

2018



August Speaker Tyler Phelps

Exploring the Twilight Zone: Scientific Diving in the Mesophotic

Fifteen minutes. That's all the time we have to collect our data at 500 feet. Dressed like "aquanauts" in closed circuit rebreathers, we're the first humans to ever visit this reef. After documenting the habitat, conducting transects and collecting potential new species, we begin our ascent. It will take six



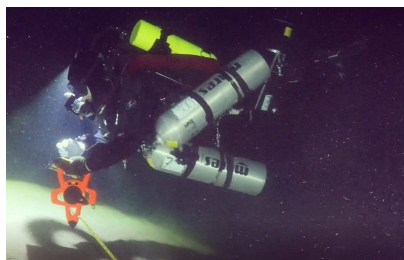
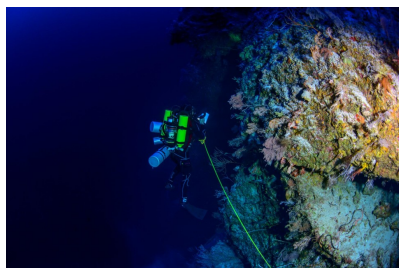
hours of decompression before we can surface. Learn about these unique mesophotic coral reef ecosystems and the challenges our team from the California Academy of Sciences encounters on our global expeditions. From his



first dives off Catalina Island growing up in Long Beach, graduate student Tyler Phelps's research has taken him on expeditions around the world. Tyler will share what is involved

diving to mesophotic depths below

200 feet, what makes these ecosystems so important, pictures and videos of these unseen reefs, the process of describing a new species and a sneak peek into their current research.



August 11 Boat Dive
Cee Ray Catalina

August 14 Club Meeting
Graziano's Italian, Yorba Linda

August 18 Night Beach Dive
Shaws Cove 7:00 PM

December 1 Warm Water Trip
Grenada



SharkBait Summer Luau

Our annual club picnic theme was Hawaiian and the tasty buffet was the best in Luau fare. If you didn't know what Hawaiian mac salad was like, you found out that day! ! Members, guests, and their kids feasted on Kalua pork, teriyaki chicken, assorted salads, snow cones, and adult beverages (rum punch) while listening to a great mix of surf/Hawaiian music. This was all compliments of the club and hosts Vlad and Chrissy Ilinksy. The fun was capped with pool time for all and sneaky tricks to get the family dog to shake water on dry guests! You know who you are... We concluded the evening with more yummy desserts than we could possibly eat! Thanks to all who joined in the fun!

LUAU ???????



I MISSED IT?????

Observing Marine Life

One of the joys of diving is being able to see the underwater habitat and the inhabitants thereof. Observing marine life is like putting puzzle pieces together. When you look at one fish, you see only one piece of the puzzle. Yet when you connect the pieces — say a fish to its habitat and to other creatures within that habitat — you begin to see the inner workings of a marine ecosystem.

The more you dive, the more you will begin to see various subtleties, and the better observer you will become. It helps to learn about what's going on under the waves so you are more likely to recognize the happenings that you encounter during your dives.

Find Out Who Lives Where, and Why

When looking for a particular marine animal, it helps to know where to find it. Marine life identification books and regional dive guides are excellent resources for learning what types of animals you'd expect to see in a given area. Water temperature and geographical distribution are key factors in determining which species live where. If you pay attention, as you gain experience you will quickly realize that the animals that occupy one niche are often different from those that occupy another niche only a few yards away.

Consider Form and Function

The body shape of marine creatures plays a very important role in how and where various species live. Animals such as rays and angel sharks are flattened from top to bottom. These creatures are well-equipped to maintain low profiles and are typically found along the sea floor. Eels have a long, more attenuated shape that is ideal for slinking around in the crevices of reef communities, and that is where you are likely to find them. By noting and considering the shapes of animals you find in very specific areas, you can begin to acquire valuable insight that will help you put together the marine puzzle.

