early work was raising sunken barges in the Mississippi and its tributaries. Bill is mentioned in several chapters of the book describing work Bill did for the river salvor John Beatty. Bill moved away from sunken barges as insurance regulation mostly eliminated single skin barges and dramatically lessened the number of sinkings. American Underwater Contractors Inc. (still frequently called Dover's Divers) focused on marine construction and industrial maintenance.

Bill was quite adept at developing working divers, as well, and was known as "Pappy" to many of them. Bill took great pride that American participated in construction at Melvin Price Lock and Dam, and McAlpine Lock and Dam. Amongst inland divers Bill was in the company of pioneers such as John Beatty and Okie Moore.

Bill's daughter Patty recently recalled, "He's worked on several of the Lock & Dam projects and even did the salvage on the River Queen that sank near the Arch on the St Louis Riverfront, bringing up the safe from the boat....only to find it empty when they opened it! He experienced life to its fullest, and continued to keep up with what was going on in the diving world up until the very end. He was a mentor to many commercial and sport divers. Just about a month ago, he went on a diving job on the Missouri River, using his walker so he wouldn't fall on the riverbank, going onto the barge so he could be in the midst of the job.... his true love. He never stopped learning; he always told me, you're never too old to learn!

Bill Dover may not have been famous but he was a legend in the inland diving community, with a career spanning over five decades. He will be missed by his family, many friends, and his divers. 🍀

Edited from information supplied by Pat Murphy and Bob Hollenbeck.



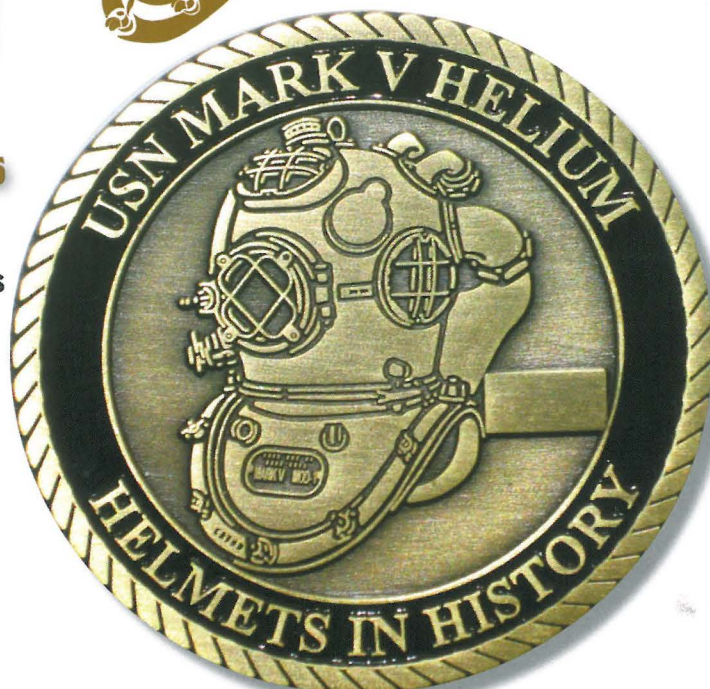
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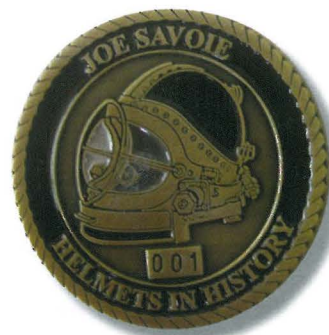
Subscriptions to the series are \$60 (plus tax for CA residents) per year for four coins (one delivered every three months).



