Sounding

Newsletter of the South Shore Neptunes

Calendar 2019

2/5 General Meeting
2/19 Annette Spaulding (tent) on Diving for Relics & History; newsletter assembly
2/24/Club dive from Clubhouse 9 AM
3/5 General Meeting
3/9-10 Boston Sea Rovers 65th Anniversary Annual Clinic, Doubletree Hotel Danvers
3/12 Board Meeting
3/19 Program: Sally Snowman Boston Lighthouse keeper; newsletter assembly
4/2 General Meeting
4/9 Board Meeting
4/16 Marine Fisheries (TBA); newsletter assembly
5/7 General Meeting
5/14 Board Meeting
5/18 Dinner Night Out, Bay Pointe Restaurant, 5PM
5/21 Diving the Philippines by Rob Robison; newsletter assembly

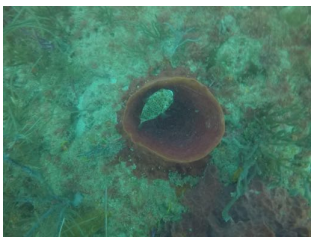
ACTIVITIES, ANNOUNCEMENTS, & REMINDERS

- Dues are due! Please bring cash or send a $35.00 check, payable to the South Shore Neptunes
- **Dinner Night Out, Bay Point Restaurant**, **Saturday, May 18, 5PM**, Bay Pointe Restaurant 64 Washington Court, Quincy MA. (617)-472-3200
- **Dave Clancy,** fellow Neptune, recommends watching an interesting 1-hour American Experience episode on PBS., called "Sealab," about the U.S Navy and NOAA's ongoing research on diving technology. It describes the history of submarines, underwater habitats, sat diving, etc. You should be able to stream the show online anytime from this the link: <Sealab|American Experience| PBS>
- Bonaire Club Dive Trip: Blackie announced we should save our $ because he's planning a club dive trip to Bonaire for sometime in the spring of 2020. Details will be spread upon the club at a later date.

Annual Banquet at The Common Market, January 26. Fifty-six Neptunes dined together and celebrated the 2018 dive season at the Common Market. Earning **awards** for their **2018** exploits were Pres. **Chuck Zarba**, who won the **Artifact of the Year Award** for his soup plate dated to the HSS Royal Mail, sunk in Boston Harbor. He also garnered the coveted **Neptune Diver of the Year Award. Best Photo** was awarded to **Matt Meyer** for his Hermit Crab closeup shot. Nice job, Matt! **Todd Alger** brought home the **Lobster of the Year Award** with a 4.95 lb. catch. **Life memberships** were awarded to **Charles Long**, **Paul Nesralla**, and **Jeff Visse**r. **Congratulations** to **all of our club award winners** for their excellence. Next year (2019), we are adding a **Video of the Year Award.** Stay tuned to the newsletter for details. For banquet photos, visit the club Facebook Page.

JANUARY / FEBRUARY DIVES

Diving Crab Cove ***Story & photo by Eric Cantor***



Crab Cove in Deerfield (Ft Lauderdale), FL. It was relatively warm in Florida in comparison to New England while I was there for a brief vacation visiting family. I wore shorts and short sleeves and was warm. I guess 67-70' air temp. is cold for the divers down there.

I made two dives, reaching a depth of about 70 feet with about 15-20' vis and a water temp of 75°. On the first dive, I had a weight issue--I was too light at 14Lb. wearing an aluminum tank. The dive shop personnel didn't account for my 7mm wetsuit, so I had to add 10Lb.The dive was alright. I saw a lot of tropical fish and coral and a couple golf balls . One of the guys I dove with wore a drysuit in the 75° water! He caught a bunch of spiny lobsters.

Sunday Jan.13 Diving Ft. Wetherill in January ***Story & photos by Rob Robison***

Having been iced out from diving at Nantasket Beach Saturday Jan 12, with Neptune Eric Cantor, yesterday, I teamed up with Mike Vaughan to get wet at Ft. Wetherill. Arriving at 8:45, I expected to see a parking lot at least partially filled with gung ho winter divers. Instead, it was completely empty save an empty lone truck and an equally empty truck with a boat trailer--duck hunters. I took the opportunity to check out the water, absolutely flat on an outgoing tide, and found it to be as clear as a bell. A short time later, Mike arrived and we dressed in the windless 22°F frigid air.