Hone Your Fish-watching Skills

Next time you dive, instead of simply looking at a fish, challenge yourself a little by trying to put the fish in context with its surroundings. Consider its shape and other adaptations it possesses as well as what you know about its lifestyle. See if you can determine whether the animal appears to inhabit a relatively small territory or whether it is in transit. If the fish tends to stay close to one area or repeatedly swims over the same patch of reef, look for a nest site or mate. Learning to be a good observer of marine life is more of an art form than an exact science. Everyone brings a different background to their diving experiences and as a group, we learn to dive in a lot of different places. After learning we travel to different places and experience different phenomena.

Club Warm Water Dive Trip 2018

Sharkbait Dive Club invites one and all to the Southern Windward Islands on the beautiful island of Grenada.

Join us for week of warm water; sun drenched white and black sands, spectacular diving, good food and good company. Divers and non-divers alike are welcome.

At 12 miles wide and 21 miles long, Grenada offers a striking topography of mountainous rainforests, stunning waterfalls and beautiful lakes and rivers. Known as the 'Spice of the Caribbean', and with more spices per square mile than any other place on earth, the scents of nutmeg, mace, cloves, ginger and vanilla will permeate the senses from the moment you step off the plane.

When: Saturday, December 1st to Saturday, December 8th, 2018.

The Resort: Coyaba Beach Resort

The Coyaba Beach Resort is just ten minutes from the Maurice Bishop International Airport and fifteen minutes from St. George's, and the famous Grand Anse beach, listed as a destination in the "1001 Things to Do before You Die" book, is steps from your room. All rooms are air conditioned with either patio or balcony. Continental breakfast is included.

Amenities include: World-class beachfront views *Ocean view signature restaurant *On-site scuba diving and watersports center *Body treatment Kabanais with panoramic sea view * complimentary green fees at Grenada

Golf Course * chairs and umbrellas on Grand Anse beach * service fees and taxes included



The Diving:

Eco Dive and Trek, a PADI 5-Star dive center, is on site at the hotel, with gear storage available at the shop.

Grenada remains relatively unspoiled compared to the other more popular Caribbean islands according to Rough Guide.

The Particulars:

Coyaba Beach Resort

Double occupancy: \$1,217 per person for 7 nights.

Single occupancy: \$1,939 per person for 7 nights.

Non-Diver: \$ 897 per person for 7 nights.

Diving

5 days of 2 tank dives. \$10 Marine Park annual fee for divers and \$1 day pass for snorkelers. Private boat are possible if available with 10 divers. Weights, tanks, and a guide are included.

What's not Included

Sunscreen

The hustle and bustle of mainland life.

\$100 Deposit due ASAP for Reservation, Balance due by October 1st.

Cancellation allowed up to 60 days before reservation after which refund rates will vary.

Club Discounts offered by Quest Dive



10 paid nets 2 free diver and hotel package (double occupancy), plus 10% commission over all costs (except taxes), split between divers.

Air Fare: (not included)

Available on several airlines; currently airfare is about \$740 RT for a decent one stop flight.

Other Info

A passport is required. Airport transfers are \$15 RT if paid in cash - \$20 if paid in advance by dive operator.

CONTACT: Silvia Swigert at (714) 349-0872 or email SilviaSwigerts@gmail.com



2018 Bluewater Shootout

Bluewater Photo has announced that the 2018 SoCal Shootout Competition will be held September 14– 16, 2018. Registration is open from now until September 13th.

This competition invites divers from all across Southern California to dive and photograph with the opportunity to enter the contest and win great prizes. Photographers of all levels are welcome and can participate in a number of different

categories that are separated by camera type (compact, mirrorless, dSLR) and photo type (macro, wide-angle, behavior, etc).

“The limitation of only being able to use photos from that specific weekend really adds to the excitement and fairness of the competition. It adds that extra flare of need to first find a subject or image you're planning to take, and then also nail the photo!” - Adam Gibson

This contest brings together our local community of divers and underwater photographers, while also promoting local diving and the great underwater environment that we enjoy here in Southern California.

What can you win?

There's a great list of sponsors who have chosen to participate in this year's competition, offering prizes that range from completely free vacations to free gear and local boat trips. With a grand total of over \$24,000 in prizes last year, Bluewater Photo is planning to surpass this total for 2018 – they already have a new record of free trips as prizes! While the full list of sponsors is still coming in, see some of the highlights below.

