BOSTON SEA ROVERS EDUCATION, EXPLORATION & CONSERVATION

INTERNATIONAL Ocean Symposium & Film Festival

March 7th & 8th 2020





BOOTH #27



A GUARANTEED EXPERIENCE

Bookings come with the added peace of mind that comes with the knowledge that your travel investment is safe and guaranteed. We are licensed, insured and bonded.

As a USTOA member, we provide the added security of a \$1 Million Travelers Assistance Program. We are accredited by IATA and ARC bonded which means you're covered on all fronts, from acts of nature or illness to flight schedule changes and other unforeseen events.



THE LEADERS IN GLOBAL DIVE TRAVEL



EXPERTISE THAT'S DECADES DEEP

For more than 35 years, we've been sending divers to the world's top destinations. Our expert agents have an average of 20 years' experience, and they've arranged more than 200,000 successful trips. This dedicated team of travel professionals delivers a generous selection of international destinations and can plan personalized itineraries that take you almost anywhere your heart desires.

A ONE-STOP SHOPPING EXPERIENCE

No need to surf the web to piece together schedules, availability and reservations. We take care of all the details of securing your flights, hotel or liveaboard accommodations, car rentals, airport transfers and of course your diving, plus added activities from spa treatments to land or water-based excursions. And because we know the ins and outs of each destination, we can deliver the most comfortable and efficient itineraries.



THE BEST RATES AND THE STRONGEST RELATIONSHIPS

Our decades of experience and broad customer base allow us to forge strong relationships with tourism boards, hotels and airlines. You benefit from these relationships because we negotiate the best possible rates and tap into additional incentives and benefits not available to travelers who attempt to arrange their own itineraries and packages. These services come with transparent pricing and the guarantee of no hidden fees.

CARADONNA.COM • 800-329-9989 • SALES@CARADONNA.COM



"I'm very impressed with the updated style and functionality of my Sherwood gear. I love the look and comfort, and having the technology and form to match is a winning combination. I'm proud to represent Sherwood and enjoy showing off the gear."



-Ken Kiefer

Award-Winning Underwater Photographer Sherwood Scuba Ambassador

Photo Credit:

B



so Simple it's *ingenious*.

Design and technology: simplified. There are enough overly complex things in life, your diving equipment doesn't need to be one of them. That's our Sherwood motto. Over the past 60 years, we have proven our dedication to the scuba diving industry by delivering consistently superior products, that are rugged, reliable and ingenious.



www.sherwoodscuba.com



SINCE 1992

25+ Years in Operation • Newly Renovated Unique Itineraries like Whale-Macro & Biodiversity Cruises 142' Wooden Pinisi • 20 Crew • 8 Cabins for 16 Guests

PINDITO.COM

LET'S EXPLORE. TOGETHER.

SUUNTO D5

SCUBALAB TESTERS CHOICE 2 0 1 9

The new Suunto D5 is designed to be so clear and easy-to-use that you can just enjoy and focus on exploring the wonderful underwater world. Play with style by changing the strap to match your looks. After diving, connect wirelessly to the Suunto app to re-live and share your adventures with friends.

www.suunto.com

¢

F Suunto Diving

Øsuuntodive

27

12.8

12' 30

158



07:15

YOUR DIVE. WITH A SIDE OF AIR

Meet the Katana 2-a low profile, modular, streamlined and minimalist harness designed exclusively for the dedicated sidemount diver.

Capable of adapting to every configuration imaginable—from warm water to cold, steel to aluminum, open circuit to sidemount CCR—the Katana 2 is ready.

Are you?





President's Welcome



Welcome to the 66th Boston Sea Rovers Show. Since 1954, the Boston Sea Rovers have dedicated their time to bring you a show filled with information from the world's top scientists, intrepid explorers, experienced divers, and more. This is by no means a small feat and a lot of time and dedication goes into crafting our line up to provide you the best experience possible.

As the new President, I have great pride in taking the reins of this organization. With our team, I am hoping to not only continue the time-tested traditions but also bring new and revitalized ideas to the show. My goal is to grow our reach even further and make the experience of the show exciting for people of all age, demographics, and walks of life.

I, personally, want to thank you for joining us. If this is your first time attending, look for any of the Sea Rovers themselves, they're always happy to answer questions. We're typically easy to spot as we'll be wearing the traditional black or blue Boston Sea Rovers name badge. If you're returning to us then I thank you for your continued support, and I hope that we continue to meet the standard you've come to expect.

Please enjoy the weekend, maybe learn a few things, and even make some new friends.

From all of us here at the Boston Sea Rovers, welcome!

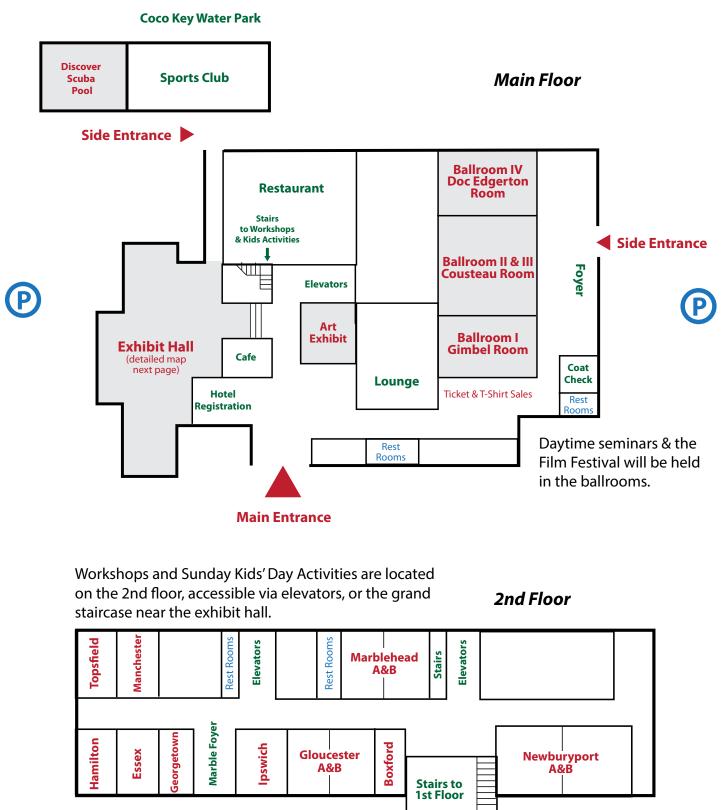
Nick Fazah President, Boston Sea Rovers

Program Guide Index

- 7 Facility Map
- 9 Exhibitor Map
- 12 Raffle Details
- 14 The 2020 Boston Sea Rovers
- 15 Diving with the Rovers
- 17 Diver of the Year
- 18 Film Festival Guide
- **20** Kids' Activities
- 21 BSR Summer Intern
- 22 BSR Diving Scholarship and BSR Outreach
- 24 Daytime Speaker Schedule
- 26 Speaker Bios and Talk Summaries
- 32 Art Exhibit: Bow Seat Ocean Awareness
- 34 BSR Expedition Flag Reports
- 41 Workshops
- 42 In Memoriam

© Copyright 2020, Boston Sea Rovers. All Rights reserved. Program design by Amy Malkoski Web design by GordonMultimedia.com For more information: bostonsearovers.com Cover photo by Chuck Davis, visit tidalflatsphoto.com

Show Map - DoubleTree by Hilton Boston North Shore, Danvers, MA





INTRODUCING THE NEW LIGHTWEIGHT AND LAYERABLE



PROTECTION

WARMTH

Δ

3-Layer Fabric with breathable membrane protects from the elements. Omnired Technology delivers thermal warmth.

-)orris

MIX & MATCH

Neutrally buoyant, modular and layerable to suit every adventure.



BARESPORTS.COM





EXPLORE FURTHER FOR LONGER

The Prism 2 Rebreather is the ideal tool for exploring open ocean, caves or wrecks, right out of the box.

- Most Reliable
- Best WOB Performance
- Easy to use & service
- Modular (FMCL or BMCL)
- Customizable (Build your own)

www.hollisrebreathers.com

Exhibit Hall Map



Show Sponsors

The Boston Sea Rovers would like to extend a hearty thank you to those companies who have supported our mission with their generosity. Please be sure to support them by visiting: <u>www.bostonsearovers.com/sponsors</u> and following the links to their websites.





Solid Brass Sponsors

The following Sea Rovers and friends have made a donation to help our organization bring you this program guide and in support of the Sea Rovers' mission: Education, Conservation and Exploration of the Underwater World.

Kristen Shepard

Bill Vanderclock

George Buckley In Honor of Joe Linehan, *Founding Member BSR*

Valerie E. Gould In Honor of Ruth D. Turner, Ocean Pioneer

If you'd like to help support the Sea Rovers mission, go to www.bostonsearovers.com/donate/

Door Prizes, Auctions & Raffle Items

This is a banner year for incredible prizes for you to win. Be sure to fill out the back of your tickets and get them in the bin by the ticket sales booth. Winners will be drawn throughout both days of the show and the winners list will be updated regularly, so be sure to keep checking. In addition, be sure to purchase raffle tickets and check out the silent auction for a chance to win more great prizes. **All daytime prizes must be picked up in person no later than Sunday at 3PM, or they will be forfeited. Some of these special prizes will be awarded off the Film Festival stage on Saturday night. You must be present to win.**

Proceeds from the Sea Rovers raffles and silent auction support our mission "Dedicated to raising the knowledge of the underwater world" through education, exploration, and conservation and funds are used to help produce the show each year and for special programs like the Boston Sea Rovers Summer Internship. Please continue to support these important programs and our sponsors.

2020 Film Festival Drawings!

Winners must be present at the Film Festival to win. The winners will be selected at the end of intermission and must come up to the stage at the end of the Film Festival to claim their prizes.

7 nights accommodation on any luxury Dive Damai vessel - only 3 divers per guide! Courtesy of Dive Damai and Reef & Rainforest. Approximate value \$4,585.

Sherwood SR2 Regulator and Octo, computer console, and BCD, donated by Sherwood and Bill O'Malley - Approximate value \$1,500.

1-Dive in the New England Aquarium's Giant Ocean Tank - Approximate value - priceless!

2020 Raffle! \$10 per ticket, 3 for \$20

The amazing prizes for this raffle include:

GRAND PRIZE: Caradonna's Trip for Two to Roatan, Honduras - Including Airfare! Approximate value \$4,000. *

7 Night trip for one aboard the Caribbean Explorer II, Courtesy Explorer Ventures Approximate value \$2,095. *

And here's just a sampling of some of the other prizes:

Oceanic Delta V Regulator Behind the Scenes Tour and Family Membership to the National Marine Life Center Stahl Sac Jamaica Smuggler Dive Bag Nightsea Bluestar Buddy Package DAN Coast Guard Complete First Aid Kit Princeton Tec Light Plus there's more gear and travel too!

Super Raffle! \$60 per ticket, 3 for \$150

Your chances of winning: 1 in 30! A maximum of 200 tickets will be sold, prizes include:









A trip for one aboard one of Indonesia's most experienced dive vessels, the Pindito. Approximate value **\$5,600** *

7-night trip aboard the Bilikiki to the Solomon Islands! Courtesy of Reef & Rainforest. Approximate value **\$3,815** *

One week dive safari to Sudan on the Red Sea Blue Force 3. Courtesy of Blue Force Fleet. Approximate Value **\$3367** *

A Bare Century Tec (MTM) Drysuit. Approximate value **\$3200** *

7-night accommodations in the Philippines, courtesy of Atlantis Dive Resorts and Liveaboards. Approximate value **\$2,200** *

> A Shearwater Teric computer. Approximate value **\$1,500** *

Scubapro Lite Hawk BCD. Approximate value **\$475** *

* See full item descriptions, rules and regulations sheet where the raffle tickets are sold. Additional fees and taxes may apply. Winners are responsible for any additional fees and taxes. Prizes are non-transferable and cannot be sold or redeemed for cash value.

The Boston Sea Rovers is an all-volunteer non-profit organization. Your support helps us achieve our mission of promoting education, exploration and conservation of the underwater world.