In such temperatures everything seems to take more time and the cold seems to bring out the worst in one's gear. After hooking up my regulator to the tank and turning it on, I heard a hiss. Turns out the valve o-ring was bad. Fortunately, I carried an extra, and Mike's tool kit saved the day. It contained a pick he was able use to dig out the hardened rotten rubber pieces, and I replaced the faulty part.

About the time we were ready to dive, the duck hunters returned and hauled out their camouflaged boat and kayak. Apparently, they enjoyed a successful hunt. As they drove away, a flock of Canada geese flew overhead in V formation, while we slipped into the water. Mike asked me to check out his suit as we dove, which I did. I saw that he was experiencing the same leaky valve that I had detected on my own set up. I didn't see any leaks coming from his suit. Apparently, he was experiencing a minor flood down his left arm, indicating either a hole somewhere up on the back of the suit,, neck seal. or zipper.

We decided it would be a short dive and headed straight down and across the cove at a very leisurely pace. The vis ranged from 15 - 20', the water temp was a balmy 36°F, considering the air temp on land. It really did feel warmer than being above ground, so to speak.

There was not much animal and plant life to describe this dive. Everything was in winter repose except for a tiny brine shrimp, a star fish obviously attempting to munch on some sort of shell fish, a clam that sat on the sand, a few baby hermit crabs that scurried about, and clusters of half slipper snails, which littered the sandy bottom of the cove.

About two thirds of the way through the dive, Mike's rock boot fell off his foot with fin attached. He recovered it and we turned the dive back toward the entry/exit ramp .We called it a day after 20 minutes, reaching only 11' in depth.

Exiting the water, we discovered the air temp had risen to 25°F and the sun had come out to shine. It felt good, in spite of the ice crystals that formed and clung tenaciously to our dry suits. We were both more than ready to head home and watch the Patriots school the Chargers, a fitting end to a pleasant

day diving into it underwater. Photos that captured the essence of our dive accompanying an earlier draft of this article are on the club Facebook page. Enjoy!

Jan 28- Feb 10. Diving the Philippines ***Story and photos by Rob Robison***

I met Hugo von Levetzow, a Toronto film maker and editor, two years ago on an Aggressor dive trip to Cocos Island ,Costa Rica. He and I had hit it off diving and socially during the trip. When my normal travel buddy, Donn Ellerbrock, died unexpectedly from an unfortunate dive accident in Bonaire, I turned to Hugo to see if he was interested in making a dive trip or two with me. He was going to either Turks and Caicos or the Philippines and asked which one I preferred. The Philippines was a no brainer; it's always been a bucket list destination. Photos from this trip will show you why. My Sea Life DC2000 camera's memory card holds 64 gigabytes of space for nearly 17,000 slides. I used up about half of its memory on this trip, a first if there ever was one, on stills and videoclips.

Our trip was headed by the Aquarius (sic) Dive Centre in Toronto. Sixteen divers, 15 Canadians from the shop, including the owner and Hugo, plus yours truly, signed on for the trip with the Atlantis Dive Resort and Live Aboard in Puerto Galera (Mintoro Island), Philippines($3,750, USD). They booked flights to Manila, nonstop from Toronto on Philippines Airlines, and I from Boston via Hong King to Manila on Cathay Pacific Air ($1,316 round trip), where we met up and spent the night at the Belmont Hotel. near the airport The next morning we were picked up by vans chartered to take us to the port city of Batangas on the southern tip of Luzón Island. There we boarded two local *bancas,* outfitted with bamboo outriggers, to ferry us across the channel to Puerto Galera on Mindoro Island, where lunch, orientation, room assignments, an afternoon dive, and a night dive awaited us. Nothing like hitting the ground running, huh?!

