### The Scuba Sports Club of Westchester, New York

Our 44th year serving the local and northeast dive community!

### The Scuba Sport Club's WINTER 2018 Newsletter





#### The Anchor Line

Denise Blais, President



Gary Lehman, Newsletter Editor



Welcome to the WINTER 2018 issue of The Scuba Sports Club Sea Swells! We invite all members of the diving community to contribute; please contact Gary at <a href="mailto:gary.a.lehman@gmail.com">gary.a.lehman@gmail.com</a> with your articles and photos! Our Club Newsletter includes features about our Club's diving and social calendar; our diving adventures, social/educational events, occa-

sional equipment and health issue discussions, and profiles on some of the more colorful and intrepid characters in our local diving community (of which there are many), and features of interest in the broader dive community.

We had a year to remember in 2018! Trips to San Salvador, Ustica (Sicily), Tubbataha (Philippines), our annual Gloucester MA. Seal Dive, Grenada, our monthly dive safety briefings, Key Largo, Bonaire-and even a TSSC trek to Mt. Everest Base Camp to fight cancer! Can we top all *THAT* in 2019?! **YOU BET**!!!

In this issue we will read about our 2018 Diver of the Year, and our 2019 officers. And diving OMAN. We go back to EGYPT. And we dive to 100 Meters! And read about DAN's online education offerings. And TSSC's rescue refresher course. And go to DEMA and our Holiday party, see our photo contest winners and learn about our Featured Creature; attend the 2018 Explorers Club Sea Stories. Learn about the USS San Diego. Just some of the unique benefits of TSSC!

This current issue reflects our Club's active diving- fanning out all over the globe for fantastic diving. Come with us to our venerable Featured Creature column and see what is happening around the dive shop!

Find the articles of interest to you, then relax and enjoy — and make your plans, your dive adventures, and all your dreams come true—with... The Scuba Sports Club!

Gary Sea Swells Newsletter Editor



Hi Everyone,

Thank you all for a very successful year! The board works hard to put together activities that everyone will like participating in. We hope you join

us again next year for a year filled with fun, educational and dive trip related activities.

Having members that are actively involved throughout the year makes it that much more fun for everyone! It's been great meeting new members and sharing fun experiences throughout the year!

We hope you take some time as the year comes to a close to spend time with your family and friends relaxing and enjoying the holiday season! It's a great time to reflect the past year and recharge for the upcoming year. I know I will be!

So please be safe, stay warm and enjoy!!!

See you in 2019!

Sincerely,

Madame President

Denise Scuba Sports Club President

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Photos courtesy Hank Hall



## TSSC CLUB OFFICERS and DIRECTORS 2018

( We always welcome our Club membership to join our leadership

President Denise Blais
Vice President Ed Van Dolsen
Secretary Michelle Memoli

Membership Al Miller
Dive Planning Jack Ricotta
Treasurer Sheri Buchman
Program Director Amanda Slattery
Director at Large Gene Miceli

Director at Large Gene Miceli
Executive Director Kenneth Salstrom

Past President Denise Blais
Newsletter Gary Lehman
Environment and Legislative Judy Dronzek
Education and Safety Nick Lappano
Social Director Position Open
Webmaster Denise Blais

Legal Advisor Robert Schrager

Founder Zig Zigahn

Co-Founder Soliman Shenouda







Photos courtesy Hank Hall



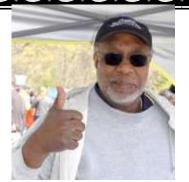
# Radar Lookout! Club Dive Trips, Deco Stops — Event Planning Calendar for 2019 (We love to hear new ideas!)



<u>ا</u>				<u> </u>
Š	Event	Club Contact	Date	Š
8	Wonders of the Sea 3D, LOEWS AMC Purchase NY	Judy Keznord/Gary Lehman	January 17	8
X	BULL SHARK/CENOTE DIVING	Jack Ricotta	January 24-28	X
18	LIDA Film Festival	TSSC Directors	February 9	18
0	Superbowl Party	Jack Ricotta	February 23	
Ż	Ocean Wreck Divers Flea Market	http://www.oceanwreckdivers.com/	March 3	X
¥	Boston Sea Rovers	https://www.bostonsearovers.com/	March 9-10	¥
$ \mathbf{Q} $	Beneath the Sea	Jack RIcotta	March 29-31	
8	48th Wappinger Creek Canoe	Bob Bak	April 28	X
X	Hudson Riverkeeper Clean Up	Judy K	May 4	X
18	Memorial Weekend BBQ/Dive	TSSC Directors	TBD	18
0	Dutch Springs Dive Expo	TSSC / https://www.dutchsprings.com/	June 8 (tentative)	
R	TSSC Dives Egypt Round Two	Jack Ricotta	June 15-30	X
X	Deco Stop Las Mananitas	TSSC Directors	July 21	X
$ \Omega $	Key West Bound!	Al Miller	August 2-9	$- \Omega $
Ş	Annual Seal Dive in Gloucester, MA	Jack Ricotta	TBD	Q
$ \mathbf{Q} $	Hudson River Kayaking	TSSC Directors	TBD	
18	Whale Watch	TSSC Directors	October TBD	18
X	The Explorers Club 2019	Gary Lehman	November 9	X
$ \Omega $	Hop Along Hollow Bunny Bingo	Judy K.	November TBD	$- \Omega $
Q	Deco Stop Ocean Wonders: Sharks!	Denise Blais	TBD	Ş
$ \mathbf{Q} $	Holiday Party	TSSC Directors	TBD	Q
Q	NYC Christmas Tree / Lights / Store Fronts and Dinner!	TSSC Directors	TBD	Q









#### CONGRATULATIONS TO ...



### **JACK RICOTTA**

The Scuba Sports Club's 2019

### **DIVER OF THE YEAR!!!!**



Each year The Scuba Sports Club recognizes one of its own as *the* stand out member of our community, and the diving community at large.

This year, The Scuba Sports Club has awarded *JACK RICOTTA* our *Diver Of The Year!* The award - a beautifully-crafted hammershead shark—specially made for Jack— was presented to Jack at this year's Holiday Dinner. Jack was thrilled with the detail and grace of the hammerhead shark, which highlighted the excellent hammerhead photographs taken by Jack on our club trips – organized in fact, by none-other-than... *JACK!* 

The award will be presented again to Jack by the Club President at the March 2019 *Beneath The Sea* Dive Expo in Secaucus NJ at the Grand Banquet!

The criteria are stringent, and generally include the following assessment criteria:

- Commitment to personal and group safety while diving
- Thoughtfulness and helpfulness to fellow divers
- Commitment to environmental awareness, concern and action
- A vigorous personal dive commitment and participation on Club and other trips
- Active participation in the Club functions and activities
- Encouragement of dive safety awareness and education
- Awareness and activism towards local and regional dive issues of concern
- Advanced the sport of scuba diving

In all these criteria and more, Jack has overachieved and we are indebted to him for his service and energy on behalf of our Club. Jack has greatly improved the life of the Club and has helped to expand the membership rolls via the exceptionally active dive schedule which he, as Dive Planner, pulls together for us all. We have traveled far and wide and seen many incredible cultural/historical sites as well as having adventure, friendship, and inspiring underwater adventures – thanks to Jack's leadership.

A hearty congratulations to Jack from the Club, recognizing his leadership and diving excellence!





































Robert Yarusso — First place — Untitled



Gary Lehman — First Place — "Seal Dive"



Gary Lehman — Third Place — "Sunrise"

## **Congratulations to our 2018 Photography Contest Winners!**

Last year's TSSC Photo Contest – "Above and Below the Water" was so successful that we decided to do it again! This is a friendly contest meant for members to exhibit their images. Fifteen members submitted 69 entries, 32 below and 37 above. Still images have great power. They reveal the beauty of marine animals and environments, and we can use them as a way to inform and show our families, neighbors and communities—and kids—about the legacy which we care about so much, which is increasingly threatened. No doubt that many environmentalists would call marine photography a "hope spot" - with the power to prompt the urgent corrective and protective measures to ensure the survival of our marine legacies.

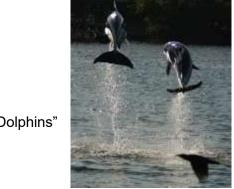
#### **Kenny Salstrom**



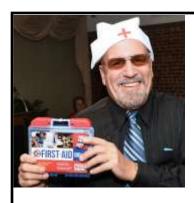
Denise Kurz — Second Place — "Rest On A Wreck"



Hank Hall — Third Place — "I See You!"



Gary Lehman — Second Place — "Dolphins"



## The Scuba Sports Club Safety Series



### **Safety Minutes**

Nick Lappano, Education and Safety Director

This year I will be serving as the Education and Safety Director. As such, one of my duties is to provide safety information to members of the Club.

To accomplish this, one of the things which I will be doing is presenting (or coordinating) a "safety minute" presentation at each monthly General Membership meeting. Although we are calling it a safety minute, it will be an open forum which will probably last about five minutes. Items regarding dive safety and the equipment and training required to dive safely will be discussed. Members are welcome to participate and even present a "safety minute" themselves to the group, with advance notice to myself and the President so that it can be including in the agenda. This can be based on personal experience or articles which one may have read in one of the popular dive publications out there. I especially welcome participation by members who are instructors, assistant instructors and dive masters, who as dive professionals, have vast experience which would be of great benefit to their fellow members.

If anyone wants a topic presented, let me know and I will try to put something together.