2019, 65th Clinic Boston Sea Rovers (Front Row Kneeling, L to R): Mike Williams, Bill Buckley, Nick Fazah, Mike Gugleilmo, Mike Zappala, Patricia Morton, Amy Mauer, Dr. Sylvia Earle, George Buckley, Michel Labrecque, Dave Morton (1st Row Standing L to R): Keith Ellenbogen, Joe Romeiro, Bill VanderClock, Brian Skerry, Dawn Guglielmo, Marty Klein, Evelyn Dudas, Patrick Rooney, Faith Ortins, Nancy McGee, Pat Stayer, Julie Ouimet, Kim Malkoski, Laura Gallagher, Amy Giannotti, Vin Malkoski (Middle Row L to R): Steve Gatto, Ryan Hunter, Dr. Greg Skomal, Ed Hayes, Erin Quigley, Chuck Davis, Betty Orr, Dan Orr, Dr. Roger Hanlon, Holly Martel Bourbon, Mark Dixon, Kathy Murray, Glennon Gingo, Dr. Charlie Mazel, Joy Marzolf, Rob Weintraub, Robbie Laak, Tom Packer, Jim Stayer, Ethan Gordon, Jenny Collister, Jeff Pagano, Berkley White, Fred Dion (Back Row, L to R): Paul Cater Deaton, Dr. Bob Ballard, Andy Martinez, Woody Tinsley, Peter Symasko, Thomas Murray, Richard Simon, Paul Leonard

The 2020 Boston Sea Rovers

Board of Directors

Dave Morton, Chairman George Buckley Nick Fazah Keith Kelly Pat Morton

Officers

Nick Fazah, President Kim Malkoski, Vice President Keith Kelly, Treasurer Robbi Laak, Secretary

Active Roster

Bill Buckley Catherine Chan-Tse Alex Dulavitz Laura Gallagher Ethan Gordon Dawn Guglielmo Mike Guglielmo Ryan Hunter Paul Leonard Dee Malkoski Vin Malkoski Ted Maney Joy Marzolf Amy Maurer Rob Robison Jake Stout Woody Tinsley Rob Weintraub Mike Williams

Friends of the Rovers

Randy Barron, Dan Dolan, Monty Fitzpatrick, Allison Giannotti, Abby Gordon, Jennifer Gordon, Valerie Gould, Kim Kelly, Amy Malkoski, Mary Maney, Annette Spaulding, Bryson Belle Tinsley, Zach Whalen, Dave Zappala

Boston Sea Rovers Honorary & Associate Members

Honorary Members

Ed Hayes Joseph Hohmann Sam Raymond Stan Waterman

Associate Members

Gracie Atkins Paul Atkins **Bob Ballard** Julie Barber Clarita Berger **Carol Besgen Lively** Peter Besgen Ali Borowski Holly Martel Bourbon Kate Bremer Ernie Brooks **Glenn Butler Cynthia Butts** Nick Caloyianis Bernie Campoli **Paul Cater Deaton**

Micheline Cignoli Jenny Collister Alexandra Cousteau Philippe Cousteau **Bill Curtsinger Chuck Davis** Fred Dion Mark Dixon **David Doubilet Evelyn Dudas Bill Dworet** Sylvia Earle Keith Ellenbogen John Ellerbrock Frank Fennell Steve Gatto Amy Giannotti Al Giddings **Glennon Gingo** Carol Gross **Dicky Gross** Howard Hall

Bob Cembrola

Michele Hall **Roger Hanlon** John Hannon Jill Heinerth **Butch Hendrick** Walter Hornberger Hank Keatts June Keiser **Roy Keiser** Marty Klein Cris Kohl Gary Kozak **Emory Kristof** Michel Labrecque Ken Lavigne Lee Livingston Mike Lodise Joe MacInnis Matt Marcoux Andy Martinez **Charles Mazel** Joe Mazraani Nancy McGee

Chris Meyfarth Tom Mount Tom Mulloy Kathy Murray Tom Murray Pete Nawrocky Bill O'Malley Lisa O'Malley **Oedipus** Betty Orr Dan Orr Faith Ortins Julie Ouimet Tom Packer Jeff Pagano Frank Panaccio Jennifer Penner Joel Penner Wes Pratt **Erin Quigley Smokey Roberts** Joe Romeiro Pat Rooney

Rick Rosenthal Bradley Sheard Rick Simon Dave Sipperly Brian Skerry Greg Skomal **Rick Stanley** Jim Stayer Pat Stayer Greg Stone Peter Symasko Eric Takakjian Neil Tassel Susan Tunis **Terrence Tysall** Bill VanderClock Dave Wagstaff Barrie Walden **Berkley White** Andrea Zaferes Mike Zappala Zachary Zevitas JoAnn Zigahn Zig Zigahn

The Boston Sea Rovers Mission

The Boston Sea Rovers is an all-volunteer non-profit organization "Dedicated to Raising the Level of Knowledge of the Underwater World" since 1954. It is our mission to organize this yearly event designed to engage you, the public – divers, nature enthusiasts, photographers and filmmakers. In addition, we are graced by speakers who travel from the far corners of the planet to present at our show. They're a mix of the world's best and brightest professionals focused on the underwater world. Beyond engaging the public, their presence here has also forged many long-term professional relationships that have changed the face of diving and underwater exploration. For more information on the Boston Sea Rovers, go to: www.bostonsearovers.com.

Diving with the Rovers

Despite the club's long history that began while diving on a boat in Boston Harbor, there have been those who believe that the Sea Rovers don't dive together. It's fair to say that 2019 put that myth to rest. In April, **Jake Duvall, Laura Gallagher, Robbi Laak, Dee, Kim, and Vin Malkoski, Dave, and Pat Morton**, along with some friends, descended upon Captain Don's Habitat in Bonaire. Lots of diving, lots of laughter, and a great time. Later in May, **Holly Bourbon**, **Paul Leonard**, Vin Malkoski, **Oedipus**, **Faith Ortins**, and **Bill VanderClock** headed south to Cuba to dive in the fabled Jardines de la Reina (Gardens of the Queen). The diving was as spectacular as advertised. We also had the opportunity to snorkel with upside-down jellyfish and a crocodile, tour Hemingway's house, and the ride around Havana in a 1957 pink Cadillac wasn't too shabby either. The group activities continued in June when **Ryan Hunte**r, Kim, and Vin Malkoski, **Nico Pellegri** (2019 BSR Intern), and **Catherine Chan-Tse** spent a week at the US Navy's NSWC Carderock facility supporting the International Human Powered Submarine Races. They were joined there by fellow Rover **Nick Caloyianis**, who was covering the event for local public television. An excellent spring indeed.

Michel Labrecque and Julie Ouimet were able to break away from diving the 'dark side' in local Quebec waters to spend almost two months in Indonesia, diving in Raja Ampat and Lembeh, as well as exploring the seldom dove north-east and south-east coasts of the Big Island of Hawaii. Michel continued to teach and passed the 1,400-student mark in 2019. Julie joined several fellow Rovers when she was inducted in the Women Divers Hall of Fame's class of 2019.

Old friends **Howard and Michele Hall** reported in on their never-ending quest for new diving adventures and new footage for their stock library. It seems 2019 was a typically slow year, with travels to the Sea of Cortes, Revillagigedo Islands, Guadalupe Island, Fiji, Valdez, AK, a few trips to the Philippines, California's Channel Islands, and Scotland (filming basking sharks and hiking the West Highland Way). One trip to Dumaguete Philippines included **Fred Dion, Marty Snyderman, Dan Orr**, and **John Ellerbrock** to celebrate Howard's and Marty's 70th birthdays. The Halls have also embarked on another IMAX film. Hopefully, we'll hear more about that next year. Speaking of Dan Orr, he and **Betty** also traveled to Guadalupe Island, Mexico, Viet Nam (first time back in 51 years!), and Cambodia. Dan not only maintained relationships within the diving community, but he was also invited to serve as Chairman of the Board for Force Blue. For those keeping counts, **Bill Buckley** extended his "no diving time" by another year and compounded the problem by moving to the middle of North Carolina. Accordingly, his certifications have been downgraded to "Junior Snorkeler." New BSR President **Nick Fazah** (what could go wrong…?) led a trip to Raja Ampat with **Alex Dulavitz** for ten days diving off of the Arenui and taught a Freediving master class in Mexico. **Rick Simon** fulfilled a long-standing bucket list wish when he dove the wreck of the HMHS Britannic with a group of friends. You may see something about that during the show.

Moving to Texas from the Virgin Islands turned out well for **Paul Cater Deaton**. He was named Executive Producer of Nassau Bay Television, serving the city across the street from NASA, and many of his news items for news agency i45NOW have been seen on national broadcasts. Frequent assignments at Space Center Houston and Johnson Space Center are career highlights, and his article on the Nemo's Garden underwater farming experiment on the Italian Riviera was published in the February edition of ALERT DIVER magazine. Also writing in from Texas, **Nancy McGee** tells us her focus has been on the 3rd dimension, underwater in locations including the Great Barrier Reef; and in the air as the VP of Education for the Commemorative Air Force. Some of her spare time has been spent serving as the Texas Chapter Chair for The Explorers Club.'

Joy Marzolf has been leading trips to Belize and Turneffe Atoll for the Oceanic Society and reports that the corals there are in fantastic shape with lots of fish to see. While in Belize, she has also been working with the Crocodile Research Coalition in Placencia on croc counts and biodiversity studies. Woodrow, Lord Tinsley, was very active in the fossil beds in North and South Carolina and documented a historic skeletal find. Naysayers and skeptics believe it to be a stick, but Lord Tinsley perseveres in his belief that he has found a missing link. We hear that a museum tour may be in the works. The remainder of his time – somehow still not working – included travel to Little Cayman, Roatan, and Bonaire (this trip included an underwater proposal and, we're happy to report, an acceptance), as well as many days looting, that is surveying, the Connecticut River with the CREST Dive team.

In addition to traveling and diving with fellow Rovers, Kim Malkoski continued training scientific divers at WHOI and went to sea aboard the R/V Neil Armstrong for a hadal exploration and research cruise 100 miles south of Nantucket to the Veatch Canyon (1420m). Part of the cruise included diving with Evan Kovacs to film and shoot new AUVs. **Ted Maney** conducted numerous research dives for an offshore mussel aquaculture project and monitoring rock wall invertebrate communities at Halfway Rock and Nahant. Rounding out the report, in between travel to exotic locations, Bill VanderClock served as the Chief Diving Safety Officer at the Boy Scouts World Jamboree in West Virginia. His team gave **14,825** Scouts from all over the world their first SCUBA experience! That's a lot of bubbles. Well done!

Enough about us. We hope you enjoy this year's show and come back next year with stories of your own!



Joe Hohmann- 2020 Walter Feinberg Diver of the Year Award

One of the great Sea Rovers, Joe Hohmann is a true American legend, and a hero for us all. Joe has been actively involved with this club since 1958, when he first volunteered to help out with one of the early clinics. His excitement for diving and passion for life is as strong now as it was over sixty years ago. Joe enlisted in the US Navy in 1955 after the Korean War as a Gunner's Mate, quickly volunteered for additional training, and soon found himself trying out for the Underwater Demolition Teams. During the brutal training in Virginia, Joe held the obstacle course record for 3 months, and he was the only trainee to ever make it across the Death Trap during Hell Week. He served as a member of UDT 21, stationed in Little Creek, VA – the noted group that would later become SEAL Team Four in 1983. Leaving the Navy and anxious to find exciting things to keep him busy as a civilian, he found out about the Boston Sea Rovers, and that partnership provided Joe with plenty of excitement over the next several decades, both in and out of the water.



Over the ensuing years, Joe completed 5 Boston Marathons, and dove year-round in New England and beyond. One of the very first divers to explore the wreck of the U-853 off RI, he was

part of one of the first non-commercial explorations of the Andrea Doria in 1967. As he recalled of that dive later, "It was still in very good shape, with rows and rows of portholes as far as the eyes could see. We didn't get much off it except great memories. After Gimbel and Cousteau, we were probably only the 3rd or 4th group to ever visit the wreck." In the late '70's, Joe notched another first, being one of the very first divers to visit the wreck of the Chester Poling, that had gone down just a few short months earlier.