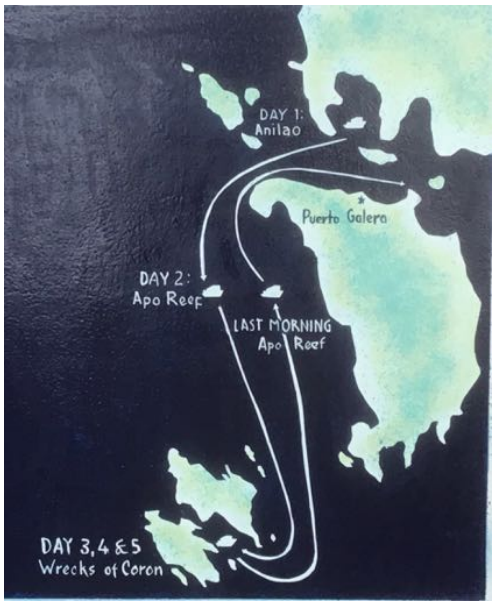
We spent four nights at the resort, all meals—wonderful—and diving included, and enjoyed 16 speedboat-based dives around the Puerto Galera area, including a total of 4 night dives, two "muck" dives across the sand to find sand-specific critters, and 1 wreck dive, the Alma James. Although the air temperature was a balmy 76°F, water temps were chilly—74 – 77°F—with the average around 77. Three millimeter wetsuits were too thin for 4 daily repetitive dives, except for the first and last day at the resort, at this water temperature. Those of us who did not bring 5mm suits or heavier wound up purchasing shorties to layer over our 3mm jumpsuits for added warmth. The vis ranged from 20-25' to about 70' depending on the location of the dive. The vis on the lone wreck was about 20' and the particulate matter stirred up easily especially with 16 sport divers and two guides roaming around it.

The diving was spectacular from the outset. We saw a sea snake, some turtles, a few white-tipped reef sharks, multitudes of colorful crinoids/feather sea stars, probably at least a dozen varieties of

nudibranchs, none of which exists in New England waters, numerous Mantis shrimps both in their holes and out in the wide open, dozens of fish species that don't exist in the Atlantic, Giant Clams, and much more.

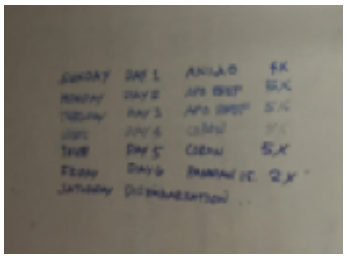
Top L-R: Clownfish, Cnidarian, Cuttlefish
Bottom L-R: Leafy white scorpion fish, Kunie's chromordoris, Hawksbill turtle with Remora on shell

Our live aboard, the Azores, a 100'X24' diesel powered ship, similar in configuration to any of the Aggressor boats I have been on, appeared late Friday afternoon or evening (Day 4 of the resort experience), and disgorged its load of 16 divers Saturday morning. We, in turn, prepared our luggage for transfer to the boat after breakfast and two final local dives later. The crew of the Azores transferred our luggage. Then, it was our turn, after a pre-boarding orientation around 4 PM, to be ferried to the ship via Zodiacs, and we steamed off to new islands and dive sites north and mostly south of Puerto Galera: Anilao island Day 1, Apo Reef Day 2, the reefs and wrecks of Coron Days 3-5, and the Apo Reef area again (different sites) on the afternoon, evening, and last morning before returning to port late Friday night. Saturday morning we off-loaded to the Atlantis resort after breakfast, while our luggage was being transferred to the *bancas*, and then we hopped aboard and began the journey home in reverse arriving, late Sunday evening, 14 days after we had



begun this epic dive adventure.