Please be sure to join the Club General Meetings to take advantage of the Safety Series presentations, which will be given by our Club Education and Safety Director Nick Lappano! Keeping safe practices in mind, and mentally practicing and pre-visualizing situations - can be crucially important to assuring safe diving always. This is especially the case when multiple circumstances suddenly present at the same time, creating potentially dangerous and adverse situations. Correct and automatic responses are a function of awareness, anticipation, training, practice, and forthright actions. Our training, reasoning and anticipation are our very best defense!. ...GL







## Diving the Hallaniyat Islands of Oman by Scuba Hank NYC

Article and Photos: Hank Hall (https://www.youtube.com/c/henryhallnyc)



I have been told by many people that Persian Gulf and Arabian Sea diving is underrated and presents a high density of marine life. In November, I had the opportunity to dive off the coast of the Sultanate of Oman. Oman is located in the southeastern coast of the Arabian Peninsula. On land, Oman is bordered by UAE, Saudi Arabia and Yemen. Oman's climate is hot and dry in the interior, and humid along the coast making for a perfect break from New York's cold weather.

Traveling to Oman was quite easy. As they say, finding exceptional diving requires flying on at least 2 airplanes. We flew out of JFK (Terminal 7) on Qatar Airways. Our first flight to Doha, Qatar was about 12 hours. And after a short 2-hour layover, we boarded our final flight to Salalah, Oman where we would meet the liveaboard. The Salalah flight was just under 2 hours. Qatar Airways delivers a decent economy product on both flights. And we were lucky, our flights were not that full and we were able to stretch out a bit with a seat free in between.





Once in Salalah and after we collected our luggage, we transferred to the host hotel which was about a 30 to 40-minute ride. The transfer was quite pleasant. We were presented with lovely desert views and free roaming camels along the highway.

We arrived a few days earlier to acclimate to the 90-degree desert weather. We stay at the Salalah Rotana Resort which is a short 5-minute walk to the marina where we later met the Oman Aggressor. The Rotana Resort is a very large property which can accommodate about 400 guests. The hotel has several pools, restaurants, along with a very large beach. Our only regret was not to take the hotel's all-inclusive add-on package as the exchange rate unfavorable to the \$USD (\$1 Omani Rial to \$2.60 USD). The Marina has a few restaurants and shops. On Friday night, the marina presents local entertainment in a very safe environment. On our transfer day, the hotel drove us and our luggage to the marina on a golf cart.









The Oman Aggressor is the only liveaboard that covers the region with two itineraries. In mid-November the yacht travels south to tour the Hallaniyat Islands. The Hallaniyat Islands is a chain of 5 islands located about 85 – 125 miles north of Salalah.

The Oman Aggressor is a relatively new yacht in the Aggressor Fleet. It's been in service for just about 2 years. This has been the nicest Aggressor yacht I've been on. I lodge on the lower deck in a comfortable stateroom with two single beds, side by side, private shower, private bathroom, porthole and airconditioning. It was very comfortable having the shower separated from the toilet. The dive deck was large and very functional. Each dive station had ample space and a box below to store personal belongings. Also, the deck had plenty of cubby holes for dry gear and two large camera charging stations. The main dining room and salon was quite large and spacious. Two large TV monitors made dive briefings very easy to follow. On the upper decks, there was an additional lounge area with bar and the sun deck featured a hot tub which I never used. The food met typical Aggressor standards and the crew on board was quite friendly and helpful.

During the week diving conditions were great. The average air temperature was 80°F, average water temperature 78°F, visibility underwater was about 25-50ft, and wind speed was about 6-18 knots. Diving in a 3 or 5 mil wetsuit was comfortable even on night dives. Most of the divers executed between 20-23 dives.

We spent 5 ½ days diving around the Hallaniyat Island chain after our local check out dives. Each morning most of the divers on board arose from their slumber around 6am for a light breakfast following by the dive briefing and we were in the water by 8:30. Nearly all of our dives were off 2 tenders. Some dives we able to end our dive under the main yacht. And most night dives were executed off the main ship.





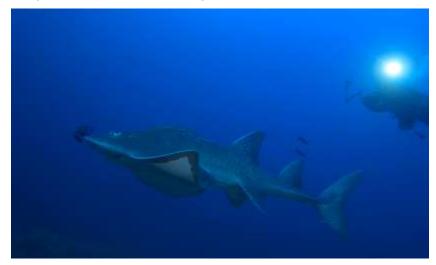


## Diving the Hallaniyat Islands of Oman ...



During the first day of diving we spotted many different types of eels, cuttlefish, blue spotted stingrays and many other species of fish. However, this was only the warm up for the second day of diving. We arrived at Al Hasikiyah Island and on our first dive we met very large bowmouth guitarfish (Note: I'll post a video to YouTube soon and provide a link). On our second dive we met a Leopard Shark resting along the reef. And to top it off after lunch a Humpback Whale decided to swim around the boat forcing me to abandon dessert. It seemed the crew was just excited as us to see them. We quickly grabbed cameras and bolted into the tenders to get a closer look. We spent about 2 hours watching the large whale swim around the dark blue bay.

A day later we dived slightly north of the Hallanyiat Islands. We were completely in the open sea. We did not see any island formations or mainland around us. This area hosts a site rightly named Fish Highway. We spotted thousands of fish here – malabar groupers, snappers, fusiliers, moray eels, scorpionfish, porcupinefish, rays and much more. The dive site is quite intense due to the density of fish. Plus, visibility is great – a good 100ft. And after lunch, we were visited by a pod of dolphins. And again we jumped in the tenders to get a closer look!



On the second to last day of diving we were at a site called the Hasikiyah Coral Bay. Here we found a ton of Moray Eels, Octopus, 2 curious jawfish and a big school of mobula rays which I was too far away to capture on video.

On our final day of diving we sailed back to the mainland where we dived a site called Ras Mirbat. Visibility at the site was not that great for taking video or picture of schooling fish. But it was perfect for finding nudibranchs, slipper lobsters, dozens of moray eels, octopus and scorpion-fish.

During the week, my top animal sighting were the Guitarfish, Leopard Shark, Dragon Eel, Cowrie Snail and Humpback Whale (during the surface interval).

I would highly recommend this dive trip during the November time frame. The Oman Aggressor offers trips in the North and I'm looking forward to exploring that region in the upcoming seasons.

Photo from the week can be found here: <a href="https://flic.kr/s/aHsmoqAfWf">https://flic.kr/s/aHsmoqAfWf</a> Video will be found here: <a href="https://www.youtube.com/c/henryhallnyc">https://www.youtube.com/c/henryhallnyc</a>



Diving the Hallaniyat Islands of Oman ...







#### **David Henry**



My plan was to stay at one location on the Red Sea, and do day-long dive trips and land trips. Accordingly, I booked Albatros Aqua Park in Hurghada, Egypt on the Red Sea for 2 weeks. I left on Friday November 2 from JF Kennedy Airport on EgyptAir. Upon arrival in Cairo I had to switch planes; I got my visa and settled in for a 3-hour wait for the next plane. Security was heavy with checkpoints here and there. Shoes, pockets, body checks - and I even had to take my watch off. Laptops however were allowed to remain in carry-on bags. Even after reaching my destination, the security team x-rayed my luggage yet again!

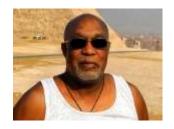
The taxicab to the resort ran me \$10 from the airport, and I was there within 10 minutes. Albatros Aqua Park and Resort is a beautiful place. So immaculate that you could eat off of the floor. The staff went out of their way to please newly-arrived guests. Really, superior service. My room was nice, with refrigerator, air conditioning, balcony; there was plenty of closet space, a safe for valuables, three beds, a sit-down shower - but truthfully the room could have benefited from more electrical outlets.



I arranged to have a meeting with the concierge staff for local tours, and met up with them on Monday morning. I booked a Cairo trip which came to around \$100. I also booked a trip to see the Luxor antiquities for \$115; this included the English-speaking guide. I also booked local diving for 5 days at a cost of \$200. All these prices included hotel pick up, lunch and drop off. The trip to Cairo took about 20 hours there and back in a big bus. Luxor was about 18 hours in a smaller bus. The scuba shop kept my dive gear and cleaned it each day. That worked out pretty well and was pretty convenient!

If you are planning to visit Egypt and traveling through the country, I suggest you be aware of these considerations, and bring these necessary items with you:

- -Toilet tissue--- not every place has this amenity readily available, and if they DO, they are likely to charge you for use of same
- -Water--- bring the hotel water with you on your travels. Even on the bus trips that you pay for, they charge for water. It is all bottled water but -- make sure the thin plastic wrapping is on the unopened cap. Unscrupulous practice exists where bottles are refilled with tap water. That can lead to rather bad outcomes. So to speak... and Yes, even the restaurants charge extra for water.
- -Egyptian small change--- vendors will charge you for the use of the toilets. What they usually want is an Egyptian 5 pound note. If you give them a US dollar, you gave them 175 pounds. You can forget about getting any change back. Also --- with the vendors, small change means better deals. Big US dollar bills means they won't let you go. The ATM machines will break the US \$20 and up dollars into Egyptian pounds; ATM's are everywhere. Use them. The vendors will accept \$1 bills but prefer \$5's and larger, and they prefer the Euro over the US dollar.