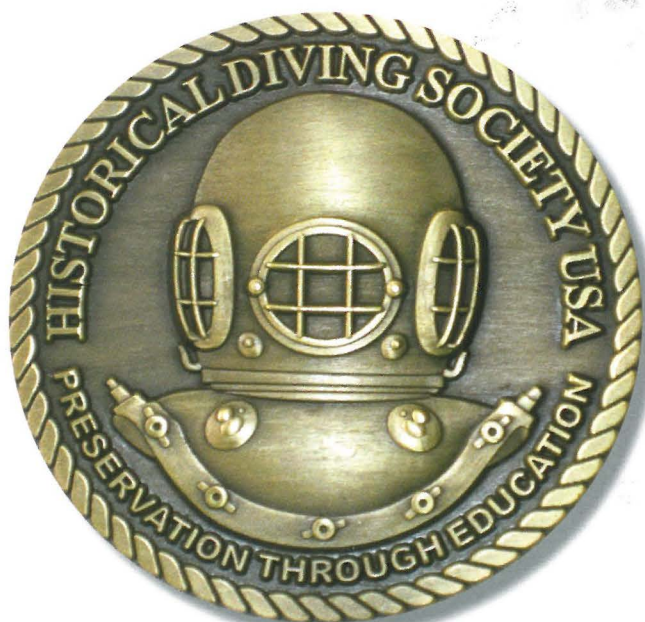
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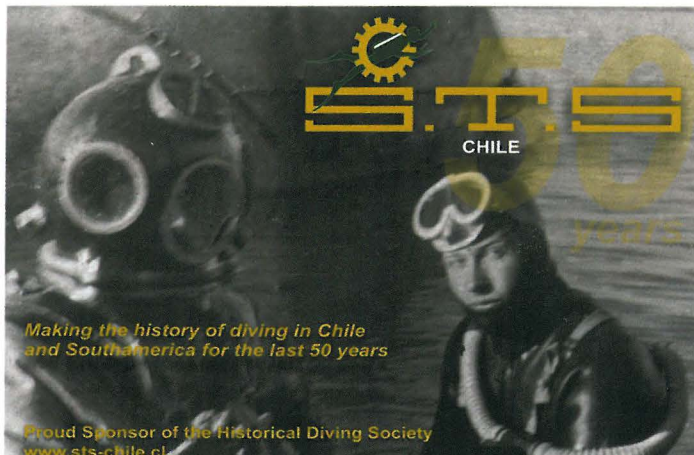


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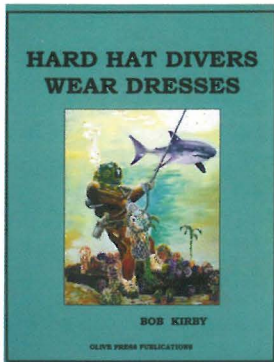
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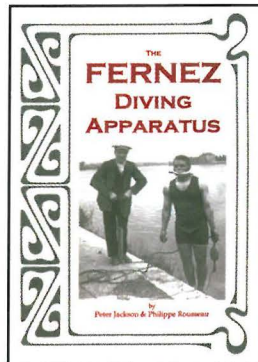
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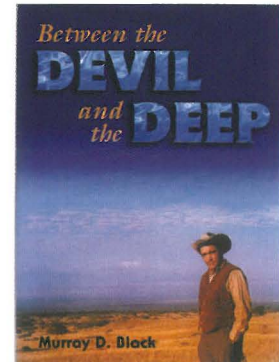
HARD HAT DIVERS WEAR DRESSES BY BOB KIRBY

Bob Kirby's autobiography covering his development of Kirby Morgan dive equipment and his work in commercial, military and Hollywood diving. Contains numerous unique photos from Kirby's career including some of his helmets. As the story of one of diving's few living legends, it will stand as a personal record of one man's unique journey through an industry at its prime. Self published by Kirby, with warts and all. Limited to only 1,000 copies. Perfect bound volume, 262 pages, b&w photos, \$40.00, plus \$12.50 domestic p&p.



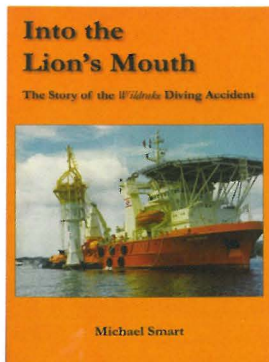
THE FERENZ DIVING APPARATUS BY PETER JACKSON AND PHILIPPE ROUSSEAU

This excellent book is about one of the almost forgotten diving pioneers, Maurice Ferenz, and his diving apparatus. It was reviewed in *The Journal of Diving History*, Issue 66, p.36. Privately published in England, 2010. Card stock bound, 90 pages, b&w photos, patent drawings, appendix. 5 3/4" x 8 1/4." \$24 plus \$6 p&p domestic shipping. CA res. add 8.75% sales tax, NV res. add 8.1% sales tax Contact products@hds.org for overseas shipping rates. Limited to 250 copies!