In the late 1960s and early 1970s, he was directly involved with three different underwater habitat projects, including the Early Bird project on the Doria and the FLARE project with U. Miami off Florida. He was also one of seven Boston Sea Rovers that were the 24/7 support divers for the EDALHAB project with WHOI and UNH, a four-day saturation diving effort in a habitat placed in 70' of water off the Isles of Shoals, in April of 1971. Not the best time of year to be making repetitive dives in wetsuits to re-supply the 3 UNH students, that's for sure! Joe has had numerous jobs throughout his career, including working as a commercial diver for 30 years in Boston Harbor. Some of the more memorable jobs that he undertook were dealing with a variety of issues with the Deer Island sewerage pipeline, making in-water repairs to the oil tanker City Service Baltimore, and repairing the pilings, hardware and water intakes for other notable fixtures in the harbor such as Pier 4 and Hook's Lobster Pound. He also worked as an arborist, spending many years high above the ground, bringing monster trees down, one limb at a time. To this day, Joe still feels that his most important accomplishment lies even closer to home, and is a proud husband, father and grandfather. But perhaps, it is also his ability to bring out the best in others, as fellow club member Bob Ballard credited Joe for giving him the inspiration to go and find the Titanic (although, to be honest, Joe really didn't think he could do it...).

For all these deeds, and countless other acts of kindness and unselfishness, it is with great pride that the Boston Sea Rovers award our 2020 Walter Feinberg Memorial Diver of the Year Award to Joe Hohmann.

The inscription on the Paul Revere silver bowl reads:

Joe Hohmann The Living Spirit of the Boston Sea Rovers If You Can Dream It, You Can Do It

1956 Edward Pansewitz 1957 Peter Gimbel 1958 James Cahill 1959 James Dugan 1960 George Bond **1961 Harold Edgerton** 1962 Hans Keller 1963 Pablo Bush Romero 1964 Alan Krasberg 1965 Kip Wagner 1966 Scott Carpenter 1967 Stan Waterman 1968 Joseph MacInnis 1969 Al Giddings **1970 Melville Bell Grosvenor** 1971 George Benjamin 1972 Paul Tzimoulis 1973 Smokey Roberts 1974 Jack McKennev 1975 David Doublet 1976 Luis Marden

1977 Rick Frehsee 1978 Eugenie Clark 1979 Sylvia Earle 1980 Robert Ballard 1981 Larry Emmerson 1982 Elga Andersen 1983 Frank Scalli 1984 Don Stewart 1985 Walt Hendrick, Sr. 1986 Rusty Murray 1987 Argo/Jason Jr. 1988 Emory Kristof 1989 Stan Waterman 1990 John Stoneman 1991 Walt "Butch" Hendrick, Jr. **1992 Ruth Dixon Turner** 1993 Dee Scarr **1994 Nick Caloyianis** 1995 Bill Curtsinger 1996 Wes Pratt 1997 Bill Hamilton

1998 Frank Fennell 1999 Jordan Klein 2000 John Cronin 2001 Sam Raymond 2002 Peter Benchlev 2003 Howard & Michele Hall 2004 The Boston Sea Rovers 2005 Mike DeGruy 2006 Phil Nuvtten 2007 Ernie Brooks 2008 Bob Talbot 2009 Brian Skerry 2010 Wes Skiles 2011 Marty Klein 2012 Jill Heinerth 2013 Bob Boyle 2014 Greg Stone 2015 Rick Rosenthal 2016 Dr. Greg Skomal 2017 Don DeSantis 2018 Berkley White 2019 Joe Romeiro

66th Annual International Film Festival



Erin Quigley

Erin Quigley, the Master of Ceremonies for the evening, is an Adobe ACE certified expert specializing in postproduction techniques specifically developed for underwater shooters. She is an award-winning photographer, a member of the Women Divers Hall of Fame, Boston Sea Rovers, and Ocean Artists Society. Erin writes the Imaging Techniques column for Scuba Diving magazine, leads trips, and teaches workshops worldwide.

Erin began her career as the resident costume designer for Chicago's famed Steppenwolf Theatre Company (http:// steppenwolf.org/), during which time she earned two Tony Award nominations for her work on Broadway. In the ensuing years, she returned to her hometown of Los Angeles and designed the television sitcom "Roseanne", along with many other stage, television, and film projects, eventually working as a producer and development executive in collaboration with 20th Century Fox and Warner Brothers Television.

Concurrent with her work in television and film, Erin became an avid scuba diver and underwater photographer. She immersed herself not only in the art of underwater photography, but also in the art of digital imaging and postproduction. She left the entertainment world to study at the Art Center College of Design in Pasadena, California, where her passion for learning new technologies evolved into a passion for teaching underwater photographers how to maximize the potential of their images via post-production.

Erin is motivated by her strong belief that exceptional imaging inspires awareness and stewardship of our fragile marine environment.



Erick Higuera

Erick Higuera is a Mexican multi-award winning wildlife filmmaker; photographer and marine biologist specialized in marine wildlife films and aerial cinematography. He has explored for over 20 years the waters surrounding the Baja California Peninsula, Guadalupe Island and the Revillagigedo National Park filming and photographing great white sharks, giant mantas, whales, dolphins, billfish and other spectacles in the deep blue off Mexico's Pacific shores.

His work has appeared on several natural history documentaries including BBC NHU productions like Shark BBC One, Blue Planet II, Blue Planet Live and Our Planet, as well in Discovery Channel, National Geographic and Shark Week.

Mr. Higuera is one of the principal image-makers for Pelagic Life, a non-profit civil organization with the mission to protect the mega marine fauna in the Mexican open ocean through awareness using inspiring images, fomenting sustainable ecotourism and promoting responsible seafood consumption. Erick's catalog is filled with amazing images of some of the ocean's largest inhabitants.

He's also a marine scientist and one of the principal leaders of MANTA PACIFICO group whose mission is to lead scientific research of the Oceanic Giant Manta in the Gulf of California and the Revillagigedo Archipelago with the objective of helping to create better management plans in order to increase the conservation of the species.





Richard M. Simon grew up diving and crewing on New England dive boats. Rick is a Boston Sea Rover & Frank Scalli Intern (2005) and a TDI dive instructor holding both recreational and technical ratings. Rick is also the president of Manta Industries- a dive equipment manufacturing company; and is the vice president of Shoreline Diving Services, INC.- a commercial diving company specializing in inspection, salvage and construction. Rick is an avid diver; especially enjoying cave and wreck diving mostly on the East Coast but really anywhere around the world. When he is not diving he enjoys spending time on his farm with his wife Erin and their many farm animals.



Since childhood, Joe Mazraani has been fascinated by the sea, its creatures and the treasure that is the underwater world. Growing up in Lebanon, Joe spent his summers by the Mediterranean. He immigrated to the U.S. at age 15 and became a certified diver in the mid-90s. Joe quickly took to diving sunken wrecks off the Northeast U.S. coast and instantly developed an obsession with exploring the sunken hulks that litter the approaches to New York Harbor. Shipwreck exploration is a way of life for Joe. He owns and operates the dive vessel Tenacious, which was specifically acquired and outfitted to accomplish several projects, including locating and exploring U-550 and other deep, uncharted wrecks in the North Atlantic. A criminal defense attorney by trade, Joe is also a U.S.C.G. licensed captain.

Dustin Adamson

Dustin Adamson is a multi-international award winning underwater cinematographer. He was certified to scuba dive back in 1996. Based out of Salt Lake City, Utah, he is completely self-taught, and has been filming since 2011. In 2002, he married his wife Tyra Adamson, an accomplished underwater photographer in her own right. They both own and operate www.OceanShutter.com . His favorite subjects to film underwater are both big and small creatures. Having traveled all over the world, he is always searching for the perfect shot. In 2015, Dustin had the honor of being invited to be a member of the Ocean Artists Society. Dustin work will be presented in the opening sequence of the 2020 Film Festival.

Kelvin Murray

Kelvin is Director of Expeditions Operations & Undersea Projects with EYOS Expeditions. His decades of hard-won knowledge have been earned through complex missions on every continent and every ocean. As Expedition Leader, Kelvin has led numerous logistically- complex trips involving diving, submersibles, ROVs, mountaineering, kayaking, camping, hiking, filmmaking, and helicopter operations.

Working with the British Antarctic Survey, he managed the UK's scientific diving program throughout the extreme environment of the Antarctic winter. Kelvin has led exploratory diving expeditions throughout Svalbard, the world's largest fjord system in East Greenland, and the Antarctic wildlife paradise of South Georgia, altogether supervising several thousand polar dives.

Kelvin sits on the Executive Committee of the Association of Arctic Expedition Cruise Operators (AECO) as well as several other operational committees and is regularly consulted by Canadian and Arctic authorities regarding operations in the Northwest Passage. Kelvin has contributed to several scientific papers on polar marine ecosystems and his various adventures have been recognized by being elected a Fellow of the Royal Geographical Society, a Fellow International of The Explorers Club and invited to join both the prestigious and historic Antarctic Club and the Arctic Club. For his Arctic emergency preparedness work and projects with indigenous communities, he was recently made a Fellow of the Royal Canadian Geographical Society.

EYOS Expeditions provided the project management, expedition leadership and expertise for the Five Deeps Expedition, and the current Ring of Fire Expedition. Kelvin is part of the expedition leadership team for these projects and will be coming to the festival from the field. The Five Deeps Expedition was the first to attempt to reach the deepest point in each of the Earth's five oceans: the Puerto Rico Trench in the Atlantic, South Sandwich Trench in the Southern Ocean, Java Trench in the Indian Ocean, Challenger Deep in the Pacific and Molloy Deep in the Arctic. He looks forward to sharing some images and tales from these record-breaking expeditions at the Boston Sea Rovers Film Festival.

Ryan King

Ryan started diving in 1990 and has never looked back. For over 25 years, Ryan has been diving, teaching, and photographing marine life, caves and wrecks from Canada to the Caribbean. He has a passion for exploration and helping others enjoy and appreciate the underwater world.

For the last few years, much of his diving has been focused on locating and documenting new wrecks in New England with the rest of the Nomad Exploration Team. Recent discoveries include the William H. Machen a collier lost during World War II. Most recently, the team discovered the USS Eagle 56 which was sunk just weeks before Germany surrendered in World War II. The team is looking forward to sharing footage from that project that has never been shown before.

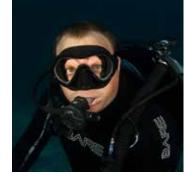
Join us after the Film Festival for our renowned

Meet the Speakers Party

This is your opportunity to meet the speakers up close and personal, see the famous Sea Rovers dunking ceremony and dance until the wee hours of the morning. The party will be in the ballroom adjacent to the Film Festival presentation.







Sunday Kids Day Activities | 10:00AM – 2:00PM

Sunday is Kids Day! Kids 12 and under are free at the Sea Rovers Show. Activities and presentations will be hosted on the second floor where the workshops are located. All programs, excluding the tidepool touch tank, will last approximately 30 minutes each. Please note that children must be accompanied by an adult at all times.

Activities Include:

11:00am - 2:00pm |Get Up Close and Personal with Sea Creature Touch Tanks Travel Tidepools Courtesy of the *New England Aquarium*

Kids Day Schedule:

- 10:00 am |National Marine Life Center: Saving Sea Turtles
- 10:45 am | Atlantic White Shark Conservancy Sharktivities event: Shark Myth Busting
- 11:30 am | Mass Audubon's Joppa Flats Wildlife Sanctuary: The Amazing World of Penguin
- 12:00 pm | Paul Cater Deaton presents two CW Cephalopod octopus adventure short films
- 12:30 pm | National Marine Life Center: Saving Sea Turtles
- 1:15 pm | Sharks4kids: Dive into the World of Sharks!





2020 Boston Sea Rovers Summer Intern

For 16 years, the Sea Rovers' Summer Internship has played a major role in our mission to produce the next generation of diving leaders. Following the spring semester, the 2020 Intern will partner with members of the Boston Sea Rovers and associates located throughout the United States to experience a wide variety of jobs and career choices. Based in part on the personal interests of the Intern, the Internship will provide advanced dive training courses and ample opportunities to dive and train with a variety of dive professionals in a broad cross-section of diving environments. Opportunities can include handson work with professional under water photographers and filmmakers, educational specialists, marine engineers and scientists, equipment manufacturer's representatives, and dive shop owners. In addition to the unique time spent with some of our most distinguished members, the Sea Rovers Intern will be outfitted with dive equipment (provided by Sea Rover corporate sponsors) for their use throughout the summer and will receive the necessary financial support to ensure travel and living expenses. To be considered for the Sea Rovers Summer Internship, the candidate must be a certified diver living in New England, a graduating high school senior, college freshman or sophomore, have outstanding scholastic grades and extra-curricular activities, and be committed to an underwater career.