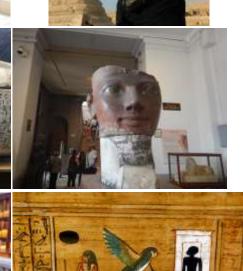
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David Henry

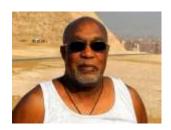
The Cairo trip included the Cairo Museum, The Pyramids at Giza, and a visit to a fragrance factory. Everything works on 'baksheesh' ... that is, a "tip" or a "bribe" – whatever term you wish to use... With the single fair paid however, everything *else* was included - the tour, entrance fees, bus ride, history and generally sufficient time allowing the visitors to see the sights. It also included heavy security, a tour of the city by bus -- and one of the worst traffic situations I have ever seen. The Cairo tour had a 2am hotel pickup with return to Albatross at about 11pm.

For the Luxor trip I could 'sleep in' to 4:30am, with a return home at about 9:30pm. Again, police and military check points all along the way. On our trip, the police did not actually board our bus, but there were a lot of check points. All along the way we saw the gardens and rich farm land. From corn to sugar cane -- and everything in between. Lot of donkeys and horses, for human transport and also pulling carts. Mini and even min*ier* transportation, like in the Philippines. Lots of people dressed in various Arab and Muslim attire. They crossed the busy streets with great agility and intrepidity, which is something like moving with death-defying peril through moving traffic! Irrigation rows with water pumps feed the many farms. Lots of farmers, in their full attire, working the fields. Plenty of street vendors, selling whatever they can get to sell. The towns along the way to Luxor seemed tidier and cleaner than those along the trip to Cairo. After the tour we were taken on a ride across the Nile, then we ate at a fancy restaurant and visited a stone factory, where they made articles using the old way style!











Expect to spend money!! The street vendors will sell you stuff for nearly nothing, and will also try to stop you from getting back on the bus if they see you are even slightly interested. Life must be very tough for these street vendors. Tourism seems down in Egypt. The store shops will milk you for every penny you got, if you let them. They will also tell you, you can charge it and keep your cash for other things. That didn't work for me, because I left my charge cards in the safe back at the resort!

The staff charges you to take pictures in the Cairo Museum. The Museum displays are moving next year to a newer, more modern facility. The new digs will be bigger, and the plan is to display ALL the antiquities, including those currently stashed away in the basement. It should have audio and visual displays, which will supplement the tour guides.

Luxor also charges 300 Egyptian pounds for photography privileges at the Tombs. My guide got me a deal for 100 pounds which included photo cards and CD's.

November is the winter season, and temperatures were moderate - in the 70's and 80's. I had to put on a sweater one of those days. I brought a 3mm wetsuit and I was fine. When I was there 10 years ago in September, it was a lot hotter - in the 90's and 100's!

I endured the eleven and  $\frac{1}{2}$  hour return flight from Cairo to JFK. But to its credit, EgyptAir provides earplugs, tooth brush and toothpaste, eye cover patches to facilitate sleep at no charge, and of course blankets and pillows, along with plenty of leg room, a wide range of movies, USB charge ports, two pretty decent meals, and snacks. (But no alcohol...) They didn't charge me for my luggage either coming or going.

I plan on returning in 2020 to see the new Museum and for more diving! The taxi driver said it was better diving farther down the Red Sea, but I had several excellent dives around Hurghada. For the price of airfare and time traveling, I plan on spending two or three weeks next time, and stay in different places. There are resorts springing up everywhere, seeking to greatly increase the tourist presence. Most of the fellow tourists/divers were Dutch, German, Swedish and Russian. I was pretty much the only American and black tourist. But Yes, I felt safe, very safe.

There is sooooo much more to tell you, but the newsletter has to end at some point! In the next section, I will cover the diving in Egypt!





Egypt: The Diving!!

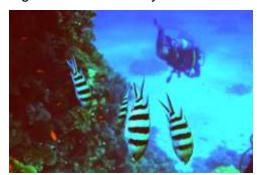
I located and contracted for diving with a good scuba shop which I felt comfortable with, Egypt International, located at Dana Beach. They picked me up each morning from my resort, kept and cleaned my equipment, gave me a *nice* lunch, and returned me to my resort. I did 10 dives with them. There were a few unique considerations with them:

- You and your buddy check out each other's equipment
- You set up your own equipment. I had to get an adapter for my tank. They claim their way is better than ours.
- In Egypt, they do not use anchors; instead, boats are usually 'rafted up' and tied to each other at the dive sites, and on the bottom. This is a problem because when a boat wants to leave, and you return to your original boat location, it just might have moved. You have to remember the name of your boat!
- They have a dry area on the top of the boat. No shoes of any kind.
- You can look but not touch, you can photograph to your heart's content but you cannot take anything from the sea.
- At a number of the dive sites we visited, we stayed at one end of the site for the first dive, and then moved to the other end for the second dive.

We were treated to calm, easy, pleasant, warm diving; I used a 3mm in December. The dive masters usually went out with 6 to 10 divers under their shift. No rush. Deepest was about 60 feet: clear, clean, no garbage water.

And of course, they don't use lbs., they use kilograms. I found the right buoyancy using 9 kilograms of weights, and was a little bit more heavily weighted than I normally am.

- These are the sites that I dived:
- ♦ Gota Abo Ramata East and West
- Torsl Far El Shaherd
- Shaab Petra
- Abu Ramada Island
- ♦ Shoup Talata
- Gotr Makadi
- Ras Disre









Egypt: The Diving!!

There were plenty of fish, brilliant corals and fun diving. My first dive was on Friday, and then I was diving from Monday to Thursday to fill in the 5 days. After the long tour on Sunday, I was a bit tired for diving but got reenergized and enjoyed it greatly!

Plan to go back? Yes! There are more dive sites in the southern regions of the Red Sea. I was told that there are more fish, turtles, dolphins and other creatures that I missed, this time.

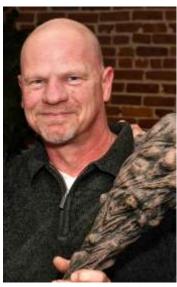
The resort was booked through Heroes Vacation Club. You must be a veteran or government employee to use that site. It cost me \$349 for the week, plus tax. That means 1 to 3 people in the room for that price, not per person. For non-vets or government employees, use TRIP Beat. They charge \$399 for a week. Same company, but you'll deal with different people. BUT YOU ARE ADVISED TO READ THE FINE PRINT for both. I didn't realize that there was a mandatory food charge. It only cost me \$200 for the week and included all meals and all (yes, ALL) drinks - beer, wine, mojitos, vodka, rum, scotch whiskey, juices and water. This resort only had two shops, but nearby resorts had plenty of more available shopping.

These resorts usually feature full kitchens, pools, gyms, parking, washer and dryers, 24-hour desks and a whole lot more - but it all depends on the resort where you are staying. Prices DO change at different times of the year, so do take that into consideration. Heroes Vacation Club has properties all over the world. They are an RCI offer site, so you don't need timeshare, and I was not forced to take their tours. BUT READ THE "FINE" PRINT THROUGHOUT AND AT THE RESORT!!!

I used HVC in Aruba, St. Martin, Puerto Rico, the Poconos, Egypt, Reno, Las Vegas, Mississippi, Orlando, Dominican Republic, Cayman Islands, Hawaii and Bahamas. And am planning on using them again for Kenya, Tahiti and Japan!







#### **TSSC Rescue Diver Refresher Session**

John Frercks

Practicing and refreshing the skills which you have learned in the recent past is the best way to be prepared to *actually use them immediately* when and if the need arises. Some skills are fairly routine and do not have crucial, immediate importance, for example balancing your checkbook, skiing downhill, or calculating the Mean Time Before Failure of the light bulb you just installed -- but one skill set which we all hope to never need to use is to effect a rescue for one of our SCUBA diving buddies. Fortunately, diving emergencies are few and far between -- but we don't typically get to review and physically use or practice the rescue skills we have learned. Thus, we are at risk of not being instantly current in those skills in the dire, life or death situations we just might find ourselves in.

In September, TSSC board member Melissa Lonquich put together an opportunity for us to refresh our skills in a controlled environment. Thanks to Rob Weintraub of the SCUBA NY dive shop, and Joe Russo (a certified instructor in many, many disciplines), several TSSC Rescue Certified club members got together at the SCUBA NY shop pool for a 4-hour Rescue Skills Refresher Session. The session began with the divers setting up their dive gear and changing into their swimsuits. We then spent a brief time in the classroom for a multiple-choice knowledge review, and to eat some doughnuts or "Energy Pills" as Rob called them. Now being full of renewed energy, we headed out to the pool to get wet.

The review reminded us of the basics:

- The best way to rescue someone is to not have to rescue them at all.
- Check your dive equipment before beginning the dive, and
- Don't dive beyond your training and experience.
- Also -- to remember not to become in need of being rescued yourself while you are helping someone else.

We then moved on to each rescue skill: rescuing a tired diver, a panicked diver, and an unconscious diver. Each of us got to practice our skills 'rescuing' our fellow divers.

Everyone came away from the session having had the opportunity to review, practice, and refresh their rescue skills -- with the hope we will never have the need to use them, but with the confidence that we will be better prepared to use them if and when the need ever arises.

Now that the local dive season has concluded, THIS is the time to intensify diving education – including refresh of rescue skills – so that when we start diving again, we'll all be primed and ready to help out for fellow divers in an emergency. Adventurous and Safe Diving to all!