Platinum Sponsor prizes: A free trip to the Sea of Cortez aboard the Quino El Guardian, multi-night stay packages at Volivoli Beach Resort in Fiji, Clearly Cayman Beach Resorts, and El Galleon Dive Resort, along with numerous high-end video lights and camera products from Kraken and a GH5 Housing with 2 TLC arm sets from Aquatica.

Gold Sponsor prizes: A multi-night stay at Aiyana Resort in Anilao, 3 night/4 day stay with dives for 2 people at Atmosphere Resort in Dumaguete, multiple products from ThinkTank, twoYS-D2

strobes from Sea & Sea, and an Olympus TG-5 camera + housing.

Silver Sponsors: prizes from Ultralight Control Systems, Ikelite, CeeRay dive boat, Channel Island

Dive Adventures, Truth Aquatics, 2 trips aboard the CeeRay dive boat, and so much more!

How do I join?

For more information or to sign up to participate in the competition, go to bluewaterphotostore.com/socal-shootout, or contact Adam at adam@bluewaterdivetravel.com.

Upcoming Dives

Change in Beach Procedure

Participation in our beach dives has been pretty spotty of late and to save Martin the hassle of getting to the dive site and having to abort because no one is there we have initiated a RSVP protocol. If you are participating in our beach dive, E-mail Martin at n1diver@aol.com or call at 714-833-9167.



www.clipartof.com - 441036

Beach Dive August 18 Night Dive Shaw's Cove Laguna Beach 7:00 PM

OK, you are all familiar with this favorite spot for your first ocean dive. There's good reason for the popularity of Shaw's, conditions here for beach diving come as close to being ideal as any other place along

Laguna Beach

The cove is well protected from waves and surf averages only one to two feet.



Currents are weak to non-existent and visibility is rarely less than 15 feet and will range up to in excess of 30 feet.

On the western side of the cove, the rocks extending from the point drop rapidly to the sand in 20 to 35 feet of water. At the end of the point there is a channel about 15 feet wide that cuts deep into the reef. Further out along the reef the water deepens to about 30 feet with abundant sea life.

The eastern side of the cove is less spectacular, but far less crowded. A shallow reef covered with blade Kelp and Eelgrass extends from the point about 100 yards ending in sand about 25 feet depth. There are several places where the reef rises from the bottom about 8 feet. This is an excellent place to find Moray Eels.



Shaw's is located between Crescent and Fisherman's cove. The stairway to Shaw's is located at Cliff Drive and Fairview. From PCH turn toward the ocean on Fairview. Look for Martin



Boat Dive CeeRay to Catalina August 11th

Details

3 dives

Bring your own tank and gear (air fills on boat)

Boarding - 6am

Cost - \$150, includes food and air fills.

Please call or visit the Seas The Day Store in Brea as soon as possible to make your reservation. Spots for this trip normally fill quickly. Scuba gear also available for rent.

Seas The Day Scuba

1039 E. Imperial Hwy

Suite F1

Brea, CA 92821

(949) 220-0500



Ocean Cleanup uses plastics to remove plastics, litter, from the Pacific

Thanks to Jeff for submitting this article from Plastics News.

By Catherine Kavanaugh

The Ocean Cleanup, a nonprofit group trying to tackle plastic pollution with technology, says it has successfully tested a free-floating system to collect marine debris from the Great Pacific Garbage Patch and will deploy it in early September.

The Rotterdam, Netherlands-based group designed a passive system with two main components both made of plastic. There's a long "floater" of flexible high density polyethylene pipe and a polyester woven skirt attached below it.



A two-week test of the collection system's durability and hydrodynamics showed it withstanding the forces of the Pacific Ocean, including 5-meter (16.4 feet) wave.

The system was designed so that the buoyant and flexible HDPE pipe bobs atop the Pacific Ocean to keep garbage from flowing over it, while the drag on the skirt, which is tapered, forms a U-shape that captures plastic floating at or near the surface.

Imagine a giant Pac-Man powered by winds and waves gobbling up the plastic in its path, said Boyan Slat, the 24-year-old founder and CEO of the Ocean Cleanup.