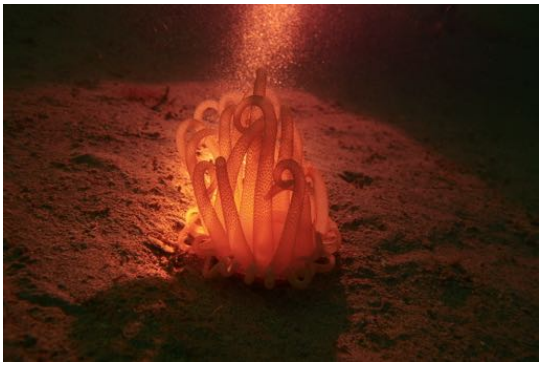
The diving schedule aboard the Azores was rigorous. Everyone dove Nitrox and we had our choice of aluminum 80s or 100s, all at no extra charge. We began each morning with wake up and coffee plus continental at 6 ,followed by dive 1 at 6:45 AM. After the dive we were offered a full breakfast of eggs to order, pancakes or French toast, depending on the day, bacon, sausage, and toast and coffee, juice, and fruit. Mangos and watermelon reigned, although there was plenty of pineapple, bananas, and apples from time to time. Dive 2 began at 9:30 followed by hot soup or a baked goodie. Dive 3 followed around 11:00-11:30. Lunch was a full course meal followed by dive 4 at 2 p.m.and the night dive , which began at approximately 5:45, ending in a mug or two or three of hot chocolate and Baileys. A full course dinner ensued. Wine and beer were available, as well as soft drinks, plenty of fresh water, coffee, tea, and tonic water to boot. However, as soon as you took a drink anytime during the day, your diving was over until the next morning. Also, at the resort and on board the depth limit was 100' and the bottom time max was 60 minutes. Our entire group was split in half, one group for each of the two Zodiacs we used to motor to the sites from the anchored Azores. One group contained all the techies. My group was the non techie group. On both boats divers dove together, lead loosely by the guides, not on our own, which was a good thing given the nature of the currents and dive conditions. Our dive guides found lots of critters for us to look at and monitored the time. My max depth on the trip was 96' on one of the wrecks and the max dive time I experienced was 63 minutes on a relatively shallow night dive when we were all so engrossed the dive master almost lost track of the time. In sum, our daily dive schedule looked like the schedule at right



The dives were different for each island. The Anilao dives were low current, shallow check out dives between 20 — 65 feet, not far from shore, where we discovered numerous varieties of nudibranchs, small colorful fish colonies, a wide variety of corals, and more. Visibility ranged from 20'— 50,' water temps were upper mid 70s. At Apo Reef, a UNESCO Heritage site, we dove the walls that started anywhere from 35' to 80 feet deep and dropped off dramatically into the blue. Visibility was in the 100'-200' range and water temps were in the high 70s and low80s. Very pleasant. On these dives there was slight to moderate current, and once we reached the wall ,it was one-way drift diving. Looking out into the blue, we saw schools of snapper, trevally jacks, and barracuda, plus turtles, to name a few, occasional King mackerel, a reef shark or two, and a few rare dog tooth tuna. Along the walls we found moray eels, large bumphead parrot fish, nudibranchs, a wide range of corals, and a range of tropical fish too numerous to describe, and more. Additionally, we saw crown-of-thorns star fish munching coral, and unfortunately, they were numerous in some spots, but not to the point the reefs were decimated—yet.

We motored south overnight to Coron Island to explore the Japanese shipwrecks from WWII, where the depths exceeded 100 feet on a few. In particular we visited the Kogyo Maru, Akitsushima, the Okikawa, the Morazan, and the East Tangat Gunboat. Penetration was not encouraged because of the particulate matter, but almost everyone did whenever allowed by following one of the two guides who led those parts of the dive. If someone did not want to penetrate, a second or in some cases a third guide was on hand to lead those divers around to explore more fully the exterior of the wrecks. Aside from the tremendous schools of fish to be found swarming the wrecks and lush coral growth sprouting from all pores, there were some unusual fish to see such as the flathead fish that looks like a miniature alligator whose predatory behavior strongly resembles that of the goose fish. Its camouflage is the best I have seen, better than flounder, and in some cases virtually undetectable. There were Many-Spotted

Sweetlips (black and white juveniles) as well as yellowish brown-spotted adults, too. Most of the images of the wreckage I tried to capture did not turn out as well as I had hoped. Suffice it to say that the Japanese fleet at anchor in the bay we dove was attempting to hide from US forces and was utterly destroyed by our bombs, torpedos, and depth charges. One of the wrecks was clearly blown in half by a direct hit. The sound, fury, and devastation must have resembled that of the Japanese attack on Pearl Harbor.



Fireworks

Our remaining dives were around Manglet Island and Pandan Island, reef dives, which served as a great wind down from an exhilarating week of underwater exploration. Some of the main sitings on these dives were a couple of extremely large Napoleon wrasse, a coral snake, blue spotted stingrays, and turtles wallowing in the sand near underwater vegetation, which they greedily munched on until we happened by with our flashes and video cams.