Stephen Reichenbach



Steve Reichenbach, Steve Tippets (L->R)
Photo by Doug Ebersole

Deep diving prompts differing reactions from people. This article provides context around deep diving in general, and will discuss my own experiences (and personal path leading to) deep diving. The truth is that I never set out on this journey with any intention of scuba diving to 100 meters (328 feet). Rather, my steadfast objective all along was to just keep building my scuba diving knowledge, become a better diver, and help out and share what I have learned along the way with my fellow divers. For me it has been an amazing, educational and skill-building journey, and was never a 'death-defying derring-do' or grandstanding in the manner of "who are you trying to impress?". Because we all know very well that at depth, there is little to no room for error, and false bravado often leads to tragic outcomes...

The kickoff was when I was certified by my YMCA scuba diving instructor at the start of my diving career. I enjoyed my first "warm blue water, pretty fish" scuba dive in the paradise of the waters of Eleuthera in the Bahamas. I was the only diver at the resort at the time, consequently the British divemaster and I had the opportunity to make many enjoyable dives together. After building a base of diving experience, we successfully achieved a milestone of the 100' depth. (Somewhere stashed away here amongst all my diving memorabilia there is a photograph of my capillary depth gauge, registering that first triple-digit dive!). The US Army's *Underwater Operations Course* requires a 130' dive, and soon the waters off Key West provided the proving ground for that next and important milestone. With that confidence-building base of experience, I descended with my dive buddy to 140' at Saba. This was my first dive with an SPG (submersible pressure gauge), which my British dive buddy referred to as a "contents gauge". The stage was thus set for further (that is, deeper) scuba dives in the future.

With my retirement came the opportunity to intensify and increase the pace of my diving education and skill building. I have been very fortunate to have had highly-experienced, well-known instructors who have lighted the path forward for me in my diving. Education is the key; diving is all about physics and formulas and responding accordingly. I endeavored to take at least one course each calendar year (and usually more than that) in order to improve my knowledge and physical skill set. It began with "Introduction to Technical Diving" under the watchful eye of renowned author and diver Bernie Chowdhury. Bernie guided me through the advanced equipment provisioning needed for technical diving. Through his incisive instruction, sharing and generosity of spirit we have become lifelong friends. We completed most of the open water training at Dutch Springs, because depth was not an issue (at least, not yet). We then progressed to the "Advanced Nitrox" course which trained me to use up to 100% O2, then the "Decompression Procedures" course - which provided a 150' bottom depth. These courses were all successfully completed in 2008. In 2011, I traveled to North Carolina and explored among others the wreck of the freighter Manuela at 156', sunk in 1942 by German submarine U-404.



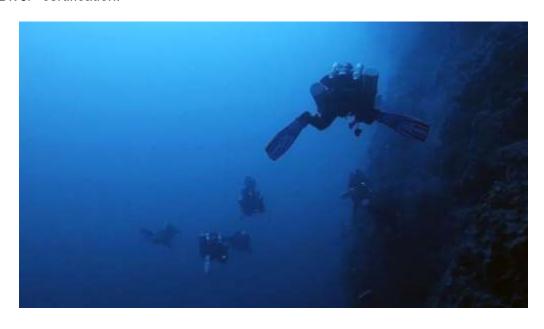
Stephen Reichenbach



Steve Reichenbach, Steve Tippets (L->R)
Photo by Doug Ebersole

At this stage of my advancing diving education, it was time to learn and train on the mixed gas called Trimix. This is a gas mixture in which helium replaces a percentage of the nitrogen in air, allowing the diver to dive deeper than is possible on air. There are two Trimix certifications, "Trimix" or sometimes known as "Normoxic Trimix", since it contains between 18% and 21% O2, and this mixture can be safely used from the surface to a maximum depth of 200 feet. The second certification is called "Advanced Trimix". In this instance the Trimix is not breathable till you reach a variable depth (depending on the percentage of O2 you are breathing; but it can then be breathed down to the maximum depth of the dive. This certifies you to go to a maximum depth of 300 feet. I completed my "Trimix" class in 2014 with the extremely capable and well-known diver John Chatterton (who with Richie Koehler discovered German submarine U869 off the coast of New Jersey, as documented in the book Shadow Divers). The Trimix class was not long, but it was intense! The class was given in Pompano, Florida on the wreck of the Lowrance at 200 feet, which I was now certified to dive on. I then traveled to Grand Cayman and spent a couple of days technical diving with Phil Short Technical, gearing up for the "Advanced Trimix" dive where we did a 211' dive for 78-minutes.

In order to expand the reach and range of my scuba diving education, in 2015 I was trained and certified on a KISS Closed Circuit Rebreather by my good friend and mentor Doug Ebersole. (My KISS rebreather experiences were published in my article "My Journey to KISS" in a prior issue of Sea Swells). Rebreather technology is a much better choice for deep diving than open circuit for a number of reasons. For one thing, the amount of gas which can be carried is far greater! A rebreather provides literally hours more time underwater than can be achieved with a set of doubles. However, the downside of using rebreather technology for me was that I was now certified to only 160' on my KISS, with air as my bailout. I also decided to advance my open circuit diving skill set by getting my "Solo Diver" certification.





Stephen Reichenbach



Steve Reichenbach, Steve Tippets (L->R)
Photo by Doug Ebersole

My journey continued to the South Pacific in 2016; one of my stops was the lovely island country of Vanuatu (located equidistant between the Solomon Islands and Fiji). I spent a week diving the 650' *SS President Coolidge* which was sunk during WWII, and is now the main attraction for divers on Espiritu Santo. It was run aground after striking two American mines, and now lies with the bow in 30' of water and the stern in 200'; it is a shore dive and if you have a passion for wreck diving this is a "must do". We did 7 dives on it to the maximum depth of 188 feet in a 63-minute dive, all on air and single aluminum 80's. We staged another 80 at 20', and our guide carried a spare 80 with him. It is a great wreck and we did get to see the captivating "Lady and the Unicorn" porcelain panel which is deep inside the ship.

2016 was a busy year for me! After returning from the South Pacific I went back to Grand Cayman, and attended Innerspace 2016 with Doug Ebersole. At that time I picked up my "CCR KISS Normoxic Trimix"



d up my CCN NI33 Normoxic minix

Then, in pursuit of additional scuba training and education, I went to Cozumel and completed my "Full Cave Diver" course on CCR.

Nine years and many courses after I started my tech dive journey, I once again traveled to Grand Cayman with Doug Ebersole for *Innerspace 2017*. *My new goal had come into focus: to dive to 300' on my KISS CCR, and earn my "CCR Trimix Diver" certification – which is the top of the current certification roadmap!* We did several warm up dives to 200', and then conducted a bailout drill. We were at 273' when I was given the CCR blowout signal, and had to bail out onto my open circuit backup. I was carrying two 80's for bailout; one had a 10/50 O2 and helium mix, and the other contained 50% O2. By the time I ascended from 273' to 75' (which took about 8 minutes), (at which depth I could switch to the 50% tank), I had expended almost the whole tank of 10/50. (...A perfect example of why you don't want to dive deep on open circuit!). The entire dive end-to-end duration was 96 minutes.



My Journey to 100 Meters

Stephen Reichenbach



Steve Reichenbach, Steve Tippets (L->R)
Photo by Doug Ebersole

On May 23rd, 2017 - with all of the required drill dives successfully completed, our confidence level strong, and with sustained high readiness, it was "post time" -- *the moment of truth had arrived!* We went for the qualifying dive! Steve Tippets, the senior instructor at DiveTech led us off into the deep blue. I have known Steve for several years, as he had been my first instructor on KISS. Doug was next to me with his camera as we started the descent. We took 15 minutes to dive to the edge of the wall at 60', making all our checks twice and mentally preparing for the upcoming descent. When we reached the edge of the wall we went down like underwater skydivers in the deep blue. There were no bubbles as everyone was on CCR, and it was surreal as we glided down the Cayman wall. It only took 6 minutes to get from 60' to 332' or 100 meters. I did it! The ocean around us was still light, but was an eerily dark blue color, very unearthly - but peaceful, with no noise and no bubbles. We stopped our descent, Doug took a picture of Steve Tippets and I savoring the moment of achievement. We then started ascending without additional delay, because the decompression time extends at a very fast rate at that depth. We slowly ascended the wall with our first decompression stop being at 130'; we took 23 minutes to work our way from 332' to 110'. We then started our long decompression time, exiting the water after 141 minutes total dive duration.

Photos by Mike Wynd











Stephen Reichenbach

One question comes up time and again... what was it like down there at that depth? What kind of preparation is necessary? In response, there is no discernable physical difference felt by the diver at 332' in terms of pressure; it is comparable to being in the bathtub. However, it is imperative to plan the dive, dive the plan, and check the plan twice. The diver needs to be uncompromisingly familiar with the equipment, and similarly instinctively bonded to all contingency plans for any kind of equipment failure. The deep diver at this level requires a lot of gas - and has to be constantly and crucially aware that decompression times increase exponentially the longer at depth. A completely-trusted dive buddy is also crucial; divers have to be 100% confident and have total faith and trust in their dive buddy - and reciprocally. Diving at this level requires a careful plan for equipment failure, and well-rehearsed backup plans must be in place. Down deep is no place for panic when something goes wrong, and situational awareness is top priority. I have had the privilege of diving with some of the best divers in the sport during my dive career, and that alone made it profoundly rewarding. Diving with friends on casual dives is tremendous fun, but when diving with leaders in the sport, every dive provides tremendous learning opportunities!