Most marine life is expected to swim underneath the system, which was dubbed Wilson in a nod to the personified volleyball friend of actor Tom Hank's stranded character in the 2000 movie "Castaway."

The pilot test for Wilson was conducted with 120 meters of Agru XXL pipe and 72 meters of skirt or screen that is 3 meters deep at the center. The system was assembled with clamping brackets in Alameda, Calif., then pulled by boat through San Francisco Bay for 1,200 nautical miles to the trash vortex in the Pacific Ocean, between California and Hawaii.

The largest of the five zones where plastics accumulate, the North Pacific garbage patch is said to be twice the size of Texas and holds 1.8 trillion pieces of plastic that entered the ocean mostly through rivers. That's 250 pieces of plastic for every person on the planet. Fishing nets make up 46 percent of the gyre and 20 percent came from the 2011 tsunami in Japan, according to scientists with the Ocean Cleanup, who also say much of the plastic is rigid PE and polypropylene.

A two-week test of the collection system's durability and hydrodynamics was done in May. Some results were

shared on social media in July, including the system withstanding 5-meter waves and forces of the ocean.

"The recently completed tow test was a crucial milestone on the road to deployment of the world's first ocean cleanup system," the Ocean Cleanup said in a Facebook post about the test validating the system's seaworthiness.

Agru commented: "Great to see our XXL pipe in action! It is flexible like a snake and will withstand even the harshest sea conditions."

Produced in Charleston, S.C., by Agru America Inc., XXL pipe is available with outer diameters up to 2,500 millimeters (98.4 inches) and lengths up to 600 meters (1,968 feet) for on- and offshore applications. The pipe can be extruded into Charleston Harbor, and when capped at the ends is buoyant for towing by tugboat to customers around the world for mining jobs and coastal projects like cooling water intakes for power plants and seawater desalination plants.

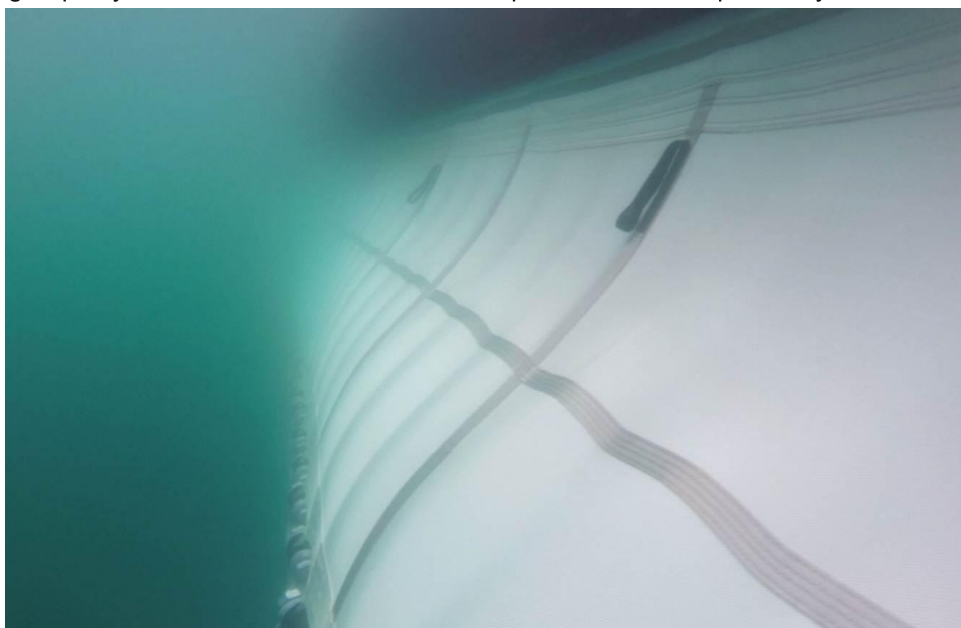
The Ocean Cleanup envisions a fleet of 60 plastic-culling floaters that are 600 meters long each and equipped with solar power lights, cameras, sensors, anticollision beacons and satellite antennas to communicate their locations and gather performance data, including an alert that the U-shaped center is full. An online summary of primary components says pipe with a 4-foot diameter will be used.