2019 BSR Intern, Nico Pellegri!

Russell Laman, 2020 Intern



The Sea Rovers proudly announce that Russell Laman of Lexington, MA is the 2020 Boston Sea Rovers Annual Summer Intern. Russell is a freshman at Boston University with a 3.97 GPA, majoring in marine science. He is planning a career that combines his interests in science, photography, and conservation. Russell is an Eagle Scout, has participated in research projects in Borneo, and an internship with National Geographic. He has completed 139 dives, is a certified NAUI Master Diver and AAUS Science Diver, and holds several specialty certifications.

Applications for the 2021 Internship must be received by November 15, 2020.

See our website www.bostonsearovers.com for more details.

2020 Boston Sea Rovers Dive Training Scholarship

In 2020, the Sea Rovers are proud to announce the start of The Jake Duvall Memorial Diving Scholarship. Named for one of our tireless members who passed away suddenly in the Fall of 2019, the intent of this annual scholarship is to provide scuba lessons and a full set of scuba gear to one or two Boston area high school students that have a passion for the ocean and a desire to learn to dive, but who may lack the financial ability to achieve such a goal.



It is the intent of the Sea Rovers to cover all costs of this scholarship through our relationships with diving

equipment manufacturers and local dive shops. For 2020, the Sea Rovers are partnering with Henderson Aquatics, Sherwood, Genesis and Akona, and East Coast Divers to offer this program.

Final details and the application process are being developed by the Sea Rovers Scholarship Committee. We will provide more information as the program is finalized and post the application on our website. Anyone wishing to donate to this scholarship may do so on our website - www.bostonsearovers.com.

Thank you!

Boston Sea Rovers Outreach

World Ocean Day - New England Aquarium - June 8, 2020

Women Divers Day - July 18, 2020

Great Annual Fish Count - July 25, 2020

Coastsweeps Costal Beach Cleanups - September 20, 2020 (In conjuncture with Bay State Council Treasure Hunt and North Shore Frogmen/Metro West Dive Club Annual Picnic)

*Events listed above held at Stage Fort Park Goucester, MA



Boston World Oceans Day



(L to R) Vin Malkoski, Congresswomen Ayanna Pressley, Randy Barron, and Margaret Malkoski

GEAR REVIEWS | GOPRO | COMPACT | MIRRORLESS | SLR | PRO VIDEO | LIGHTING | TRAVEL GEAR | TRIPS & CLASSES | SERVICE

BACKSCATTER UNDERWATER VIDEO & PHOTO

West • 831-645-1082 East • 603-432-1997 www.BACKSCATTER.com



SCAN HERE FOR FREE REGISTRATION



DIGITAL LEARNING DOWNLOAD OUR APP TODAY!

- 1. Visit https://my.divessi.com/register or download the MySSI app. (available on iOS or Android)
- 2. Check your email for your personal login information. This login is used for all your MySSI services.
- 3. Go to www.divessi.com to find a Dive Center near you. Visit your SSI Dive Center or Resort to schedule your training, register for more programs, and receive online and offline access to your Digital Learning through the MySSI app.



MYSSI APP: iOS



Saturday – Daytime Seminar Schedule 2020

	Gimbel Room	Cousteau Room	Doc Edgerton Room
Room Topic	Photography & Video	Wrecks & Maritime History	New Technologies!
9:00 am - 9:45 am	Nancy McGee Lilliput vs Brobdingnag: or, Can you shoot it all; Macro or Big Animal?	Erik Petkovic Lake Erie Technical Wreck Diving: A guide to Lake Erie's Deepest Wrecks	Charles Mazel Exploring Fluorescence to 3,000' in a Manned Sub- mersible
10:00 am - 10:45 am	Jake Stout Stop Taking Pictures, Start Making Photos	Joe Mazraani, Jennifer Sellitti, Rick Simon The Magnificent Disaster: The Story of the SS Burdi- gala	Derya Akkaynak Sea-thru: A Method for Removing Water from Underwater Images
11:00 am - 11:45 am	Joel Penner Add Compelling Aerial Footage & Topside GoPro Footage to Your Trip Video	Ryan King and Jeff Goodreau Never Forgotten: The Hunt for Eagle 56	Nick Caloyianis, Peter Lake & Stuart Cody Retrospective of Blue Wa- ter White Death
	Be sure to visit all of the exhibitors and exhibits during the lunch break.		
Room Topic	Creature Features	Exotic Diving	Dive Safety Medicine
1:00 pm - 1:45 pm	Andrew Martinez Don't Mess With Me	Amy Giannotti Over the River and Deep Underground!	Dan Orr Scuba Diving Safety: Risk vs Reward
2:00 pm - 2:45 pm	Greg Skomal Saving Gretel The Great White Shark	Paul Cater Deaton The Flower Garden - Ex- ploring the National Reef of Texas	David Charash Are you Medically Fit to Dive?
3:00 pm - 3:45 pm	Ron Watkins Humpback Whales: Excit- ing Encounters With One of the Largest Mammals	Michel Labrecque & Julie Ouimet African Diving - Where in the world is Moheli	Ted Harty Solutions to Common Equalizing Problems for Freediving & Scuba Divers
4:00 pm - 4:45 pm	H. Wes Pratt Are Sharks Smarter Than Divers? Conclusions from 50 Years of Shark Reseach	Faith Ortins Old World Diving	Frauke Tillmans Women and Diving: Equal Opportunity vs Physiology

Sunday – Daytime Seminar Schedule 2020

	Gimbel Room	Cousteau Room	Doc Edgerton Room
Room Topic	Wrecks & Maritime History	Photography & Video	Citizen Science
9:30 am - 10:15 am	Thomas Easop The Searchlight - An Obscure Weapon at Sea During World War One	Brian Raymond Cameras and Conserva- tion	Philip Colarusso Citizen Scientists Monitor- ing Seagrass
10:30 am - 11:15 am	Jim & Pat Stayer The Submerged, Historic WWII Planes of Northern PNG	Erin Quigley New Dirty Tricks for Under- water Photographers	Ted Maney Tools to Identify Organisms and Contribute Observa- tions to Science
11:30 am - 12:15 am	Carl Kaiser Excavation and MIA Repatriation on the B-24 Tulsamerican at 40m	Erick Higuera Revillagigedo - An Ocean for Life	Uma Mirani REEF Volunteer Fish Sur- vey Project
	Be sure to visit all of the exhibitors and exhibits during the lunch break.		
Room Topic	Underwater Archaeology	Exotic Places	Science & Conservation
1:00 pm - 1:45 pm	Steve Nagiewicz Underwater Archaeology by Remote - Going Where No Diver Has Gone So Far!	Peter Venoutsos Diving Vancouver	Randi Rotjan Science in the Pheonix Islands Protected Area: A Decade past and Future
2:00 pm - 2:45 pm	Calvin Mires From Shore to Deep Sea: Maritime Archaeological Research and Investigations of the Night Boats PS Portland and City of Rockland	Hergen Spalink Diving Indonesia	George Buckley Sargassum Invades the Caribbean Sea
3:00 pm - 3:45 pm	Nico Pellegri 2019 Boston Sea Rovers Intern Update Note that participants scheduled	Michael Salvarezza - Christopher Weaver Diving in the land of the Pharaohs: The Egyptian Red Sea	Loretta Roberson Seaweed Mariculture as a Tool to Help Protect Coral Reefs

Note that participants scheduled to speak at any Sea Rovers Clinic event are subject to last minute travel and work emergencies inherent when pushing the boundaries of filmmaking, exploration and discovery. Please understand that the participant list is subject to change at the last moment.

Daytime Speaker Bios & Seminar Descriptions

Saturday Morning:

Gimbel Room Morning - Photography and Video

Nancy Magee Explorer and filmmaker Nancy McGee has lived a life of adventure and diversity. An Explorers Club Fellow, she is the first female Exosuit pilot and has dived and filmed on 7 continents. She has been the first to explore several archipelagos and opened tourism in the Andaman and Forgotten Islands. She is an inductee into the Women Divers Hall of Fame, working as an explorer, filmmaker, author, emcee and passionate educator.

Lilliput vs Brobdingnag: or, can you shoot it all; Macro or Big Animal? - The dichotomy between the macro world and the hunt for big animals reflects the greatest challenge for image makers. Which lens to choose? I don't have multiple cameras and a Sherpa. Should I go wide, or stick with macro? Find out how to deal with this ongoing challenge from a pro. The answer is easier than you think!

Jake Stout has been a Photographer for 11 years working in many genres although mainly in wildlife and underwater imagery. As the Boston Sea Rovers 2018 Intern, Jake traveled around the US, Newfoundland, and Roatan working with and learning from experts in underwater science and photography. Jake is currently a junior at Northeastern University and an accomplished photographer. His photo of swarming sea nettles made in Monterey, CA was selected as a finalist for the 2018 National Geographic Photo competion. His work has appeared in gallery openings such as the Chandler Gallery at the Maud Morgan Arts Center and Cambridge Multicultural Arts Center. Jake currently photographs articles for the New England Aquarium as well as working on photojournalism studies around New England waters of his own.

Joel Penner is the founder of Newmediasoup, LLC, a multimedia and event coverage company. Joel was an early adopter of the use of DSLR cameras for shooting high definition underwater video and currently shoots 4K Ultra High Definition video as part of his business. A commercial drone pilot, Joel is adept at drone usage to capture interesting and fresh aerial perspectives. He is also an active product tester for Backscatter assisting with underwater video camera testing and video editing for new products. His images have been published in various magazines. Along with his wife Jennifer, they have authored many published articles on imaging and are regular presenters at scuba diving trade shows.

Add Compelling Aerial Footage & Topside GoPro Footage to Your Trip Video - Experience trip videos from around the world that include Quadcopter and GoPro camera footage. See what's possible with drones and these small but powerful action cameras. Topics covered:Drone Usage for Aerial Capture while traveling and more! Topside Video & Timelapses, and Tools for stability

Cousteau Room Morning - Wrecks & Maritime History

Erik Petkovic is an explorer, author, maritime historian, technical wreck diver, and shipwreck researcher who has over 20 years of diving experience. Erik has been featured in dive publications worldwide and is a regular contributor and columnist to several magazines. Erik is the author of the highly popular books Shipwrecks of Lake Erie Volume One, Lake Erie Technical Wreck Diving Guide, and the Shipwreck Monograph Series. Learn more about Erik at www.ErikPetkovic.com.

Lake Erie Technical Wreck Diving: A Guide to Lake Erie's Deepest Wrecks - Dive to Lake Erie's deepest wreck. Relive some of the most harrowing tales lost to history. This first of its kind presentation blends unique storytelling, rare archival photos, and spectacular underwater photography of the deepest and least visited wrecks in Lake Erie.

Joe Mazraani, Jennifer Sellitti & Rick Simon Since childhood, Joe has been fascinated by the sea. Growing up in Lebanon, Joe spent his summers by the Mediterranean. He immigrated to the U.S. at age 15 and became a certified diver in the mid-90's. Joe quickly took to diving sunken wrecks off the Northeast US. Exploration is a way of life for Joe. He owns and operates the dive vessel Tenacious, which was specifically aquired to accomplish several projects, including locating and exploring the U-550 and other deep, uncharted wrecks in the North Atlantic. Criminal defense attorney by trade, Joe is a certified closed circut diver and is U.S.C.G. licensed captain.

Jennifer Sellitti is a regular crew member of the dive boat Tenacious, managing a number of topside operations during dive trips. She also performs historical research on the ships and helps locate ships that are the subject of new projects for the team. Jennifer develops and delivers presentations on Tenacous projects with goal of educating the public about the historical significance and importance of wreck diving in the North Atlantic.

Richard M. Simon grew up diving and crewing on New England dive boats. Rick is a Boston Sea Rover & Frank Scalli Intern (2005) and a TDI dive instructor holding both recreational and technical ratings. Rick is also the president of Manta Industries - a dive equipment manufacturing company; and is the vice president of Shoreline Diving Services, Inc. - a commercial diving comapny specializing in inspection, salvage, and construction. Rick Is an avid diver; especially enjoying cave and wreck diving mostly on the East Coast but really anywhere around the world. When he is not diving he enjoys spending time on his farm - with his wife Erin and their many farm animals

Ryan King and Jeff Goodreau For over 20 years, Ryan has been diving, teaching, and photographing marine life, caves and wrecks from Canada to the Caribbean. He has a passion for helping others enjoy and appreciate the underwater world.