Steve Reichenbach, Steve Tippets (L->R)
Photo by Doug Ebersole



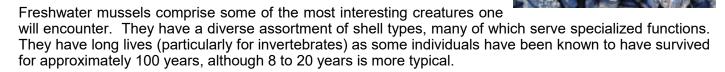
#### Rick D'Amico

### **Freshwater Mussels**

Here along the Atlantic Coast, when most people think of mussels, the blue mussel (pictured right) comes to mind. They live in salt or brackish water, and we probably know of them because of their value as a de-

licious food. They're also easy to find, as they tend to form lush growths around rocks and pilings. However, fresh water is also home to a number of interesting mussels, and some of them have commercial value, although not generally as food.

This article will deal with freshwater mussels of the order Unionida, which includes most of the larger freshwater mussels and are native to North America.



Unionids are filter-feeders. They bury themselves in the sediment. However, since their siphons, the organ with which they take in water, is generally short, they do not bury themselves deeply. Usually the posterior part of the mussel, which contains the siphon, sticks out of the sediment. They filter phytoplankton and zooplankton, suspended bacteria, fungal spores, and dissolved organic matter from the water column. Thus, they may influence water clarity.

In turn, they are fed upon by a number of animals. Their principal predator is the muskrat, but they are also preyed upon by birds, raccoons, minks, otters, skunks and fish. They are particularly vulnerable to predation as juveniles, when their shells are weak.

A more recent threat to native species of mussels are zebra mussels. The picture to the right shows a native mussel that has been infested with zebra mussels. An invasive species, zebra mussels have reproduced and spread rapidly throughout the region. The zebra mussel larvae settle and attach themselves to the native mussels' shells, creating a couple of problems. When the zebra mussels form colonies several mussels deep, they extend past the native mussels' siphons and prevent them from taking in water. This hampers the ability of the native mussel to obtain oxygen and food.

Mussels possess of a pair of shells, called valves. They are pretty-much equal in size and they cover the living portion of the mussel. They're shut tight with an elastic ligament. They have no eyes, ears, or noses, they cannot hear, see, or smell things. They do have other organs, such as kidneys, a mouth, and a heart. They have a circulatory system, which carries oxygen through their bodies. Typically, they are simultaneous hermaphrodites, which means that they possess both male and female sex organs at the same time. They are capable of limited mobility via a muscular foot that can protrude through the shell and allow the mussel to move laterally or dig and partially bury itself. They do not travel very far—their distribution can increase when they reproduce, as we can see from their life cycle.

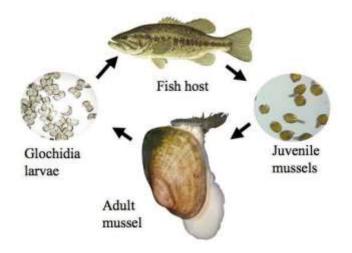


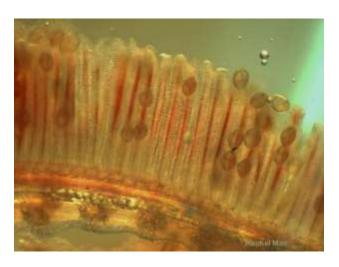


### Rick D'Amico

#### FRESHWATER MUSSEL LIFE CYCLE

Unionid reproduction is extraordinary and very effective. The illustration on the left side of the paragraph depicts the reproductive cycle of the Unionid mussel. Male mussels release sperm into the water column, which is filtered by the female mussels. This fertilizes the female's eggs. Microscopic larvae called glochidia are formed. The glochidia are parasitic and attach themselves to the gills or fins of a fish. In order for this to happen, the mussel must make contact with the fish. Some mussels can use a portion of its mantle (an organ in mollusks that, among other things, secretes shell material) to mimic the prey for the species of fish that carries the glochidia. The fish strikes at the would-be food and the mussel releases the glochidia into the fish's mouth. Given that mussels have no sense of sight, hearing or smell, this makes it very remarkable that they can lure fish to them to release their larvae into the fish's gills. As the glochidia approach the fish's gills, they clamp on to them and begin a parasitic existence, obtaining nutrition from the fish. The larvae are so small, that they don't affect their host fish. After a few weeks, the parasitic larvae have developed into juvenile mussels and drop off the host fish and settle on the bottom. If the juveniles land in a suitable habitat, they can become adult mussels. Sometimes this mussel/fish relationship can be very specific as one species of mussel will only parasitize certain species of fish. In most cases, one species of mussel can use multiple species of fish to reproduce. For example, host fish for the triangle floater mussel include the common shiner, blacknose dace, largemouth bass, pumpkinseed sunfish, and several others. This process benefits the mussels by helping them to become distributed throughout a waterway. The photo to the right in the paragraph shows glochidia attached to the gills of a host fish (credit Rachel Mair).







#### Rick D'Amico

#### **ECONOMIC AND CULTURAL VALUE OF FRESHWATER MUSSELS**

At one time, freshwater mussels were important for Native Americans, particularly tribes in the Midwest. They were gathered for food, but their shells also had value for tempering pottery and tools, utensils, and jewelry.

In the late 1800's, they were important to a newly-established button industry in the U.S. The nacre (inner shell) of mussels, otherwise known as "mother-of-pearl" makes up the outer layer of pearls. (See photo to the right) It was also used to make buttons. This led to wide-spread harvesting of mussels, and at the time, conservation measures were rarely, if ever, practiced. Between the intense harvesting and mussel habitat destruction, the freshwater mussel population declined. Today, with the reduced demand for mother-of-pearl by the button industry, the freshwater mussel population is less threatened than it was, but conservation still becomes important.



Freshwater mussels are used mostly in the Far East for the cultured pearl industry. Different species of freshwater mussels have varying colored nacres. Depending on the species, freshwater pearls will vary in color.

#### FRESHWATER MUSSELS WE'RE LIKELY TO SEE WHILE DIVING

#### The Eastern Elliptio—Elliptio complanata

The Eastern Elliptio is widespread throughout our area. It is the most abundant freshwater mussel in the northeastern U.S. It is found throughout the Atlantic Slope drainage in the U.S. and Canada. Between its

larvae's ability to parasitize a number of species of fish and the adult's tolerance for a variety of environmental conditions, it is well-suited to be widely distributed in our area. It can inhabit a wide range of bottom substrates, including sand, silt, clay, sand/gravel, cobble and large rocks. Its larvae are known to occupy the gills of yellow perch, banded killifish, banded sculpin, white perch, blueback herring, numerous centrarchid (sunfish and black bass) and other species. This adds up to the Eastern Elliptio being so prevalent in our waters.





#### Rick D'Amico

#### The Eastern Lampmussel--Lampsilis radiata radiata

The Eastern Lampmussel has a somewhat oval shell and grows to up to six inches in length. It can frequently be found in ponds, lakes, streams and rivers and tends to prefer sand or gravel substrates over mud. Like the Eastern Elliptio, it uses a number of species of fish as hosts for its glochidia larvae, including: rock bass, pumpkinseed, bluegill, and smallmouth bass.

It ranges along the Atlantic Coastline, from Nova Scotia to the Carolinas and throughout the Great Lakes. Its population is considered generally healthy and stable through its range.

The State of Connecticut has published a very good guide for freshwater mussels in the region (<a href="https://www.ct.gov/deep/lib/deep/wildlife/pdf">https://www.ct.gov/deep/lib/deep/wildlife/pdf</a> files/nongame/fwmusl.pdf). The mussels can be tricky to identify at first, because many of them are similar in appearance.



[During the 1990's, Rick D'Amico participated in freshwater mussel surveys and zebra mussel control projects in Lake Champlain and the Poultney River with the U.S. Fish and Wildlife Service and the Vermont Department of Environmental Conservation.]



### DEMA - Diving Equipment & Marketing Association Convention – Trip Report

Jody Deevy



Diving Equipment and Marketing Association, is an international organization dedicated to the promotion and growth of the recreational scuba diving and snorkeling industry. (source: <a href="www.Wikipedia.com">www.Wikipedia.com</a>)

Each November, resort owners, equipment manufacturers, underwater photographers, training agencies and dive store and travel personnel from all over the world make their way to the USA to attend the DE-MA show. Officially, "The annual DEMA Show, the largest trade-only event in the world for companies doing business in the scuba diving, ocean water sports and adventure/dive travel industries, attracts hundreds of exhibitors and thousands of dive and travel industry professionals from around the world." Just think Beneath the Sea on steroids - but for the industry only - not consumers.

This past November, DEMA was held in the Las Vegas Convention Center from the 14th - 17th. The show alternates between Orlando and Vegas which seem to be favorites with the industry exhibitors and members. It was also held in New Orleans for many years until Hurricane Katrina decimated the city. There are plans to go back to New Orleans in 2020 and everyone is excited to return. It runs for 4 days and with all the booths to visit, informative seminars to attend, scheduled meetings and festive "happy hours" to stop in at, 4 days go by very quickly. This is the one opportunity in the year when you can meet with manufacturers, sales reps. resort owners and destination specialists face to face. Dive store owners often place merchandise orders to obtain special rates and get hands-on training and insight as to what is new in the product line. Resort owners are proud to show off renovations or new boats and facilities added. Many will host an hour-long seminar to showcase the resort and gladly answer any questions about the islands, destination and logistics. They want you to know what the diving is like, how good the food is, what is the best time of year to visit, and if there is shopping nearby. Any and all questions come up, so you go away will all the knowledge to successfully be able to sell the resort and book dive travel. There are all kinds of sponsored seminars for marketing, sales and operations. I would typically attend the travel seminars to remote or new areas that I have never been to and come away with tremendous knowledge of the destination, and am able to determine if this is a good fit for my travel program.