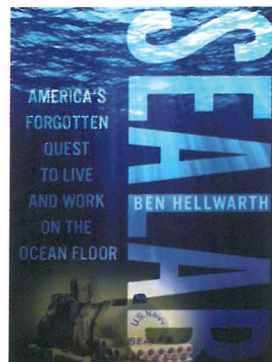
BETWEEN THE DEVIL AND THE DEEP BY MURRAY BLACK

As one of the early pioneers of commercial oilfield diving, Murray Black was an industry leader with an abundance of natural bravery. After graduating from E.R. Cross' Sparling School of Deep Sea Diving, Black progressed through the colorful ranks of the abalone diving and eventually founder DIVCON. History was made with DIVCON, with surface bounce dives past 500 feet as Black consistently pushed the envelope. The book also contains details of Black's post diving career with friends like John Wayne and other characters. 189 pages with b&w photos. \$25, plus \$5 domestic p&p.



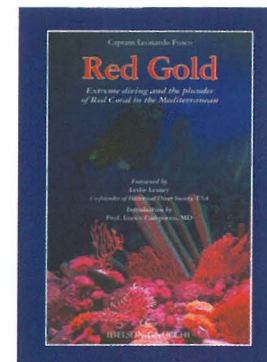
INTO THE LION'S MOUTH: THE STORY OF THE WILDRAKE DIVING ACCIDENT BY MICHAEL SMART

A thoroughly researched and superbly presented story of one of diving's bitterest tragedy's that should be obligatory reading for anyone putting a diving helmet on their head, or thinking about it. "Into the Lions Mouth is truly a well-written work. I found it hard to put down. I can highly recommend this book to anyone, even beyond the offshore industry." - Bev Morgan. "Compelling, harrowing and impressively well researched. A former North Sea saturation diver, Michael Smart not only knows his subject inside out, he explains it all with admirable clarity. Holds the reader's attention to the last page." - Christopher Swann. Soft bound, 2011, 445 pages, color and b&w photos, diagrams, map, index, bibliography, appendix, end notes. \$30, plus \$7.50 domestic p&p.



SEALAB: AMERICA'S FORGOTTEN QUEST TO LIVE AND WORK ON THE OCEAN FLOOR BY BEN HELLWARTH

An extensive and detailed record of the triumphs and tragedies of the SEALAB program, based upon Hellwarth's painstaking research. Hellwarth, a veteran journalist, interviewed many surviving participants from the SEALAB experiments and conducted extensive documentary research to write the first comprehensive account of one of the most important and least known experiments in US history. His compelling narrative covers the story from its scrappy origins in Dr. Bond's Navy laboratory, through harrowing close calls, historic triumphs, and the mysterious tragedy that brought about the end of SEALAB. Hardbound in dust jacket, 2012, 388 pages b&w photos, index, 19 pages of reference notes. \$28 plus \$7.50 domestic p&p.



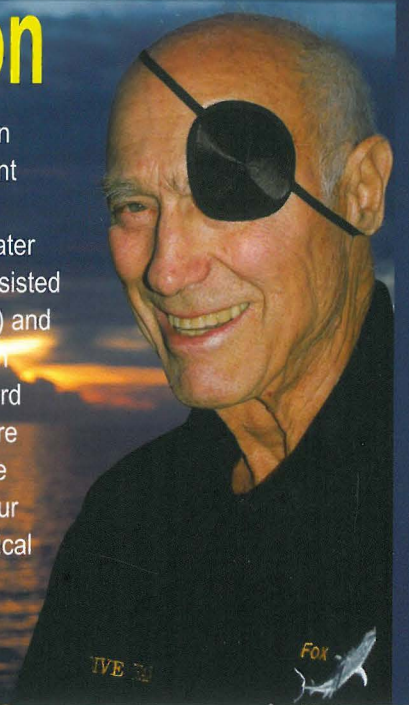
RED GOLD BY LEONARDO FUSCO

A first person account of Leonardo Fusco's career as a diver, translated from the Italian. After his discovery of Red Coral, and his use of the Aqua Lung to harvest it, Fusco adapts to the deep diving life of a Mediterranean Sea gypsy. His journey includes success and tragedy as he moves from deep air diving to rebreathers, interacting with Hans Hass, Gerhard Haux, Professor Buhlmann and others. His later career is spent in the fields of submersibles, hyperbarics, and in efforts to preserve the remnants of the Red Coral colonies so effectively harvested. Introduction by Enrico Camporesi and Foreword by Leslie Leaney. Reviewed by Brett Gilliam in issue 69 of the *Journal of Diving History*. Hard bound in dust jacket, 271 pages, color and b&w photographs. \$25, plus \$7.50 p&p.