Jeff Goodreau hails from the state of New Hampshire and is married to his loving wife Mindy. A truck driver by day, Jeff lives to hunt wrecks in his free time. An avid mixed gas rebreather diver with over 20 years of wrecks diving experience, Jeff's diving has taken him to wrecks up and down the Eastern Seaboard, throughout the Great Lakes and England

Never Forgotten: The Hunt for Eagle 56 At 8 am on April 23, 1945, sixty-two American sailors cast off from Portland, Maine aboard the USS Eagle 56 for a routine coastal patrol. Less than 5 hours later, their ship had sunk, 13 men had been pulled from the frigid water, and 49 families were about to learn that their loved ones were never coming home. The US Navy initially classified the sinking as an "accident", leaving the families wondering, "who aboard that ship was so negligent, that they killed my son." (Harold Peterson - Eagle 56 Survivor). However, the survivors told a different story. As WWII progressed, the truth about the Eagle faded into the background but those families and survivors never forgot. Working in strong currents and frequently poor visibility (200 ft deep), the team located and documented the wreckage to bring this important event to the forefront, set the record straight, validate the survivors' testimony, and provide closure for the families.

Doc Edgerton Room Morning - New Technologies!

Charles Mazel is the pioneer of the modern era of night diving to explore fluorescence, including development of the equipment to see and record the phenomenon. He is a Boston Sea Rover and the founder of NIGHTSEA, the first company to provide lights and camera accessories for underwater fluorescence. He has conducted extensive scientific research on the phenomenon and in the course of this he conducted the first fluorescence exploration dives to a depth of 3,000' in a manned submersible, making 9 dives over the course of two scientific missions, one in the Bahamas and one in the Gulf of Mexico.

Exploring Fluorescence to 3,000' in a Manned Submersible Underwater fluorescence is usually associated with night dives in shallow water, and scientific theories about it relate to the interaction with light. But what might you find where it is always dark? This presentation will recount the experience in conducting the first deep-water explorations for fluorescence using a manned submersible.

Derya Akkaynak is a mechanical engineer and oceanographer ((PhD MIT & WHOI '14) who studies problems of imaging and vision underwater. In addition to using off-the-shelf RGB cameras for scientific data acquisition underwater, she uses hyperspectral sensors to investigate how the world appears to non-human animals. Derya has professional, technical, and scientific diving certifications and has conducted underwater fieldwork in the Bering Sea, Red Sea, Antarctica, Caribbean, Northern and Southern Pacific and Atlantic, and her native Aegean. Akkaynak is an honoree for the 2019 Blavatnik Awards for Young Scientists in physics and engineering. She is at Harbor Branch Oceanographic Institution.

Sea-thru: A Method for Removing Water from Underwater Images. Sea-thru is a new, groundbreaking computer vision algorithm that removes water from underwater images. How and why does it work? It will help speed up the pace of marine science, extend the limits of ocean exploration, and change recreational and professional underwater photography.

Nick Caloyian, Peter Lake & Stuart Cody

began as a cold-water diver and biology graduate student and later apprenticed for several years in Mexico with filmmaker Ramon Bravo, perfecting his craft with 16mm and 35mm formats. Nick's natural history subjects range from humpback whales off Hawaii to orca whales off Norway, as well as footage of the Greenland shark under the ice in the Arctic and rare shark mating behavior in the Gulf of Mexico. His camera work has garnered numerous awards, including several Emmys, Cine Golden Eagles, an Oscar, a NOGI, and the Earthwatch Award.

Peter Lake & Stuart Cody were original crew members on the production of Blue Water, White Death. Peter was one of the best photographers of that period and did many other projects including a behind the scenes film about the Hollywood film, The Deep. Stuart Cody is a legendary pioneer in the development of cinema verity sound recording and was also involved in both of Peter Gimbels' Andrea Doria projects.

Retrospective of Blue Water White Death - A retrospective of Blue Water White Death as the inspiration for Jaws with Peter Lake & Stuart Cody.

Saturday Afternoon:

Gimbel Room Afternoon - Creature Features

Andrew Martinez has been diving and photographing marine life for over 40 years and his work has been used in many magazines and books. His popular app, Marine Life North Atlantic, is a necessary resource for anyone wanting to know the critters from this area. Andy's new book, *Don't Mess with Me* is a peek into how sea creatures defend themselves. He has led many diving groups to the Philippines, Indonesia, and many islands in the Caribbean.

Greg Skomal is an accomplished marine biologist, photographer, author, and 2015 Boston Sea Rovers Diver of the Year. As a senior scientist with MA Fisheries, he has been studying sharks for over 35 years and written numerous scientific research papers. Greg has appeared in a number of film and television documentaries, including programs for National Geographic, Discovery Channel, and PBS. His book, *The Shark Handbook*, explores the world of sharks.

Saving Gretel, the great white shark - This presentation celebrates the 15th anniversary of Gretel, a 14-foot female white shark that entered a shallow estuary in Massachusetts on September 21, 2004. She was tagged immediately but remained trapped in the pond for two weeks. As she progressively weakened, her fate remained in the hands of a group of biologists. Gretel was the first white shark tagged with satellite-based technology in the North Atlantic and, in many ways, an omen of what was to come.

Ron Watkins is a photographer, writer and trip leader specializing in underwater and topside nature photography. He uses his photography, writing and storytelling as a media to raise awareness and promote conservation issues that he has personally observed over the last three decades. Ron is passionate about sharing his knowledge of photography with others by writing articles, presenting and leading photo workshops. His work has been recognized for over 18 years in international photo competitions including the prestigious Nature's Best Windland Smith Rice International Awards and the Underwater Photographer of the Year, as well as appearing in numerous magazines around the world.

Humpback Whales: Exciting Encounters with One of the Largest Mammals - Humpback whales migrate to the warm water around Moorea to give birth and raise their calves before heading back to Antarctica to feed. Observing, listening, learning about and photographing these once endangered magnificent enormous mammals and their complex social structure and interactions is an amazing experience.

H. Wes Pratt currently works on shark biology, particularly the nurse shark, *Ginglymostoma cirratum*. He worked for NOAA's NMFS researching North Atlantic large sharks for 34 years and is now Adjunct with the Anderson Cabot Center for Ocean Life, New England Aquarium and Mote Marine Laboratory. His current project is 'Nurse Shark Research.'

Are sharks smarter than divers? - Conclusions from 50 years of shark research - Sharks play a role in the concerns of most divers. Many wish to dive with sharks. Recent studies have shown some sharks to be intelligent. Drawing on a lifetime of personal research with social nurse sharks and the work of colleagues; Pratt will explore the realities of co-existing with sharks.

Cousteau Room Afternoon - Exotic Diving

Amy Ginnotti is a marine ecologist and proudly represents Schoolyard Films as their Director of Development. She has extensive experience in freshwater and marine environments, including underwater caves and problems with invasive species. Amy has a B.S. in biology from Marietta College and a M.S. in environmental sciences from the University of Virginia. During her career she has initiated many educational and outreach programs for youth, including a variety of projects related to the preservation of cave, karst, groundwater, and marine systems in these regions. Schoolyard Films produces high-end nature and wildlife documentaries for K-12 youth that are accessible to all and FREE!

Over the River ... and Deep Underground! - Let's dive into the Floridan aquifer for a behind the scenes look at cave diving with famed cinematographer and director, Tom Fitz. We will emerge in the Rainbow River and drift down this pristine ecosystem following two turtle scientists who study these ancient creatures as indicators of the river's health.

Paul Cater Deaton is an award-winning writer, producer, director and cinematographer. He is based in Galveston and works all over the world. Recent credits include "The Amazing Race," HBO Documentaries, the Discovery Channel, and "Wild Honduras" for NatGeo Wild. Paul's work has garnered several industry accolades, including Best Music Video at the Austin Music Awards (SXSW), a Bronze Telly, numerous Gold and Silver Addy Awards, and an Addy Best in Show Video. His "Showdown at Tiger Beach" was screened at over a dozen international film festivals and won Best International Documentary Short at two of them.

The Flower Garden - Exploring the National Reef of Texas - When asked for their favorite local dive site in the state, many Texas SCUBA divers jokingly say, "Cozumel." In fact, the Lone Star State has an extensive coral reef system that was designated the 10th National Marine Sanctuary on 17 January 1992 and is the only marine sanctuary in the Gulf of Mexico. The story goes that the Flower Garden got its name from fishermen who could see the colorful corals and sponges from their boats on the surface. Once you submerge, you can see how accurate the name is. The underwater topography reveals ranges of mountainous corals, punctuated by sponges and loads of sea life, including sharks and manta rays.

Michel Labreque & Julie Oulmet are seasoned divers who have traveled to some of the most remote areas of our planet. They are technical trimix divers, rebreather divers and accomplished dive training professionals. Since 2014, they have devoted themselves to underwater imagery and exploration. Michel is a photojournalist and Julie is a videographer and filmmaker. They are both Fellows of the Explorers Club and Associate Members of the Boston Sea Rovers. They have twice been bestowed the honor of carrying the Explorers flag, contributed to the creation of an MPA and received the Explorers Club Citation of Merit. In 2016, Michel was named a PADI Ambassador. Julie is a member of the Women Divers Hall of Fame.

African diving : Where in the world is Moheli - Located in the Mozambique channel, the tiny island of Moheli in the Comoros is visited by fewer than 100 divers a year. Turtles nest on its shores, whales migrate to its waters and its reefs host a number of surprising species, not to mention schooling fish by the hundreds, mantas and dolphins.

Faith Ortins Starting as a scientific diver and volunteer public safety

diver in the 1980's, Faith became a technical diver and dive store owner in MA before joining DUI's sales team. She worked with DUI to develop some of the first women's dry suits and created DUI's DemoTour and DiveOps Programs, which promoted local diving and education about dry suits. With thousands of dives over her 40-year diving career, she has led expeditions to all 7 continents and all 5 oceans including both poles. She now devotes all her energy to her new company Blue Green Expeditions, running guided expeditions to unique destinations.

Old World Diving - Europe is rarely considered a dive destination for Americans. This introduction to diving in the Old World will highlight its incredible diversity from the Mid Atlantic Ridge islands of Azores and Iceland, to the shipwrecks of Scapa Flow and Croatia, and the marine life and orcas of Norway. We bet you will add another destination or two to your bucket list after this presentation.

Doc Edgerton Room Afternoon - Dive Safety Medicine

Dan Orr is President of Dan Orr Consulting, providing a variety of services to the global diving community. Retired from the position of President of Divers Alert Network (DAN), Dan currently works with many non-profit and for-profit diving organizations including the Academy of Underwater Arts & Sciences, DEMA, the RSTC, Force Blue, the UHMS, Best Publishing, and WCH Media Group. He has authored and co-authored hundreds of articles and published books and manuals on diving topics including Scuba Diving Safety. He is an Associate Boston Sea Rover, a NOGI Award Fellow, a member of the International Scuba Diving Hall of Fame and received the Leonard Greenstone Award for Diving Safety.

Scuba Diving Safety: Risk vs. Reward A review of the published diving accident and fatality data with a discussion of how divers can reduce risks and improve safety for themselves and those they dive with.

David Charsh is a Dive Medicine Physician, Board Certified in Undersea and Hyperbaric Medicine. He is the Principal at Dive Medicine and Hyperbaric Consultants LLC. and he is the Medical Director at Inova Health Systems in Alexandria, Virginia. Dr Charash is a DAN Referral Physician and DAN Instructor, and he has lectured at the United States Coast Guard Academy and the United States Navy Base Naval Undersea Medical Institute on Dive Medicine and Basic and Advanced Diving Physics.

Are you Medically Fit to Dive? - Medical Fitness is required of every diver before they enter the water. The criteria for medical fitness to dive will be reviewed. Both risk and common medical conditions that can affect our medical fitness to dive will be discussed. Common conditions will include Asthma, Hypertension, and Diabetes. The responsibilities of both the diver as well as your health care provider will be outlined.

Ted Harty began his professional underwater career as a Scuba Instructor for PADI, NAUI, and SSI in 2005. In 2008, he took his first freediving class with Performance Freediving International, participated in PFI's first official Instructor program in 2009, and immediately started working for PFI. Ted went to his first freediving competition in 2009 as an overweight, out of shape scuba instructor and progressed from 80-90 ft free dives to 177 ft in 3 weeks. Breaking a USA Freediving record in 2011, his deepest freedive is 279ft, and his longest breath-hold is 7 minutes. He is the founder of Immersion Freediving, www.Freedivingsafety.com, and www.Onlineclasses.ImmersionFreediving.com Solutions to Common Equalizing Problems for Freediving and Scuba Divers - I will discuss freediving equalization techniques and address the most common equalization problems freedivers experience. I will also explain how these same techniques can also help scuba divers who struggle with equalization.