The show floor can be overwhelming and bustling crowds are everywhere. It is best to go in with a floor map and a plan, or you will waste a lot of time wandering around trying to find what you need. Appointments are scheduled months in advance with your current Rep and possibly with a Rep for opening a new product line. Many people go to just walk the aisles and pick up the abundance of trinkets and flyers on the tables. I have more pens and tote bags that I could ever use! Sometime you are even able to purchase items at the end of the show if available for sale (and the exhibitor does not want to pack it up and bring it home). Many remote resorts buy lots of items as it is cheaper to carry in your luggage or check a box as opposed to shipping overseas.



### DEMA - Diving Equipment & Marketing Association Convention – Trip Report

Jody Deevy



There are interesting special areas, such as the New Product Showcase. Wyland the artist often has his artwork on display and new innovations in technology. The latest photography equipment is proudly being displayed, GoPro

draws a huge crowd and the Russian dive folks have been known to serve caviar and vodka shots. There are tributes to the Women Divers Hall of Fame, and interesting key note speakers. Stan Waterman is usually drawing a crowd and the "Who's Who of the Industry" can usually be spotted. There are so many things to see if you get to walk the floor, but when you go to work you pretty much stay put and miss out on a lot. Even some staff from BTS attend the show, and you will see them on the show floor diligently making their way around securing exhibitors for the next BTS show in NJ.

I have attended more than 25 DEMA shows as an attendee, previously due to my position as a dive travel professional and with the dive shop. These past few years I have been an exhibitor with the Marco Vincent Dive Resort in the Philippines. There is a large Philippine Pavilion where all the resorts can have a stand/table and we also have an additional booth, just like BTS with brochures, videos, Philippine treats and the ever-popular giveaway. Past guests flock to the booth to say hello to staff and the owners and relive the good times of the trip. Many pictures are taken and they happily join in sharing their "oh, you gotta go, it's a great place, and the diving is amazing".

Micronesia, South Pacific, Cayman Island, Indonesia, Bahamas, Mexico to name a few have huge pavilions and two side of the rows for a destination experience.

The Navy Experimental Diving Unit is quite popular and there is ALWAYS something new to see and learn. I have always found the networking opportunities crucial to building long-standing relationships. Resorts offer special pricing at the show to encourage bookings which are the best prices and incentives you will find. It is truly a reunion of people you get to see only once a year as well.

As much fun as the show can be, there is real business going on.

DEMA Show is limited to trade professionals only and is not open to the public or consumers, however attendance is available to divernasters, instructors and assistant instructors as they are considered industry professionals. DEMA exists to grow the dive industry worldwide, they encourage industry professionals to become members, they are involved in disaster assistance, legislative and environmental advocacy. The "Go Dive Now" Pool is at the show where you can try out the latest and the greatest, and it travels on a nationwide tour to generate interest in scuba diving and a host of other services.

So if being a 'dive professional' is on the radar for you, then DEMA will be too. Here's to hoping that this primer on DEMA will give you some background on this great event, and 'giant stride' into all the fun action when the timing for you is right!



Gary Lehman

Sea Stories is an annual convocation of those who share a bond with the world's oceans, convened at The Explorers Club (TEC) in Manhattan NYC. Sea Stories features presentations on marine exploration, biology, history and archaeology, adventure, culture, lifestyle - and all manner of marine-related endeavor. This year Sea Stories set sail on November 10 and was a sellout and inspiring success, with the Clark Room on the second-floor bursting to capacity.



TEC fires the imagination of all who attend events at the venerable club, and everyone is enriched by the



experience. The Explorers Club was founded by adventurers, scientists, staffers at the American Museum of Natural History in NY, an author, a war correspondent, and an ethnologist in 1904. The timing was just right – 1904 was a point in human history where exploration of the world and oceans was accelerating and intensifying due to the combination of advancing technology, increased awareness via instantaneous communications of radio and photography, and the burning spirit of scientific inquiry ignited by Darwin and many others.

Over the years, The Explorers Club's hallways, offices, nooks, crannies, and the intrepid explorers and sponsored expeditions have yielded a universe of human 'firsts' - "First to the North Pole, first to the South Pole,

first to the summit of Mount Everest, first to the deepest point in the ocean, first to the surface of the moon—all accomplished by TEC members." Evidence abounds in artifacts of exploration cluttering the

TEC HQ . Including reportedly the very same globe used by Thor Heyerdahl to conceive his journey west from Peru 5,000 miles across the open Pacific to French Polynesia in a balsawood raft, undertaken to prove the feasibility of such long ocean voyages in support of a 'diffusionist' theory of human cultural interaction. Today the Club's membership includes science, exploration and military leaders, and pathfinders alike, including astronauts Buzz Aldrin and Neil Armstrong, President Theodore Roosevelt, James Cameron, Jeff Bezos (Amazon) and Elon Musk (Tesla and PayPal, among others). And so many luminaries and leaders in the sport of scuba diving, too!





Gary Lehman



The 2018 lineup included the following five presenters: Andrew Stevenson on North Atlantic Humpbacks; Jeff Goodreau and Ryan King on the discovery and exploration of the sunken freighter Willian H. Machen; Dr. Mauricio Hoyos Padilla on the white sharks of Mexico; Mehgan Heaney-Grier relating her experiences in A Freediving Evolution; and finally Richard Lundgren on Exploring Mars The Magnificent (a Swedish manowar sunk in the 1500's).

#### **Summary of the 2018 Sea Stories Presentations**

Humpback sightings on whale watches are usually right off the coast; we get only a fleeting glimpse of their behavior. But what happens when humpbacks are in open ocean areas? What are their secrets and undiscovered behaviors? These are the answers sought by Andrew Stevenson, who devotes himself to this quest from his Bermuda home, perfectly situated because humpbacks migrate through Bermuda on the way to northern feeding areas. The story of his bonding interaction with a particular whale called "Magic Whale" was spellbinding. This is one of 1,500 individuals which Anderson has ID'd and whose behavior (and clearly advanced emotional capacity) he has extensively documented, occasionally using drones for unobtrusive observation. We could practically hear and



feel the humpback's song reverberating through our seats, just as Stevenson through the hull of his small boat. Spending TIME observing humpbacks and other animals is the only way to understand their spirit and connections to the world around them, and to us. For the time and diligent observation and logging of this time with humpbacks, heartfelt congratulations and thanks to Andrew for his pioneering efforts on behalf of humpbacks and ultimately humans, everywhere!







Gary Lehman





In 1942 the US Navy leadership was loath to incorporate defensive shipping techniques developed by the British in their war against German submarines in WWII. Consequently, over 600 American merchant ships were sunk by Uboats in the first eight months of 1942, some sunk in broad daylight in view of horrified beach goers. Many ship captains took their own measures, such as shutting off their running lights at night. This was effective, since coastal towns were also dimming their lights, preventing the ships from becoming silhouetted targets. Unfortunately for coal carrier W.H Machen, this resulted in a collision with another ship near the Isles of Shoals off Portsmouth, New Hampshire. Fortunately, there were no fatalities on either vessel. A three-year search by a dedicated team of New Englanders, including the use of a secret weapon - local fishermen! - finally found Machen in 2017. The identity was suspected to be Machen, and finally confirmed by flatware bearing the name of the shipping company which operated Machen. Scuba divers Goodreau and King and team had a tremendous challenge diving Machen, with water a soupy frigid blackness, and at the extreme scuba diving limits of close to 300'. But with fanatical and sustained dedication to find the wreck, and the team's superb diving skills and meticulous preparation under these challenging conditions, this intrepid team achieved their mission! An interesting aspect was

that the team members signed on from many different professions; each team member brought unique expertise together in the completion of their shared mission. No matter what their individual jobs were back home, once on (and in) the water they merged into a seamless team. Hearty congratulations on the mission's success! The team is holding their future plans close to the vest as to whether they will continue to dive Machen, or move on to new subsurface objectives. We'll be watching - safe diving, gentlemen!

Dr. Hoyos' scholarly presentation on white sharks brought new anatomical and physiological details about this species to light for Sea Stories. No one for example knew that white sharks have blue eyes, and not black eyes! And that their bite can measure 2 tons/square inch! New details were offered regarding the lateral line, sense of smell and the excellent vision of this species. The migratory behavior ranging from Mexico to Guadaloupe Island to the 'shark café' and on to Hawaii is new information based on data collected on white shark movement. Most remarkable, innovative and welcome was Dr. Hoyos' outreach to the children in Mexico. Through the use of cartoons to convey an understanding of the white shark's necessary and welcome place in marine biology, Dr. Hoyos is achieving sustained cultural change among children who will in the future be tasked to shoulder the burden of protecting and advocating for this critical apex predator, and for all marine life. Dr. Hoyos is what Dr. Sylvia Earle would term a "hope spot". "If you want to save the ocean and its fish, start by saving the white shark". Many of us (ie 9 million Facebook views) have also seen Dr. Hoyos' underwater footage of the 20'+ white shark off Guadaloupe Island known as Deep Blue (largest white shark ever witnessed), in which a diver famously gives a 'high five' to Blue's left pectoral fin! Hats off to Dr. Hoyos, and may his message ring loud and clear for the children of Mexico, and for all the oceans, and for us!