The Stan Waterman Film Collection

The Historical Diving Society USA proudly presents the Stan Waterman film collection on DVD. Stan Waterman, one of America's best known and most beloved underwater cinematographers, has spent nearly sixty years filming on, under, and around the sea. From the late 1950s into the 1970s, Stan took his films on the lecture circuit across the United States. Stan brought the adventure of underwater exploration to the nation at a time when diving as a sport was still in its infancy. His later career consisted of major motion pictures (*Blue Water, White Death* in 1968 and Peter Benchley's *The Deep* in 1977) and television (*American Sportsman, Spirit of Adventure, and Expedition Earth*). His film work and ocean ambassadorship has earned Stan many awards, including five Emmys, a lifetime Achievement Award from the Boston Sea Rovers, the The Historical Diving Society USA's Hans Hass Diving to Adventure Award, and the DEMA Reaching Out Award, to name just a few. Most recently, he was named to the International Scuba Diving Hall of Fame. The Discovery Channel produced and broadcast a two-hour biographical special about Mr. Waterman, *The Man Who Loves Sharks*. Stan also sits on the Historical Diving Society USA's Advisory Board.

Now you can own and enjoy Stan's films. See below for volumes currently available.



Volume 1 \$15.00

THE LOST TREASURE OF THE CONCEPCION: Burt Webber's search for, and eventual discovery of, the 17th Century Spanish treasure galleon lost in a storm on the Caribbean's Silver Shoals. The film traces the expedition from concept to conclusion and provides insight into the life of a treasure hunter.

Volume 2 \$15.00

OFF THE WALL: Follow Peter Benchley and his family on a diving adventure that includes pirates, shipwrecks, and giant moray eels.

UNLIMITED AIR: Stan takes us back to the Caymans but this time we travel and dive with Our World Underwater scholarship winner Lisa Truitt.

Volume 3 \$15.00

BEYOND JAWS: Includes clips from Stan's earliest dives in 1958 through filming Great White Sharks in Australia with friends Peter Benchley and Rodney Fox. Sharks are the center of attention on these dives.

A QUICK TRIP TO THREE OCEANS: A medley of images from many of Stan's adventures during the 1960s and 1970s. Stan takes us to the Caribbean, Bahamas, Cocos Island, Papua New Guinea, Yap and many other exotic locations.

Volume 4 \$15.00

ROUGHING IT IN THE CORAL SEA: A tongue-in-cheek exposé of life aboard a multimillion dollar "hell ship".

FINS TO THE RIGHT, FINS TO THE LEFT: Return to Cocos Island for a thorough shark-fest. Together the films offer nearly an hour of Stan's delightful images and eloquent narration.

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MORA WHEELS: This is the story of the Moray Wheels a Boston-based Scuba club for divers with disabilities. Produced in the 1970's, Stan follows two students as they undergo their initial dive training in the pool at M. I. T., then make check out dives at the New England Aquarium in Boston. The students face the challenges of diving in open water at Bonaire, Netherland Antilles.

GENESIS 1-27: "So God created man in his own image, in the image of God he created him; male and female he created them." Stan's underwater imagery set to a haunting musical score won a Gold Medal at the inaugural United Kingdom Film Festival.

A BITING KIND OF SHARK:

Eighteen years after filming *Blue Water, White Death*, Stan returns to Dangerous Reef, South Australia, with famed Australian shark expert Rodney Fox to once again film the Great White Shark. They are accompanied by underwater photographers and scientists from Canada, Saudi Arabia, and the United States.

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THE WAR REEFS: In 1942, the small, South Pacific Island of Guadalcanal became the scene of a decisive, World War II, air-sea battle between the United States and Japan. It was a turning point in the war for the US and its allies, but a resounding defeat for the Japanese. The terrible cost of the battle can be found enumerated on the sea floor in what is now called Iron

Bottom Sound for the scores of ships and aircraft that lie there. Stan and his companions visit the waters surrounding Guadalcanal, and as they explore Japan's sunken fleet, they discover that the debris of war has, over time, been changed, softened by the sea, and is now the home of a fantastic array of marine animals.