Frauke Tillmans is Research Director at the Divers Alert Network (DAN). Originally from Germany, Dr. Tillmans has a degree in Human Biology and a PhD specializing in oxidative stress (free radicals) which is involved in acute diving injuries and may affect long term health of divers. Dr. Tillmans is also a very experienced public safety diver, scientific diver, diving safety officer, and diving instructor. She has worked as a researcher in global collaborative projects covering decompression stress, inert gas narcosis, and oxygen toxicity and was employed with the German Navy before joining DAN in 2019.

Women and Diving: Equal Opportunity Versus Physiology - Women's anatomy and physiology is of course different than men's. Women are generally considered less strong but more flexible, and there are differences in risk awareness, body composition and hormones. How relevant this is to scuba diving and what it might mean for decompression is not well studied. We'll look at the differences that have been explored in physiology and psychology research, and we'll draw some conclusions about equal opportunity underwater.

Sunday Morning:

Gimbel Room Morning - Wrecks & Maritime History

Thomas Easop has been diving for over forty years and holds an expedition rebreather certification. Educated at Brooks Institute of Photographic Art and Science, he earned a BA in Color Technology with a minor in Industrial – Scientific Imaging. He has operated his own commercial studio since 1986 and is a master print maker. The photography project entitled "The Guns and Armour of Scapa Flow" was begun in 1998 and is a catalogue of the naval warfare technology remaining on the German Imperial High Seas Fleet scuttled in Scapa Flow, using homemade large format film cameras and specialized exposure and lighting techniques.

The Searchlight – An Obscure Weapon at Sea During World War One - The searchlight was a fascinating weapon of night-time fighting during WW1. The German fleet developed special tactics to exploit new light technologies and during the Battle of Jutland, they were put to novel use. This unique story can be experienced diving the 'foul grounds' of Scapa Flow – sites where shipwrecks have been salvaged.

Jim & Pat Stayer The Stayers are explorers and well-known underwater filmmakers dedicated to sharing shipwrecks, animal behavior, and remote dive destinations around the world. They have directed several evening film festivals and are popular presenters across North America. Jim & Pat have been diving for 45 years and their footage has appeared on several major networks worldwide. They have discovered several shipwrecks and have coauthored 3 books and produced 33 DVDs. Jim & Pat are co-owners of Out of the Blue Productions, Associate Members of the Boston Sea Rovers, and Pat is a member of the Women Divers Hall of Fame

The Submerged, Historic WWII Planes of Northern PNG - Some of the

fiercest battles of the South Pacific took place in Papua New Guinea. The program features dives on 6 WWII plane wrecks; a Japanese Zero, two Petes, and a Kate, along with an Australian Catalina. The program highlights two American B-25s with their incredible stories; one in the jungle and one in crocodile infested waters.

Carl Kalser holds a B.S, M.S., and PhD in Mechanical Engineering (Robotics) from Colorado State University. He is currently a Program Manager in the Applied Ocean Physics and Engineering Department at Woods Hole Oceanographic Institution. Until recently he managed the AUV portion of the National Deep Submergence Facility and now manages an independent portfolio of UUV projects funded by ONR, NOAA, NSF, DARPA and others. His research interests include novel applications for AUVs including in confined spaces, human robot interaction via limited or degraded communication channels, and diver robot interactions. He is also an avid technical diver for both work and play.

Excavation and MIA Repatriation on the B-24 Tulsamerican at 40m - In 2017 a Team from the Defense Personnel Accounting Agency, Lund University, The National Park Service, and Woods Hole Oceanographic Institution excavated the nose section of the B24 Tulsamerican in search of the remains of three US servicemen missing in action since the crash in December 1943. The Tulsamerican lies in just over 40m of water off the island in Vis Croatia. This talk describes the mission, the men, the loss, the re-discovery, the excavation, and ultimately the return of one of America's fallen heroes.

Cousteau Room Morning - Photography & Video

Brian Raymond A lifelong Rhode Islander and former commercial fisherman; Brian is no stranger to the cold waters of the North Atlantic. After co-founding Rhode Island Shark Diving in 2010, his professional life has been about one thing - sharks! The skills he learned while fishing for nearly a decade, have made him uniquely suited for his new life on the water, working as a captain on a shark photography and research vessel. Allowing him to pursue his passion of diving and filming sharks, Brian has had his images featured in various publications both in print and on-line and made multiple appearances on Discovery Channel's Shark Week.

Cameras and Conservation - A look at my journey from commercial fisherman to shark photographer and ecotourism operator. Brief look back at fishing and focused on photography of blue and mako sharks, day and night off of the Rhode Island coast.

Erin Quigley is an Adobe ACE certified expert specializing in post-production techniques specifically developed for underwater shooters. She is an award-winning photographer and editor, and a member of the Women Divers Hall of Fame, Boston Sea Rovers, and Ocean Artists Society. Erin writes the Imaging Techniques column for Scuba Diving magazine, leads trips, and teaches workshops worldwide.

New Dirty Tricks for Underwater Photographers - Straight from the Go Ask Erin laboratory, Erin Quigley demonstrates new Lightroom and Photoshop sorcery to make your underwater images shine. Think you can't sharpen an out-of-focus eye? Think again. Join Erin for a fun foray into the dark arts and add some new dirty tricks to your repertoire.

Erick Higuera is a Mexican multi-award-winning wildlife filmmaker; photographer and marine biologist specialized in marine wildlife

films and aerial cinematography. For over 20 years, he has explored the waters surrounding the Baja California Peninsula, Guadalupe Island, and the Revillagigedo National Park filming and photographing great white sharks, giant mantas, whales, dolphins, billfish and other spectacles in the deep blue off Mexico's Pacific shores. Eric is also one of the principal leaders of MANTA PACIFICO group whose mission is to lead scientific research of the Oceanic Giant Manta in the Gulf of California and the Revillagigedo National Park.

Revillagigedo - An Ocean for Life. On November 24, 2017, the Mexican government signed a decree creating Mexico's largest marine reserve to date. More than 57,000 square miles, a vast rectangle in the ocean encompassing the four Revillagigedo Islands is fully protected. Revillagigedo National Park is home to many sharks, rays, and cetaceans. All forms of fishing are prohibited and mining and tourism development in the reserve and on the islands are banned, creating the largest marine protected area in North America.

Doc Edgerton Room Morning - Citizen Science

Phillip Colarusso has worked on seagrass conservation at EPA for 30+ years. Through EPA, he holds a Scientific and Divemaster certification and functions as the alternate Unit Dive Officer for the Region I dive program. He has a Master's degree in Aquatic Toxicology from UMass/Boston and a PhD from Northeastern University in Marine Biology. His area of expertise is in seagrass physiology and conservation. He has spent well over 500 hours underwater in seagrass meadows.

Marine Forests - Seagrasses perform numerous important ecological functions, including carbon sequestration and serving as a nursery area for juvenile fish and invertebrates. Natural resource managers need data on location and condition of seagrass meadows for better management decisions. Divers, acting as citizen scientists, have great potential to gather important data on this critically important habitat. This talk will focus on specific ways divers can collect data on seagrass, so it will be useful to natural resource managers.

Ted Maney is a biology instructor and underwater researcher at Salem State University. Formerly the Diving Safety Officer at Northeastern University and a past President of the American Academy of Underwater Sciences (AAUS), Ted has been training scientific divers and conducting underwater research for over 35 years. Current research projects involve benthic marine ecology studies of rock walls, kelp beds, and eel grass communities in addition to offshore mussel aquaculture. Ted earned his M.S. at UMass Boston studying the ecology of the marine gastropod *Lacuna vincta* and its role as a member of the kelp bed community.

Tools to Identify Organisms and Contribute Observations to Science -Learn how to use iNaturalist to explore and share your observations from the natural world. iNaturalist.org is a joint initiative of the California Academy of Sciences and the National Geographic Society.

Uma Mirani has been an avid scuba diver for more 20 years and a member of the New England Aquarium Dive Club since 2000. An active board member and current President of the Dive Club, Uma has worked with REEF to host the Northeast Great Annual Fish Count in support of the REEF Volunteer Fish Survey Project. Uma earned an MS in Marine Biology from Northeastern University Three Seas Program and is also a volunteer with the New England Aquarium Marine Mammal Rescue and Rehabilitation team.

REEF Volunteer Fish Survey Project - Divers and snorkelers participate in citizen science and contribute to the REEF Volunteer Fish Survey Project. I will show you how to use the REEF website to submit data from roving diver surveys of fish and invertebrates.

Sunday Afternoon:

Gimbel Room Afternoon - Underwater Archaeology

Steve Naglewicz is a well-known wreck diver and charter boat operator and acknowledged authority on shipwrecks and scuba diving. His first book: *Hidden History of Maritime New Jersey* was published about the tragedies of shipwrecks off the New Jersey coast that played an important role in passenger safety and maritime commerce. Nagiewicz is a Fellow and former Executive Directory of the Explorers Club, managed the New Jersey Marine Science Laboratory. He is a former Chairman of the Board for Shark reseach Institute and currently teaches Environmental and Marine Science at Atlantic City High School and Underwater Science & Technology and Underwater Archaeology at Stockton University.

Underwater Archaeology by Remote – Going where no diver has gone...So Far! - Explore deep-water shipwrecks accessible only by remote aboard EV Nautilus and NOAA's Okeanos Explorer as scientist ashore from the comfort of a sofa and computer! It is called 'telepresence' and it is becoming a new way to explore shipwrecks with a few strange marine creatures and surprises along the way... remotely.

Calvin Mires has almost 20 years of experience in maritime archaeology and underwater cultural heritage. He is a Research Associate at Woods Hole Oceanographic Institution and a Visiting Assistant Professor at Bridgewater State University in the Department of Anthropology. Calvin has led and worked on more than 30 maritime archaeology projects around the world, including Greek and Roman shipwrecks and harbors, Sweden's iconic warship, Vasa, Confederate blockade runners in North and South Carolina, and various sites in Bermuda, the Caribbean Sea, Pacific Ocean, and the Great Lakes. He co-directs a maritime archaeology field school in cooperation with the Massachusetts Board of Underwater Archaeological Resources, the Trustees of Reservations, and the National Park Service. Current projects include archaeological investigations of 1626 Sparrow Hawk and deep-sea research on shipwrecks in Stellwagen Bank National Marine Sanctuary (SBNMS).

From Shore to Deep Sea: Maritime Archaeological Research and Investigations of the PS Portland and PS City of Rockland - In 2019, a team from WHOI, Marine Imaging Technologies, and NOAA's SBNMS conducted an interdisciplinary exploration, survey, and telepresence outreach of biological and cultural sites within the Sanctuary, using some of the most cutting-edge underwater technology available to date. This work included surveys of the PS Portland and other shipwrecks using custom-made ROVs designed for collection of 4K motion video imagery plus 3D photogrammetry. The PS City of Rockland rests in tidal waters off Little Misery Island. Since 2018, students from Salem State University have investigated this shoreline shipwreck to understand site formation and cultural processes as evidenced in the archaeological record. This presentation will discuss latest research, future goals, and how these two shipwrecks, Portland and City of Rockland, provide case studies to engage new learners in the field of maritime archaeology -- each in their own unique ways.

Nico Pellegri *Boston Sea Rovers Intern Update* As the 2019 Boston Sea Rovers Intern, Nico worked at the New England and National Aquariums, traveled to Bonaire to work with Kid's Sea Camp, dove the wrecks of Bell Island Newfoundland, and spent time at commercial diving school in Seattle. Nico is trained as a commercial diver and underwater welder and now works for Shoreline Diving.

Cousteau Room Afternoon - Exotic Places

Peter Venoutsos started scuba diving in 1976 and became a commercial diver in 1983. He has worked for private underwater engineering firms, the federal government, and the United States Navy. He is an active member of the Connecticut Underwater Archaeology Committee, has published many diving articles, and teaches underwater photography.

Diving Vancouver - Have you ever seen a nudibranch over six inches long? A giant Pacific octopus or sea anemones over three feet tall? Diving off the coast of Vancouver British Columbia you will encounter many fascinating and amazing sights. Jacques Cousteau is quoted as saying that "Vancouver Island is the best temperatewater diving in the world second only to the Red Sea". Dust off your dry suit and explore the beauty below Vancouver.