Gary Lehman



Have you ever been freediving? To just 20', much less 80'? No BCD, no tank? Crazy? Well, guess what you have. Anytime you are in the water holding your breath, you are freediving! Freediving is a rapidly growing segment of the dive industry. And who better to introduce us to this fantastic sport than freediving expert, model, TV personality, conservationist, Women Divers Hall of Famer, mom, and world record-holder (165' on a single breath of air!) --- Mehgan Heaney-Grier. Mehgan led off her presentation taking all of us through a virtual freedive, complete with predive mental checklist/previsualization, priming breaths and body positioning. Our virtual dive together right there in the Clark Room of TEC was 'immersive' in every respect - we could practically/virtually feel the water pressure building and reflexively needed to equalize! Freediving is not for everyone, but anyone who has been underwater dragging around scuba gear can relate to Mehgan's description of being underwater without the hissing, bubbling regulator and cumbersome tanks. When Mehgan described the feeling of being 'at one' with the water and herself, hearing life in the clicks, pops, crackles and rumbles of the ocean, seeing the little reef fish coming out to investigate -- we could connect with her experience in a visceral way. Freediving is returning to the very origins of life, both individually and collectively - recalling life's early ventures out of the primordial ocean. To Mehgan, freediving is like observing the night sky in Montana on a cloudless night with zillions of stars, and "...seeing the Southern Cross for the first time. You understand just why you came this way, Cause the truth you might be running from is so small - But it's as big as the promise, the promise of a coming day." (Crosby, Stills and Nash, 1982). (I've been privileged three times: once on the way to summit Kilimanjaro, once near Lake Hovskol in Mongolia, and once in the Galapagos when the boat generator bit the dust temporarily and we saw the Southern Cross and zillions of stars....). Mehgan concluded her presentation with three foundational imperatives for all of us... 1) reduce single-use plastics 2) download the Monterey Bay Aquarium Seafood Watch application and use it and 3) share/connect our love of the ocean in order to preserve it for our kids and their futures. Heartfelt Thanks Mehgan for all you do for us, and for the marine world!

One of the trademarks of all explorers is dedication to the mission and hacking through disappointments and adversity. Richard Lundgren described just this exactly during the 20-year search for Mars The Magnificent, the flagship of the Swedish navy which was sunk in battle with Danish/Luebeck forces in 1564 in the Nordic Wars pitting Sweden against Danish/Luebeck and Polish forces in alliance against Sweden; at issue was hegemony of the Baltic Sea. Naval battles in wooden ships were horrific for the crews: a maelstrom of scorching fire, gunpowder explosions, snipers from enemy ships picking off the officers (that is how Admiral Nelson was killed), hand grenades spewing burning shards of metal through flesh flung to and from ship to ship, choking smoke inside the gun decks from the cannon broadsides, deadly wood splinters, and torn apart sailors, blood and gore. Mars had dozens of cannons of various sizes aboard, including the largest, four monstrous 48lb cannon; with solid shot, a hit on the side of a wooden ship from any of these could cave in the enemy ship's hull at close range. Lundgren and team discovered the wreck lying in 230' of frigid water off the southeastern coast of Sweden; exploration of the well-preserved wreck is challenging due to depth and position. By comparison, Mars is about twice the displacement as the Mary Rose, which was sunk in battle twenty years earlier in 1545 near Portsmouth, England. Mars is longer, and with a bigger crew than the USS Constitution (Old Ironsides), which was built over two hundred years after Mars was built. Exploration of Mars's crew's personal effects will yield astounding new insights into the life and times aboard ships and about life for officers, gentlemen and bluejacket seamen both aboard ship and life ashore during the 1500's. And - it is impossible to even begin to imagine the surging waves of excitement which must have swept through Lundgren and team as they dove into the Admiral's quarters aboard Mars 230' down; humans laying eyes on that place for the very first time in almost 500 years! The mind staggers at the prospect. Lundgren and team knew instinctively and immediately that they hit the archeological jackpot with this discovery, one of the most important ever made. He and variously engaged scientific and archaeological teams



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are employing for the first-time tens of thousands of 40+ megapixel photoprogrammetry images to recreate in virtual reality the interior of the ship. Imagine being able to tour the interior of Mars! No quite as exciting as personally diving the Admiral's quarters aboard Mars, but certainly warmer! Bravo Zulu – job well done – to Richard Lundgren and all teammates for this stunning discovery and exploration.

#### About Sea Stories and TEC HQ

Sea Stories gets an early start on the day with a breakfast mixer with the explorer/presenters. The day proceeds with their presentations, coffee breaks, lunch, more presentations, an opportunity to tour the Club, and ends with concluding remarks and the presentation of certificates of appreciation by TEC leadership to the presenters. The TEC tour includes a trek to the 'summit' (77' above sea level) of the building (formerly the home of the world's first paparazzi photographer, Lowell Thomas who reported on and popularized Lawrence of Arabia). Braving the not-too-perilous ascent of the staircases to the 'summit' is highly recommended because of ...the Trophy Room! Brimming with Club history, the collection there includes taxidermy specimens (some perhaps by the American Museum of Natural History's member Roy Chapman Andrews, the prototype for Hollywood's Indiana Jones). Chapman was a taxidermist at the AMNH and led the Central Asiatic Expeditions to Mongolia, which is where many of the AMNH's dinosaur bones were found. History like that is why you have to attend Sea Stories and other Explorer Club events, and take the tour!

With 2018 Sea Stories now successfully completed, it is time for the TEC staff to start planning for 2019 Sea Stories. And you should too! Reserve November 9, 2019 and grab your imagination, turn off the smartphone, cancel everything - and set your exploratory GPS for East 70<sup>th</sup> street for TEC's 2019 Sea Stories – see you there!







Gary Lehman

















## Diver Alert Network Online Education and 'Giant Stride'

Gary Lehman

Some of us will take some time off from diving during the winter months, while others are lucky to be able to sojourn to points south, to warm blue water and pretty colorful fish! One of the opportunities for all of us however is to take advantage of education to rebuild/refresh our diving knowledge. This prepares us for diving action, soon to be upon us when the weather warms up.

Luckily for us, Divers Alert Network has some offerings for us in addition to the other agencies which we have all benefitted and learned from.

DAN is a unique resource in that many (if not most) dive accidents worldwide are reported through DAN. This creates a worldwide database of knowledge and contributing factors to accidents, so that trends can be detected and mitigations taken to reduce the frequency of and improve outcomes of dive accidents. And, DAN makes this knowledge available to all of us.

There are education courses and roadmaps available for recreational divers, instructors, public safety divers, technical/professional divers, and medical professionals. For those of us who will take a leader-ship role in a dive emergency, the first-aid courses are an excellent way to keep skills perfected for immediate use in emergencies (basic life support, oxygen, assessments, timeline and life-cycle of a dive emergency, etc. The courses are online, but also involve hands-on with a local DAN instructor.

Of great interest to me is the **Prepared Diver Program**. This is a concise but intense refresher course reviewing so many of the safety considerations which can sometimes be overlooked or marginalized, sometimes with loss of enjoyment, or bad - or tragic - consequence. The course focuses on fundamental diving safety skills based on that worldwide accident database. The course talks about setting limits to risks; who can call a dive (anyone, for any reason); situational awareness as to depth, conditions, currents, air; buoyancy; ears and equalization; safe ascents; and preparing for diving. DAN is working on making their huge inventory of courses and videos more available remotely, including DCS management, medical fitness for diving, and emergency action plans. This is all great stuff. Dive caps off the DAN for helping keep us safe in our sport!

The Diving First Aid for Professionals course is used by NOAA, certified by the US Coast Guard, Smithsonian, Sea World and others. It is an intense online and hands-on learning curriculum complete with scenarios and response evaluation.

Check it out at WWW.DAN.ORG/TRAINING !



## Diver Alert Network Online Education and 'Giant Stride'

### **DAN'S GIANT STRIDE**



Because of DAN's efforts towards and success analyzing dive accident data available from worldwide accidents, we now know that the greatest diving risk factors are for new divers and for very experienced divers. New divers (heaven forbid,) might not have gotten the message or been paying attention to the risks of pulmonary overexpansion. Or, the consequences of not being properly weighted for good buoyancy. Or they might push through ear pain on descent and suffer barotrauma. Or, might not have a safety sausage/surface marker buoy. And so on. But what about those very experienced divers? They might be distracted during their dive preparation. They might skip or rush through the buddy check. They might enter the water with no fins or their glasses still on, or much worse, their air supply not fully engaged (or not at all). There is a routine for diving prep which has to rigorously adhered to. So DAN has discovered that there is a statistical bulge in accidents for NEW divers, then the accident rate subsides, but then another bulge in accidents amongst VERY EXPERIENCED divers.

The implications are clear: for experienced divers, the dive safety mindset has to be constantly reinforced and brought to the forefront; and for new divers, more experienced divers have to be attentive to them and must ensure that newer divers have taken all their required training seriously, are not diving beyond their training and skill and experience, and are not learning bad habits.

And again, DAN has an offering for the new diver. DAN created a curriculum after comprehensive consultation with dive instructors, analysis of new diver accident factors, dive safety professionals and dive medicine experts. The guide is called GIANT STRIDE, and it deals with a whole variety of consequence subjects, concerns, diving lifestyle ways and means, and diving protocols—especially important for new divers. These include:

- Dive etiquette
- Underwater safety
- Dive travel
- DAN's educational offerings

The Guide is available for free at <a href="https://www.diversalertnetwork.org/files/GiantStride">https://www.diversalertnetwork.org/files/GiantStride</a> FINAL Web2.pdf

For those of us who don't dive often enough, or for new divers, and perhaps younger extended family members who will be joining the ranks of diving, let's all commit to taking full advantage of these offerings both for ourselves and for our families, friends and greater dive community — so that we can just fully and safely enjoy our wonderful sport to the total max!