This was a great yet exhausting dive trip. The food was abundant and good to out standing. Cuisine ranged from Chinese to Mexican to Thai and American, plus some Italian and Spanish thrown in as well.No one ever went hungry. The servers, cooks, chefs, crew, dive masters, captain, boatmen, reception and hotel staff were literally well organized and top drawer: Friendly, learned our names (Hugo and I learned theirs quickly, too) and preferences quickly. They were bright cheery and wonderful to work with. The accommodations were excellent at the both hotel and onboard. For the camera bugs there was a great camera room with wonderful workspace, outlets, and compressed air hoses at the hotel along with a good rinse station. The boat also had a good rinse station, a big three deck center table for our camera gear on the dive deck, complete with compressed air hoses to blow water off our camera parts and plenty of charging outlets for cameras and devices.

By my count there were 42 dives available, and I made 32 of them. A few made more, other made less. One unfortunate diver suffered terrible ear pain, forcing him to sit out half of the dives from the ship. When there were five dives per day, I rested on the 4th to preserve my ear health and save energy for the night dives. Likewise, I missed a few dives at the resort trying to recover from jet lag and to purchase a shorty to layer over my 3mm for additional warmth. Thirty-two dives is the most dives I've ever made in such a short span of time; it was literally all the diving I could/wanted to handle. The amount of photos and video clips I brought home also tells me it was well worth the time, money, and effort to make this bucket list dream come true. If I were to sum this experience up in a word it would be Outstanding! I couldn't have asked for much more. I would highly recommend the trip should the opportunity ever arise. You will definitely be able to dive into it as much as you could ever possibly

want and discover wildlife on your own that most of us only can ever hope to see in the picture books. Dive it into folks! *Rob*

ENVIRONMENT

What is the Sargasso Sea?

Mats of free-floating sargassum, a common seaweed found in the Sargasso Sea, provide shelter and habitat to many animals. Image credit: University of Southern Mississippi Gulf Coast Research Laboratory.

The Sargasso Sea, located entirely within the Atlantic Ocean, **is the only sea without a land boundary.** The Sargasso Sea is a vast patch of ocean named for a genus of free-floating seaweed called *Sargassum*. While there are many different types of algae found floating in the ocean all around world, the Sargasso Sea is unique in that it harbors species of sargassum that are 'holopelagi' — this means that the algae not only freely floats around the ocean, but it reproduces vegetatively on the high seas. Other seaweeds reproduce and begin life on the floor of the ocean**.**

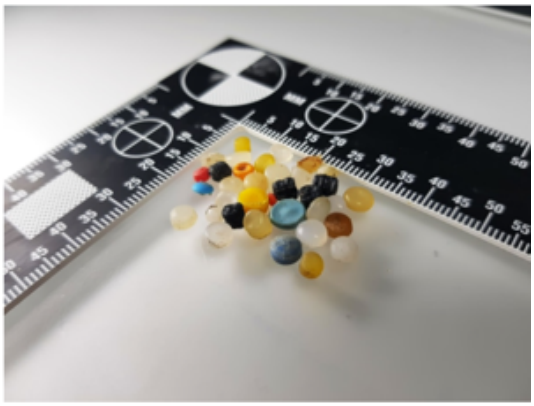
Sargassum provides a home to an amazing variety of marine species. Turtles use sargassum mats as nurseries where hatchlings have food and shelter. Sargassum also provides essential habitat for shrimp, crab, fish, and other marine species that have adapted specifically to this floating algae. The Sargasso Sea is a spawning site for threatened and endangered eels, as well as white marlin, porbeagle shark, and dolphinfish. Humpback whales annually migrate through the Sargasso Sea. Commercial fish, such as tuna, and birds also migrate through the Sargasso Sea and depend on it for food.

While all other seas in the world are defined at least in part by land boundaries, the Sargasso Sea is defined only by ocean currents. It lies within the Northern Atlantic Subtropical Gyre. The Gulf Stream establishes the Sargasso Sea's western boundary, while the Sea is further defined to the North by the North Atlantic Current, to the East by the Canary Current, and to the South by the North Atlantic Equatorial Current. Since this area is defined by boundary currents, its borders are dynamic, correlating roughly with the Azores High Pressure Center for any particular season.
Source: https://oceanservice.noaa.gov/facts/sargassosea.html

The major source of plastic pollution you've probably never heard of

Meet the nurdle, aka "mermaid tears." BY CLAIRE GWINNETT 3 MINUTE READ *02.17.19*

"Nurdles" may sound cute but they pose a huge risk to the marine environment. Also known as "mermaid tears", these small plastic pellets are a feedstock in the plastic industry. Instead of being converted into household items, many end up in the ocean, collecting toxins on their surfaces and being eaten by marine wildlife. Not so cute now, are they?