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PETER AND THE SHARK: Stan, Peter Benchley, and crew travel to Australia to dive with Great White Sharks. Along the way, they encounter Manta Rays, sea turtles, Bronze Whalers, Tiger Sharks on the Great Barrier Reef, and then, at Dangerous Reef, the big guys showed up. Originally aired on the American Sportsmen Show

THE CALL OF THE RUNNING TIDE: Edited for U. S. Divers from Stan's original lecture film, Call of the Running

Tide documents a year that Stan and the Waterman clan spent living in the South Pacific, diving the waters of Tahiti and Bora Bora, and learning the culture of the South Pacific Islanders.

THE LAST OF THE RIGHT WHALES: Stan travels to Patagonia to search for and dive with Right Whales. These amazing, gentle creatures were hunted nearly to extinction because they were the "right" whale to bring large profits to early whalers. Stan also looks at the other creatures living along this lonely, desolate coastline.

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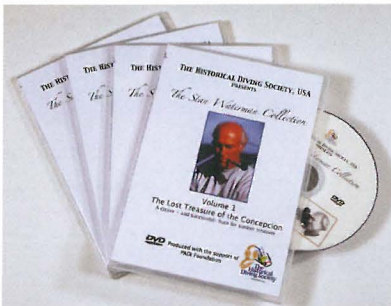
THE BEST OF CAYMANS: Stan visits the Cayman Islands aboard Wayne Hasson's Aggressor Fleet liveaboard dive boats. Along on the trip are Stan's good friend Peter Benchley and his family. They dive the wreck of the Ore Verde; visit Jew Fish, Barracuda, and Grouper; dive reefs, walls, and visit a shallow sand patch filled with sting rays.

THE SINAI REEFS: The best of the Red Sea, aboard the live aboard dive boat, SUN BOAT. Stan and mixed group of divers from the US visit reefs along the Sinai Peninsula, the Gulf of Eilat, Ras Muhammad, and the Straits of Tehran. The beautiful colors of reef fish and corals endure in this film.

BELIZE - A DIVING HOLIDAY: An Aggressor Fleet trip, this time to the reefs of Belize. Day or night, the reefs are ablaze with color and the photographers on board take full advantage of the scene.

CORTEZ - THE HAMMERHEAD: Stan and Peter Benchley travel to the Espiritu Santo Seamount in the Sea of Cortez to film the massive schools of Hammerhead Sharks known to congregate there. Accompanied by shark researcher, Dr. Ted Rulison, Peter and Stan learn about the enigmatic Hammerheads and research in shark behavior.

STELLA MARIS: In another American Sportsmen episode, Stan films author Peter Benchley and Dr. Sylvia Earle as they dive with sharks at Stella Maris in the Caribbean. First dives include encounters with a large Manta Ray, and individual sharks, then the large school arrives and the dives get interesting.



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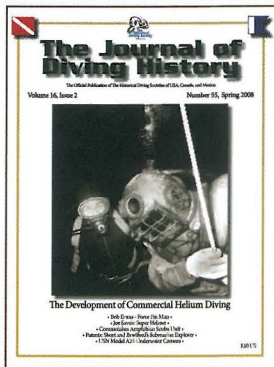
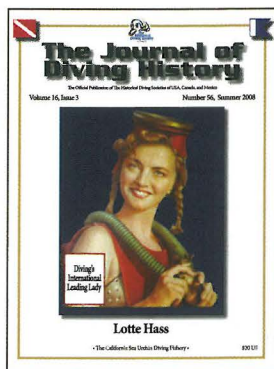
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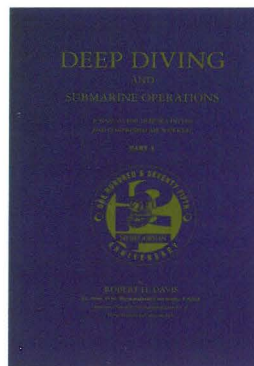
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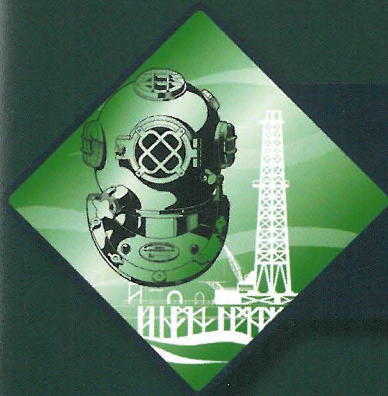
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