### 100<sup>th</sup> Anniversary of the Sinking of the *USS San Diego*: Findings of the Two-Year Interdisciplinary, Multi-Agency Inquiry

Gary Lehman



And now it can be told. An interdisciplinary team of ten US Federal agencies, the military, scientists and academicians collaborated on a two-year study of the wreck of *USS San Diego* on the occasion of the 100<sup>th</sup> anniversary of its sinking, to determine definitely what happened that day. The study was undertaken in memory of the six sailors killed in the sinking. New technologies were employed in the study, including finite-element engineering modeling of the flooding and sinking timeline based on loads aboard the ship and interior compartmentalization, high density/ definition photogrammetry mapping and side scan sonar analysis of the wreck, and underwater unmanned probes (AUV's and ROV's – autonomous underwater vehicle and remote-operated vehicle) equipped with laser beams to measure the structure.

The initial court of inquiry finding by the US Navy brass has been confirmed: USS San Diego was sunk by a mine laid by German submarine U165.

Many of us here in the northeast have dived on the *USS San Diego*. Many of us have seen photos and videos of the brooding wreck. There is quite a backstory to this ship and its sinking! Towards the end of WWI in July 1918, *USS San Diego* was on its way from Portsmouth, New Hampshire to NYC (where the sailors were looking forward to a night on the town) - but instead it was sunk by a German naval mine. July 19th, 2018 marked the 100<sup>th</sup> anniversary of the sinking of this 15,000-ton cruiser, technically called *CA-6* (named *USS San Diego*). *San Diego* was destroyed by a 'bottom' mine, laid by German Uboat *U165*, and she sank 10 miles southeast of Fire Island, NY. Six sailors were killed in the flooding and blast. *USS San Diego* was the only major US warship sunk during World War I. She is on her side in 110' of water, and is slowly, inexorably, collapsing -- and at some point in the not-too-distant future will be completely reclaimed by the ocean with a plume of rust dust ...

During WWI, Germany and Britain laid extensive naval mine fields in an attempt to sink each other's ships, and thus have supremacy on the high seas. Laying of mines can be defensive - to deny the enemy use of certain parts of sea lanes, or to protect friendly shipping by quarantining areas (securing those areas from enemy surface or submarine penetration). Mines can also be used offensively, and can be placed in known or anticipated enemy shipping lanes (with the intention to sink enemy ships).

For purposes of this discussion, mines can either have positive buoyancy and be attached to an anchor on the bottom (in water deeper than 200'), or can be placed on the bottom (in water less than 200' deep). In the former case, when a ship strikes a moored mine (generally suspended by a chain from a bottom anchor point extending upwards to just below the water's surface), the resulting explosion is likely to blow a hole into the ship's hull when contact is made causing flooding. In the latter case, the displacement of water caused by the explosion of the on-the-bottom-placed mine can split open or even collapse the hull of the ship as it passes over the mine which detonates and causes the displacement of water. This results in the loss of water to support the weight of the ship, which can split the hull or break the back of the hapless vessel.



### 100<sup>th</sup> Anniversary of the Sinking of the *USS San Diego*: Findings of the Two-Year Interdisciplinary, Multi-Agency Inquiry



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Owing to naval warfare in the Franco-Prussian war of 1870, Germany got a big head start over the British in naval mine warfare, technology and doctrine. Consequently, German naval mine technology was more advanced than that of the British at the start of WWI. During WWI the German Navy also met with considerably greater success sinking ships than the British did, due to more aggressive, and primarily offensive naval mine tactics. During the war the British captured a German mine and reverse-engineered it; the improved design proved effective for the British - but by then, land-based warfare had become the deciding strategic factor in the war.

USS San Diego was only one of hundreds of Allied ships which were sunk by German naval mines in WWI. Several notable losses of British Navy ships come to mind. Germany got off to a good start in WWI with its naval mine warfare right off the bat. Just a few months after the start of hostilities in 1914, the largest warship to be sunk in WWI – the battleship HMS Audacious – was sunk in October 1914 by a German mine which had just been laid just a few days prior in a likely staging area for British warships. (The humiliation and propaganda value of this loss to the Germans was so great that the sinking was kept secret by the British Admiralty and the press corps until the end of the war. But the Germans knew HMS Audacious had been sunk and reported this). HMS Audacious was just two-years old, having been launched in 1912 and commissioned in 1913, and she was the pride of the British Navy - and then -with her paint barely dry—she was sunk and on the bottom. Another grievous loss to the British in WWI to a German naval mine was the cruiser HMS Hampshire on June 5.1916 - a stone's throw from Scotland's Orkney Island. (HMS Hampshire was almost exactly the same size as USS San Diego). She was on her way to ally Russia with British Secretary of State Lord Kitchener of Khartoum and his entourage to meet with the Russian Imperial War staff to coordinate their fighting strategies in a two-front war against Germany. But shortly after leaving the British anchorage at Scapa Flow, HMS Hampshire hit a German mine. Kitchener was a British field marshal, imperial administrator, revered 'Conqueror of the Sudan' (hence Kitchener of Khartoum), commander-in-chief during the South African (Boer) War, and Secretary of State for War at the beginning of World War I. Lord Kitchener, his entire staff, and virtually all of ship's company were lost in the sinking. There is a massive monument at Orkney's Marwick headlands, overlooking the spot where HMS Hampshire was destroyed. (I spoke with shopkeepers in Orkney who, to this day, remember their parents and grandparents who were farmers on the fertile Marwick moors, talking about that terrible night of the explosion.)

Another stunning British ship loss to a German naval mine was His Majesty's Hospital Ship HMHS Brittanic. She was the sister ship to RMS Titanic, and she was newer -- with increased safety measures engineered into her resulting from the investigation into Titanic's loss. Brittanic was discovered by Jacques-Yves Cousteau in 1975, and was the object of several dive expeditions to explore her, and also to determine the circumstances of her sinking. During WWI Germany steadfastly maintained, contrary to British claims at the time, that Brittanic was not torpedoed by a German submarine (and in fact, this was true - Brittanic was NOT sunk by a torpedo attack). Brittanic was a hospital ship and fully-illuminated, with a big 'red cross' on each side of the ship, making it impossible to misidentify Brittanic as a man-owar. Of course, it suited British propaganda purposes at the time to claim that the hospital ship Brittanic was wantonly and viciously torpedoed by "the German Hun". The reason that the Germans did not reveal that their mine was the cause of the loss of Brittanic is that the British thought that it was impossible to place a mine in over 200' of water. Patently, this was a false assumption because that is exactly what the Germans did, resulting in the loss of Brittanic. Germany did not want to reveal that it had perfected the technique to put mines into deeper water beyond 200'. (I greatly recommend reading Richie Koehler's book Mystery Of The Last Olympian <a href="http://www.mysteryofthelastolympian.com/">http://www.mysteryofthelastolympian.com/</a> which details the sinking of Brittanic, the human side of the story, the full envelope of historical background, and of course the spell-binding dive operations around the exploration of Brittanic. Be prepared however to not put the book down; trust me, you will read it cover to cover!).



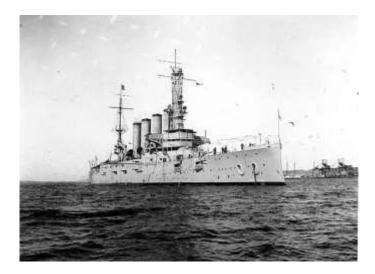
### 100<sup>th</sup> Anniversary of the Sinking of the *USS San Diego*: Findings of the Two-Year Interdisciplinary, Multi-Agency Inquiry

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So, taking all this together - we see that the German Admiralty in WWI had a hugely effective naval mine warfare campaign in effect--so much so, that it reached across the Atlantic Ocean in 1918 to sink the *USS San Diego*, the 100<sup>th</sup> anniversary of whose sinking we observed in July, 2018!

PS: For those who wish to personally inspect a warship (intact and topside!) which pioneered some of the naval architecture of *USS San Diego*, visit Independence Seaport Museum in Philadelphia, where museum ship *USS Olympia* (C6) is restored to its 1898 combat configuration. There are striking visual similarities to *USS San Diego* (you will readily see the family resemblance, although *Olympia* is 2/3 the size). *Olympia* is the oldest steel-hulled ship of the US Navy still afloat. She was forged in battle in the Spanish-American War, and (with other ships of the US fleet,) destroyed the Spanish navy fleet in Manila Harbor in 1898. From her bridge Commodore Dewey famously instructed *Olympia*'s captain, "You may fire when you are ready, Gridley" (and ...you can actually stand in his footprints on the bridge!).



USS San Diego (CA-6)110' on the bottom , off Fire Island, NY



USS Olympia (C6)
Philadelphia's Independence Seaport Museum

## And Around The Dive Shop.....

### LOCAL DIVE SHOPS......AT YOUR SERVICE!

Looking for dive-related gifts? Need to upgrade your gear?

Here is a list of shops that may just have the right one for your best dive buddy or for yourself!





www.divenewsnetwork.com or www.scubah2omag.com