Hergen Spalink is a Nauticam Ambassador who lives and works at the forefront of underwater imaging. Since 2010, Hergen and his partner Kerri Bingham have been leading exclusive underwater photography safaris and workshops in the world's best dive destinations, where guests benefit from the couple's deep passion for the underwater world and twelve years of experience managing dive businesses in Indonesia and the Caribbean. Hergen is also the co-author of the Underwater Photography Series, along with Photoshop guru Deke McClelland, at Lynda.com. Hergen is both a PADI-certified scuba diving instructor and an Adobe Certified Expert in Lightroom.

Diving Indonesia - Join Nauticam Ambassador Hergen Spalink for a trip across the popular dive regions of Indonesia including Bali, Komodo, Alor, the Banda Sea, Ambon, Lembeh, Bunaken, Triton Bay and Raja Ampat through photos and videos taken over more than ten years living and working across the archipelago.

Michael Salvarezza & Christopher Weaver have been diving the waters of the world since 1978. They have presented their work to many audiences and have been published in numerous magazines including National Geographic Adventure. Their work has also been used to support a number of research and educational programs, including the Jason Project for Education, the Atlantis Marine World Aquarium in New York, the Cambridge University and the University of Groningen Arctic Centre work on monitoring the transformation of historic features in Antarctica and Svalbard.

Diving in the Land of the Pharaohs: The Egyptian Red Sea - In the shadow of the Pyramids of Giza and under the eternal gaze of the Great Sphynx, the Egyptian Red Sea beckons divers to explore its underwater treasure. Journey to these fabled lands with Eco-Photo Explorers to experience an adventure for the ages. Using photography and video, Eco-Photo Explorers will first visit ancient Egyptian monuments before exploring the jaw-dropping marine eco-system of the Red Sea from a liveaboard dive operation.

Doc Edgerton Room Afternoon - Science & Conservation

Randi Rotjan is currently a Research Assistant Professor at Boston University. Her research ranges from tropical to temperate corals, and she investigates questions related to ecophysiology and resilience. She is the Chief Scientist of the Phoenix Islands Protected Area Conservation Trust, and the co-Chair of the Phoenix Islands Protected Area Scientific Advisory Committee. Rotjan is a member of The Explorers Club, a member of W2O (Women Working for Oceans) and is an active member of the editorial board for several peer-reviewed journals. She also serves on the Board of Directors for The Nature Conservancy-Caribbean, and the Friends of the Middlesex Fells.

Science in the Phoenix Islands Protected Area: a decade past and future. The Phoenix Islands Protected Area (PIPA) is the largest and deepest UNESCO World Heritage Site on the planet and was one of the catalysts for large-scale marine conservation in the Pacific and globally. PIPA is now one of the oldest large-scale marine protected areas and has experienced 3 major high thermal events (resulting in coral bleaching). The fate of PIPA's ecosystems has implications for climate survival the world over, as does the success of PIPA's policies and enforcement. The PIPA science program formally began in 2010; a decade later, what have we learned? And in the decade to come, what do we need to know?

George Buckley is an environmental consultant, educator and filmmaker and he has led field research projects with Earthwatch Expeditions on horseshoe crabs, bay ecology and coral reefs. His work has been recognized with the EPA Lifetime Achievement Award, BTS Diver of the Year, and Bonaire's ACCOLADE Medal. At Harvard University, he earned the Excellence in Teaching and Distinguished Service Awards. His film 'Bonaire Bonanza' won the 'Palme d'Or Award'. He has served on the Board of Directors of the Boston Sea Rovers, the New England Aquarium, the EARTHECHO Foundation, Boston Malacological Club, and the ENVIROTHON Council

Sargassum Invades the Caribbean Sea - Sargassum seaweeds have been a valuable part of ocean ecology until recent massive, uncontained, explosive growth has impacted shallow water and shoreline ecology and threatened coastal businesses and communities throughout the Caribbean and Gulf of Mexico. While the search for answers and solutions continues, the constant threat of environmental impacts has people, businesses and communities on edge. Join us as we view the impacts of invasive Sargassum seaweed and discuss its causes and solutions to the problem.

Loretta Robinson holds a BS in Biology from California State University and a PhD in Biological Sciences from Stanford University. In 2003, she became Adjunct and later Assistant Professor at the University of Puerto Rico in San Juan, PR, directing several research centers there. In 2016 she joined the Marine Biological Laboratory in Woods Hole, MA where she is now an Associate Scientist. Her interests are in environmental protection and conservation, sustainable energy, the oceans, and diving.

Seaweed mariculture as a tool to help protect coral reefs - Corals support some of our most diverse ecosystems but now are severely threatened by global warming. Rising temperatures disrupt the vital symbiosis between the coral and the algae living within their cells, causing bleaching and, often, death. Can anything be done to save the corals?

2020 Art Exhibit: Bow Seat Ocean Awareness

We have a special exhibit this year!

This exhibit will feature the winners of the 2019 international Ocean Awareness Student Contest run by local nonprofit Bow Seat Ocean Awareness Programs.

Since 2012, Bow Seat's annual Ocean Awareness Contest has encouraged young people around the world to dive into critical conservation issues—from oil spills and overfishing to plastic pollution and climate change—with a focus on humans' roles as both problem-makers and solvers. Nearly 10,000 students from 78 countries and all 50 U.S. states have responded through visual art, writing, film, and music.



Meters Deep by Seung Won C.

These powerful works by young artists expose what is happening to our ocean; reflect on what it means to be a human in the 21st century; discover and advocate for solutions on personal and planetary scales; and inspire a culture of respect and action for all life on this blue planet.

Exhibit Hours: Saturday 9am-5pm and Sunday 9:30am-3pm

Know a middle or high school student who is into art, film, poetry or music and loves our oceans? Visit Bow Seat Ocean Awareness Programs for information about the upcoming year.





PADI COURSES WEEKLY LOCAL DIVES EXOTIC DIVE TRAVEL SERVICE & REPAIR FULL RETAIL STORE



AQUALUNG - HENDERSON - SHERWOOD - DEEPSEE GOPRO - SEALIFE - AKONA - APEX PRINCETONTECH - MCNETT - LIGHT & MOTION

67 HIGH STREET, DANVERS, MA 01923 978.927.9551 www.underseadivers.com

Boston Sea Rovers Flag Report

BSR Flag #2 - Britannic Expedition May 2019

"As you descend, the water turns from pale turquoise to sapphire to an even deeper blue until out of the blueness you see her. All shipwreck divers imagine in their mind's eye what a wreck will look like up close and in person, but nothing prepared me for my first glimpse of one of the world's great ocean liners – Britannic. She is massive, mysterious, and perhaps most importantly, full of limitless opportunities for exploration and discovery." – Joe Mazraani, Diver on Britannic Expedition May 2019.

On May 10, 2019, a group of ten divers set sail from mainland Athens to Kea Island, Greece to dive the famed ocean liner Britannic. Boston Sea Rover and Expedition Member Rick Simon carried with him Sea Rover Flag No. 2. Veteran British shipwreck diver Scott Roberts led the international team of divers that included Richard Ayrton, Luke Kierman, Jacob MacKenzie, Joe Mazraani, George McClure, Duncan McCormick, Steve Pryor, Rick Simon, and Scott Wyatt.

HMHS Britannic was the third vessel in White Star Line's Olympic class, which included Olympic and the most famous of the three sisters, Titanic. Unlike Titanic, Britannic never realized her potential for luxury because she was requisitioned by the Brit-



ish Royal Navy as a WW1 hospital ship shortly after her launch in 1914 and refitted for that purpose. On November 20, 1916, Britannic was carrying almost 1,100 seamen, wounded soldiers, and hospital personnel when she struck a mine laid by a German U-boat.

The blast flooded six of Britannic's watertight compartments – damage more substantial than that which crippled Titanic but damage the ship was nonetheless designed to handle. The ship's captain, Charlie Bartlett, ordered the ship to shore intending to run her aground on Kea Island. Earlier in the day and against standing orders however, the ship's nurses had opened the portholes to ventilate the sick wards. Water came pouring through the open portholes



as she steamed causing the ship to list. The disaster was further compounded by some who launched lifeboats against orders while the ship was underway. Those passengers were killed when they were sucked into Britannic's enormous propellers. Captain Bartlett eventually gave the order to abandon ship, and more than 1,000 people boarded the lifeboats from which they were soon rescued. Thirty perished, most of whom prematurely boarded the lifeboats.

The damage eventually sent the 50,000-ton Britannic to the bottom of the Aegean Sea. She currently lays on her starboard side in 116 meters (383 feet) of water in the channel between the islands of Kea and Makronisos. Many of her portholes are still open and her colossal propellers are still intact.

Blessed with unusually good weather, the expedition team made six dives to Britannic in an eleven-day period. This allowed them to explore, document, and photograph numerous areas of the vessel.

The team had the honor of being joined for a portion of the expedition by Britannic's owner, Simon Mills. Mills' passion for the ship and respect for divers were apparent as he delighted the team with stories about Britannic and of expeditions past, going as far back to the first dives led by Boston Sea Rover Jacques Cousteau, who found the wreck with Boston Sea Rover Doc Edgerton in 1976. Mills is not just the owner of the ship but serves as an ambassador for her preservation. His spirit of exploration and decision to open the wreck to divers capable of exploring her mysteries made the team's dives possible. A documentary crew from a major broadcaster also joined the expedition. Their program will air within a year.

In addition to exploring Britannic, the group made two dives to SS Burdigala, a liner built by the German shipbuilder Schichau Werke for Norddeutscher Lloyd to be both fast and luxurious. In 1912, she was purchased by Cie De Nav Sud-Atlantique, a French Line, and sailed under the French flag from port in Bordeaux. Burdigala sunk on November 14, 1916, just one week prior to the sinking of Britannic. The cause of her demise was a mine laid by the same U-boat as the one that laid the mine that sank Britannic. This shipwreck was discovered more recently than Britannic and was not identified until 2008. A stunning sight, she sits upright on her keel at a depth of approximately 70 meters (231 feet). Dives like these are not possible without a tremendous amount of coordination, permissions, and surface support. The team expresses their gratitude to the following people and organizations: the Greek Ephorate of Underwater Antiquities for granting permission for exploration and providing on-site archeologists to educate the team and monitor their progress; Mayor Ioannis Evaggelou of Kea for welcoming the team to his island paradise with open arms; Yannis Tzavelakos and his team at Kea Divers for their logistical and surface support; and surface-team leader George Vandoros, whose professionalism and wisdom of experience inspired confidence in the team that those above water always had their backs.

BSR Flag #3 - RMS Lusitania August 2019

On August 8, 2019 amid the ashes from long-time Sea Rover friend, Bart Malone, Sea Rover Associates Steve Gatto and Tom Packer unfurl the Boston Sea Rovers Expedition Flag over the main mast of the RMS Lusitania, as it lay in the sand. New Rover Associate, Joe Mazraani, along with Anthony Tedeschi captured the historic moment. It was the culmination of many months of planning for an international team of U.S. and Canadian divers to explore the iconic shipwreck in 300' feet of cold and dark water at the bottom of the Irish Sea. Members of the team were as follows. U.S. Team: Steve Gatto, Tom Packer, and Joe Mazraani: Associate Sea Rovers. Harold Moyers and Anthony Tedeschi, long time Clinic Attendees. Canadian team: Terry German, Kim Martin, and Pat Shannon.







COLOUR YOUR DIVE



NC I I I I INFO ,

SHEARWATER

" MENU . .

21/35 1 23:19

" ' I'IEHII''





STEEL LINE

TOUGHNESS TO GET YOU THERE

FEATURING THE EXCLUSIVE

Stahlsac's Steel Line of premium bags protects gear from the elements with functional compartments that keep dry items dry and wet gear safely sealed away. The Steel Line appeals to a wide range of adventurers who participate in gear-intensive and water-related activities. Every detail is engineered for a purpose and key features are carefully refined to maximize the usefulness of the entire bag. The innovative designs and modern styling provide organizational solutions for any time outdoors and near the water.



EB

STPAL

CREATING LEADERS

LEARN MORE ABOUT NAUI LEADERSHIP AND DEVELOP THE TECHNIQUES AND CONFIDENCE TO BECOME A NAUI DIVE PROFESSIONAL.