Nurdles – colourful, ubiquitous and deadly for wildlife. [Photo: Amy Osborne/courtesy of the author]

Nurdles are the building blocks for most plastic goods, from single-use water bottles to television sets. These small pellets–normally between 1mm and 5mm–are classed as a primary microplastic alongside the microbeads used in cosmetic products–they're small on purpose, as opposed to other microplastics that break off from larger plastic waste in the ocean.

The small size of nurdles makes them easy to transport as the raw material which can be melted down and moulded into all kinds of plastic products by manufacturers. Unfortunately, mismanagement of these little pellets during transport and processing leads to billions being unintentionally released into rivers and oceans through effluent pipes, blown from land or via industrial spillage.

AN OCEAN OF MERMAID TEARS

"Mermaid tears" is an appropriate nickname when we consider the potential harm that nurdles have on marine life. Their small size, round shape and array of colours make them attractive food–easily mistaken for fish eggs and small prey. This "food" has an extra problem–it comes with a side of noxious chemicals.

The large surface area to size ratio and polymer composition of the nurdle pellets allow persistent organic pollutants (POPs) in seawater to build up on their surfaces. These toxins then transfer to the tissue of organisms which eat them. The problem is in the name–POPs are "persistent", meaning they don't go away easily and can remain on the surface of nurdles for years. Nurdles can also be colonised by microbes that are dangerous to humans. A study investigating nurdles on bathing beaches in East Lothian, Scotland, found that all five beaches tested had nurdles that were covered with *E. coli*–the bacterium responsible for food poisoning.

Nurdles can be so noxious that people cleaning beaches or recording pellets in scientific surveys are advised not to touch them with their bare skin–which makes sun bathing on many beaches in the summer an unattractive prospect.

So how many nurdles are out there in the ocean and on coastlines? It's estimated that up to 53 billion nurdles are released annually in the UK from the plastic industry. That's the same amount of nurdles

that it would take to make 88m plastic bottles. So why are nurdles rarely discussed in the plastic pollution debate?

THE NURDLE HUNTING

Luckily, there are organisations raising awareness of nurdles and their prevalence in marine pollution. The Great Global Nurdle Hunt started by Fidra–a charity based in Scotland that addresses environmental issues–and the Marine Conservation Society encourages people to become citizen scientists and gather data on how common these pellets are on beaches around the world.

Data collection helps identify the main sources of this pollution from the plastic industry, which can use the information to improve management of the problem. As there are so many nurdles present in the environment, it takes an army of people to gather information about them. The Hunt takes place over ten days in February each year.

Citizen scientists log their nurdle findings onto a global map that shows the extent of nurdle pollution worldwide and how it's changed over time. Since 2012, the number of beaches being searched has reached 1610 across six continents, 18 countries and with over 60 organisations involved.

This year, Staffordshire University's Microplastic and Forensic Fibre Research Group took part in efforts to estimate the concentration of nurdles on Hightown beach in Liverpool, UK. An average of 139.8 nurdles per square metre were found. That's around 140,000 nurdles over 1km of high tide line.

If you'd like to become a citizen scientist and collect nurdle data at your local beach, there are a few useful tips. Have a look at one of the online nurdle ID guides online so that you don't mistake a polystyrene ball, BB gun pellet or ancient fossil for a nurdle.

Make sure to check seaweed and other marine debris when on the beach–these act like large nurdle nets. Once you've collected data, don't forget to submit your findings to a suitable survey so that that they can be used to fight the pollution problem.

And if you don't live near the coast, don't worry–nurdles have been found in most environments, including rivers, lakes and even far inland and away from water. We even found them in soil in our campus. So let's get nurdle hunting–but don't forget your gloves.

Source: Fast Company: https://www.fastcompany.com/90307833/the-major-source-of-plastic-pollution-youve-probably-never-heard-of