In optimal conditions, every week, 1 metric ton of plastic debris will accumulate in front of the system. Garbage-hauling vessels will arrive periodically to pick up the plastic and take it to land for recycling into products like sunglasses, backpacks, headphones and watches.

The Ocean Cleanup says this full-scale fleet could pick up 50 percent of the Pacific garbage patch every five years. The plastic returned to shore for recycling will be sold to business-to-consumer companies and that money will go toward cleaning up the other gyres in the South Pacific, North and South Atlantic Ocean, and Indian Ocean.

The floater pipes, too, could be recycled after their estimated 20-year service lives.

If the Ocean Cleanup can deploy fleets into every gyre, and if efforts of source reduction continue on land, the group says it should be able to remove 90 percent of ocean plastic by 2040.



This woven polyester screen is an important component of The Ocean Cleanup system. Attached to the buoyant "floater" of polyethylene pipe, the drag on the tapered screen forms a U-shape retention area that captures plastic floating at or near the surface.

Creating a 'coastline'

The principle behind Wilson is simple, according to an Ocean Cleanup video: "Create a coastline where there are none, concentrate the plastic and take it out."

Both the debris and the free-floating removal system will be carried around by the currents, automatically drifting to the areas with the highest plastic concentration. But only the pipe-and-screen system is propelled by the waves and wind, giving it an edge on speed over the garbage. The system moves faster than the plastic trash and can capture it.

The tapered screen, which is deeper at the center of the floater than the edges, naturally forms a U-shape that collects debris in the center like a funnel.

In a July 21 update, Slat said, "Although there is a fair chance this won't be the last iteration of our ocean cleanup technology, we have high confidence that it addresses the stability issues and that this will be the design responsible for collecting the first plastic from the Great Pacific garbage patch later this year."

The group's original plan was to moor a 60-mile floating boom to the sea floor and guide plastic to a mechanical extraction system, such as a conveyor belt. The debris would then move to a platform with a storage hull and processing equipment, like a shredder, on a solar-powered deck. Every 45 days or so the debris would be hauled to land and converted into energy or recycled.

However, the group decided against one massive cleanup system fixed to the seabed and switched to the plan of a fleet of smaller free-floating systems.

The screen then became a focus after a prototype of polyester fibers covered by a layer of TPU tore and delaminated. The group changed to a strong polyester fabric in a geotextile-based screen design.

"The fibers of the fabric are grouped in bands, which means the load will always be spread across many fibers, making tear propagation unlikely," Slat explained in a website update earlier this year. "As an added safety feature, the strong-lines themselves act as an additional rip-stop mechanism as well. The upside of this design is that it solves all the failure mechanisms we previously encountered. It is, however, more complicated, requiring many interfaces in the shape of stitches."

The screen will gather plastic fragments just millimeters in size to 10s of meters in size like huge ghost nets.

Then what?

The Ocean Cleanup estimates that a plastic extraction vessel will travel to the floaters every six weeks to collect marine plastics from within the retention system. The area will first be scanned for large fish, sharks and sea turtles with an underwater camera. If a living marine mammal or sea turtle is found entangled in a derelict net or debris, a disentanglement procedure may be initiated depending on safety and weather conditions and the species involved.

The system also may be equipped with pingers to deter marine mammals and green flashing lights to deter sea turtles.

When the area is cleared of marine life, a net will be towed by the main vessel and closed slowly. The catch will be transferred on board to a brailer with fine mesh to collect macro- and microplastics. Any living small fish and other organisms will be manually separated, if possible, documented and released back into the ocean.

The extracted plastic will be deposited in open-top containers with drainage holes and commercial-grade filters to retain microplastics. The plastic will then be shipped to a drop-off point in the San Francisco Bay area, moved to labeled containers and taken to a recycling site, where it will be pretreated to remove biomass and inorganic fractions. Nonplastic debris and plastics not suited for mechanical recycling will be subject to thermal recycling.

The target date for deploying Wilson is Sept. 8.

Hey Beach Divers Be careful Parking in Laguna Beach

LAGUNA BEACH — Tickets for parking violations that impair public safety — at a red curb, next to a fire hydrant, too close to a fire station, and in certain other no-parking zones — will cost violators \$63 beginning May 10, a 46 percent increase over the current fine.