> NAUIHQ@NAUI.ORG +1 813.628.6284 F 🕑 🛅 @NAUIWorldwide COURSE DIRECTOR | CROSSOVER | DIVEMASTER | FIT | FREEDIVER | INSTRUCTOR

> > I CINK I



The First Green Alternative to Neoprene, 5 Years in Development.

100% Neoprene-Free Sustainable, Plant Based Insulating Foam.

Available in 3, 5 and 7mm Thicknesses.

Interior and Exterior Fabrics made from Recycled Water Bottles.

> More Stretch. Superbly Soft. Lighter in Weight. Warmer at Depth. Lasting Durability.

3rd Party Tested USDA Certified BioBased Product.

MEN'S INTERIOR

WOMEN'S INTERIOR

MEN'S EXTERIOR

WOMEN'S EXTERIOR

Potentially Hypoallergenic.*

Flattering Styling and Striking Good Looks.

Henderson 10-Year Limited Warranty.

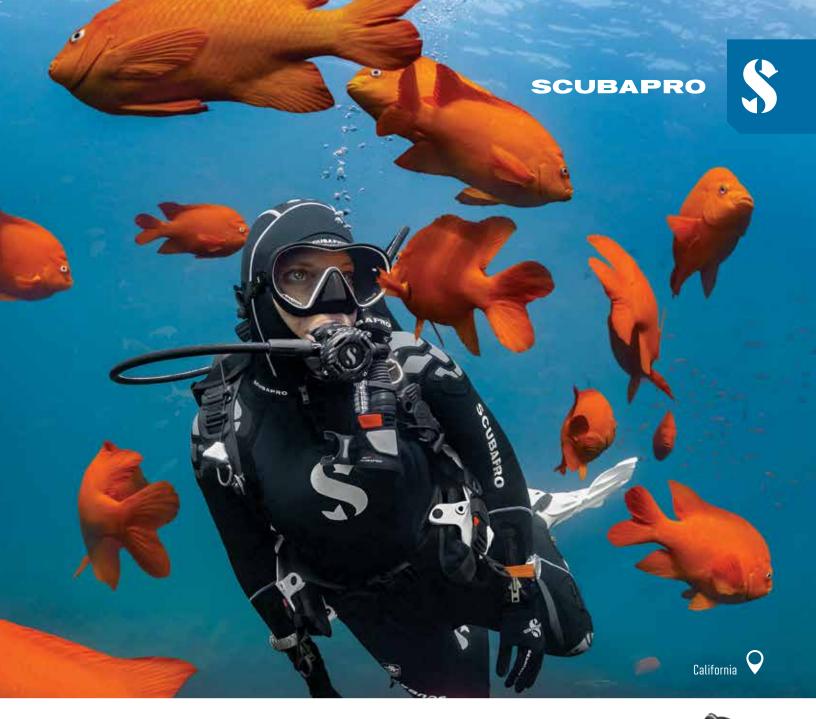
100% Recycled Packaging.

Great for You ! Better for the Environment. Only from Henderson !

What are you waiting for?



*Contact your Henderson dealer, or visit the Henderson website for additional information regarding Greenprene.



THE ABILITY TO CHANGE ANYTHING, CHANGES EVERYTHING.

Hydros Pro transforms with every dive. A breakthrough in comfort and customization, you're free to change the color, fit, accessories, and even the weight system, from integrated weights to a lightweight Trav-Tek harness. Easily pack an entire dive kit on your back with the compact design and custom backpack. Wherever you take it, Hydros Pro's monprene, molded construction means ultimate durability and near perfect fit — ideal for any diver and any dive.



Available in 9 Colors, 4 Men's and 3 Women's Sizes





Trav-Tek Straps and Backpack Included veddot award

DEEP DOWN YOU WANT THE BEST / SCUBAPRO.COM

OCEANIC EVERY DAY | EVERY DIVE "

THE NEW FAMILY OF

***BLUET** -R

PROPLUS 4.0

Bigger, better, bluetooth

VEO 4.0 Slim and accessible intelligence

GEO 4.0

Stylish color straps perfect for daily wear Stay connected with the **DIVERLOG+ APP**

Access and organize your dive data and plan every dive all from the convenience of your mobile device. DiverLog+ App is available for free in the app store.

OceanicWorldwide.com/us/bluetooth





RANGER BCD

// THE ORIGIN OF TOUGH

If it's toughness you're looking for, your search ends here. Tested and trusted by professional forces and experienced divers around the world, Ranger combines Zeagle's highest standards of quality and heavy-duty construction in a weight-integrated, rear floatation buoyancy control device.

RUGGED DESIGN, VERSATILITY, AND COMFORT. RANGER SETS THE STANDARD.



@ZeagleSystems www.Zeagle.com/Ranger

2020 Workshop Schedule

Find full details and descriptions online at: bostonsearovers.com and get room locations from signage at the show.

Friday:

9:00am - 4:00pm	2020 Boston Sea Rovers Public Safety Workshop
8:00am - 5:00pm	Visual Cylinder Inspection
9:00am - 4:00pm	Lightroom Bootcamp For Underwater Photographers

Saturday:

PSI-PCI Annual Update
Wide-Angle Shooting Tips for the Underwater Photographer
Hands-on Advanced Lifesaving Techniques
Seashells Around the World
Valve Repair Technician
Editing Techniques for Wide-Angle Underwater Images
Advanced Dive Planning
Aquariums for Aquanauts
Everything you ever wanted to know about underwater lighting (but were afraid to ask)
Northeast Regional Diving Safety Officer Meeting
Intro Photoshop for Lightroom Users
Oxygen Cylinder Cleaning Technician
Eddy Current Technician

Sunday:

9:00am - 11:00am	PADI Member Forum 2020
10:45am - 12:00pm	Putting it all together - Basics of video editing for underwater videographers
9:00am - 10:30pm	Topside and Underwater Shooting Techniques with your GoPro
9:00am - 2:00pm	Elements of Diving / Mastering Propulsion
9:30am - 4:00pm	Boy Scouts Oceanography Merit Badge Workshop
1:00pm - 4:00pm	Dirty Tricks for Underwater Photographers using Lightroom and Photoshop
1:00pm - 4:00pm	Underwater Fluorescence – How to See and Capture the Spectral Magic



In Memoriam



Joe Linehan

Ridgley "Jake" Duvall

Joe Linehan, the last original founding member of the Boston Sea Rovers, passed away October 21, 2019, at the grand age of 88. He was a devoted husband to his wife, Irene, whom he married in 1959 after they met on an arranged date, and was also a beloved father, grandfather, and brother.

Joe joined the Merchant Marines after high school, then graduated from Northeastern University, where he majored in mechanical engineering, eventually becoming a chief engineer in the field of offshore oil engineering, traveling around the world. He loved diving and boating, especially the Kaye G, his diving boat that he operated with fellow Sea Rovers. He constantly kept himself busy and always had projects going in various phases of completion, as he was an amazing handy man. In retirement, he became a master woodworker and was highly regarded as a member of the Chatham woodworkers who have done several projects for the town (including building movie theater benches and display cases for the Marconi Museum). He was a great conversationalist and was always ready to listen and give advice.

Joe had been an Honorary Sea Rover for nearly twenty years, and will be sorely missed, but will never be forgotten.

Ridgely "Jake" Duvall began diving in the 1980s and became involved with the Boston Sea Rovers in 2009. His love of the ocean and desire to experience and capture images of exotic locations, both above and below the surface, meant he was often traveling to some distant area of the globe to experience a new country, culture, dive location... and food and drink! Jake shared his life and interests with his wife of 34 years, Kathy Lum, albeit at opposite ends of the spectrum given he was from Boston and she was from New York. He a Red Sox fan, she a Mets fan (thankfully not the Yankees). He had a deep love for French cuisine, her Chinese. But their love for each other was boundless.

To say he was enthusiastic is an understatement. He jumped into everything that interested him with both feet. His passion for the ocean and photography, and his desire to share his passion with children, empowered him to become an integral part of the Boston Sea Rovers Summer Internship, for which he hosted the Annual Food and Wine dinner to benefit the internship.

In honor of this amazing man, we proudly announce The Jake Duvall Memorial Diving Scholarship. The intent of this annual scholarship is to provide scuba lessons and full scuba gear to one or two Boston area high school students that have a passion for the ocean, and a desire to learn to dive, but who may lack the financial ability to achieve such a goal.

Cheers, Our Friend, you will never be forgotten!

Remember to Raise a Toast To All of the Rovers Past

Elga Andersen Gimbel George Benjamin George Bond Bobby Boyle Jim Brown Lois Buskirk Van Buskirk Bill Carmichael Bob Cartier Jack Chalk Eugenie Clark Chip Cooper Jacques Yves Cousteau Mike deGruy Don DeSantis Norm Despres Craig Douglas Steve Drogin

James Dugan Ruth Dugan Harold Edgerton Walter Feinberg Walter Gaudet Peter Gimbel Harold Goodwin George Gorman R.W. 'Bill' Hamilton Walt Hendrick Sr. Peter Hess Clifford "Bunky" Hodge Richard Irvine Norman Katz Delbar Keily Mel Lillis T. Walker Lloyd Luis Marden John McAniff Jack McKenney James "Buzz" Milligan Robert Newbury W. Jerry O'Neill Richard Oberhauser Carol Oteri Raymond Oteri Bob Price Glen Reem Tony Salerno Don Scalli Frank Scalli Harry Shanks Wes Skiles Ruth Turner Paul Tzimoulis Rick Vahn

PRESERVE CONSERVE

NAUI GREEN DIVER INITIATIVE DIVE WITH A PURPOSE!

PROMOTE aquatic activities and continuing education through participation in conservation programs.

CONSERVE local research documenting the quality of marine ecosystems and aquatic life.

CREATE sustaining opportunities through fundraising contest and activities.





Durable, fast drying and lightweight for travel. The TLS350 is so versatile that it has become the primary choice for underwater photographers, deep cave explorers, and the US Coast Guard Helicopter Rescue Swimmers. By varying the insulation, you can use this suit in the warm waters of Florida and the ice-covered seas of Antarctica.



DiveDUI.com | 800-325-8439 @ @DiveDUI @ @DUI - Diving Unlimited International



Come visit us at Booth #17

Blue Green Expeditions specializes in off the beaten track destinations. We want to encourage you to explore, so come with us to your dream "Mystery Destination."

Bid on our trip in the Boston Sea Rovers silent auction! The winner will be able to choose from at least four destinations with a minimum value of \$4,000 and up to \$6,000. Destinations include options between warm and cold water and liveaboard and land- based destinations. We promise you an amazing adventure along with all the experience and fun Blue Green Expeditions is known for!



This could be you!

or visit us online at: www.bluegreenexpeditions.com



a Whole New Way!



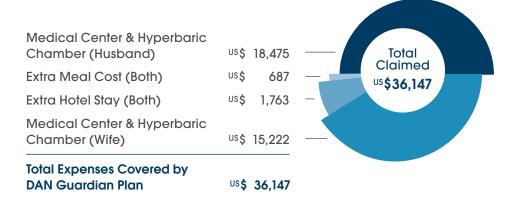
A WORLD OF DIFFERENCE

You are far from home and have nowhere else to turn. That's when DAN dive accident coverage can help.

DAN.org/Join-DAN



A couple injured in Maldives relied on DAN's Guardian Plan to cover 100% of their claim. See the full story at DAN.org/Claim-Stories.



The scenario summarized above is offered only as an example. Coverage depends on the facts of each case and the terms, conditions and exclusions of the policy. Depending on the state of residence, insurance is underwritten by either The United States Life Insurance Company in the City of New York or National Union Fire Insurance Company of Pittsburgh, Pa. Coverage may not be available in all states or outside the U.S. Visit **DAN.org** for complete details.

Let our experience be your guide!

PACIFIC

CARIBBEAN

AFRICA

From the remote Islands of Indonesia to the African Savanna to the mysterious wrecks of the Truk Lagoon, Reef & Rainforest specializes in designing the best personalized itineraries to the world's best dive destinations since 1995. When planning your next dive vacation, don't just rely on luck, let our experience be your quide!



RE TRAVEL

800-794-9767 or www.ReefRainforest.com

Arenui

The Boutique Liveaboard

24 CREW TO MAX 16 GUESTS 5 DIVE GUIDES 4 WESTERN CRUISE DIRECTORS

RAJA AMPAT AMBON & SPICE ISLANDS KOMODO & ALOR THE FORGOTTEN ISLANDS

5 STAR SERVICE

LUXURY CABINS

MASSAGE & SPA