The City Council on Tuesday, April 10 voted 4-0, with Councilwoman Toni Iseman absent, to increase the penalty of the violations.

Other fines — including for parking at a yellow, white or green curb, over marked lines or in an intersection or driveway — will remain at \$43. Parking in a spot designated for disabled drivers without the proper permit will remain \$300, the city's stiffest parking fine.



Upcoming Classes

Continuing education courses are designed to advance your diving skills and keep you doing what you love. You can start right after earning your Open Water Diver certification.

Taking another dive course will help you gain more confidence and enhance your scuba skills so you can find new ways to explore the underwater world.

Upcoming Classes

Open Water Classes:

July 14, 15, 21, 22.

July 21, 22, 28, 29.

July 28, 29, Aug 4, 5.

Advanced Open Water Class:

July 15, 21.

EFR Class:

July 24.

July 26.

Rescue Class:

July 22, 28.

Learn to Dive Enriched Air

Learn to dive using Enriched Air Nitrox from the comforts of your own home! The E-Learning course will allow you to complete your bookwork and test all from home and on your own time. Once completing the test you will then come into the store for a practical training session which will include analyzing tanks. Stop in or give us a call for more information.

Volunteer Divers Needed

Bill Maley is a club member and is looking for divers to assist him and his team providing rescue standby for boat and waterski races in the area. Give him a call or E-mail him if you are interested in participating.

Rescue Divers needed for standby at Water ski race May 5th and 6th.

Divers who are advanced by certification or experience. \$50/day plus fuel reimbursement round trip plus free lodging. Free training offered including certification in DAN First Aid CPR and Oxygen administration. More events every month.

Divers and Medics Needed

Rescue Standby for Boat & Waterski Racing.



Schedule: Weekends most months. No minimum attendance.

Locations: Parker, Elsinore, Havasu, Mission Bay

Reimbursement: Lodging, Fuel, Food & Other (\$50+/day)

Training: In-water extrication and immobilization. First Aid & Oxygen certification.

Medics = EMT or higher. Comfortable in the water.

Divers = Advanced by certification or experience.

Contact

Lead Medic: Bill Maley wotbill@cox.net (949) 933-6754

Lead Diver: Dan Eisenbeisz dan@isnbice.com (949) 510-3362

Website: <http://www.meetup.com/wmi-corp-water-rescue>

Don't Forget Our Sponsors

We are fortunate to have a great group of sponsors who contribute to the success of SharkBait Dive Club. Without their help and support, we wouldn't be able to provide the benefits that membership in SharkBait gives our members.

We need to do our part also by supporting our sponsor/friends with our continuing business support. When considering a purchase of equipment, a class or a trip, or when you have that irresistible taste for Italian food please remember our sponsors. They are great partners !!!!



1039 E. Imperial Hwy, Suite F1
Brea, CA 92821

Tel. 949.220.0500

Mon Closed
Tue – Sat 10am – 7pm
Sun 12pm – 6pm



17487 Imperial Hwy
Yorba Linda, Ca 92886
(714) 524-2770
<http://www.grazianosrestaurants.com/>

Club Information



Monthly club meetings with speakers and raffle prizes
Monthly Newsletter
Land-based Club activities and events for the whole family
Organized local dives
Resort warm-water trips
Good dives and good buddies
Membership costs are as follows .

. .
New Membership:
Single \$40 pp
Family \$50 (couple/family)
Renewal:
Single \$30
Family \$40

membership renewals are due in February for all current members. New members dues will be prorated depending on the month they join the club

Dive Club members will receive from Seas the Day SCUBA

*10 free air fills, or 5 free nitrox fills

*10% discount on all merchandise except cameras and camera equipment, weights and cylinders (very skimpy markup on these items)

*discounts on boat trips with the club.

Club Board Members

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Dieter Jacobs
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Secretary/Beach Dives

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Publicity/Social Media, Warm Water Trip

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Honorary Board Member

Randy Garzes

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SharkBait Dive Club - SoCal

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Scubaboard

Scubaboard.com