

Visitor Center Updates

We have been busy with exhibit tasks now that we have our Museum Tech on board. Thanks to James and volunteers Bob and Scott, we are catching up on some much needed projects in the VC.

They have been focusing on some exhibit cleaning and maintenance. The wave tanks and erosion tanks were deep cleaned.

The Lego lighthouse received some thorough maintenance. For all of you that volunteered in the past with Kent, you can imagine how happy he would be to know that his prized exhibit is getting the routine attention needed!



The aquarists have been busy installing a new chiller housed in the access area behind the octopus tank. This new chiller will keep the octopus tank and smaller tank along the side at the steady temperature needed for the animals in those systems.



Now that the pile driving is completed for the updated seawater system platform structure and the new chiller is in place, the octopus tank is getting prepped to move the giant Pacific octopus back on exhibit. We hope to have the GPO on exhibit by this Thursday and the Pacific spiny lumpfish back out by next week.

Algae Culture in the West Wing

Here is a fun project led by Visitor Center Aquarist Jaimie Hart. The aquarists decided that they needed to start a culture of microalgae in order to better provide our Oysters in the Estuary 2 exhibit a more direct and varied diet. The brine shrimp and commercial Oyster feed blends just didn't seem to be delivering everything the oyster clutches needed. This moved the process forward to start introducing some nutrient rich live food.

The algae that they are culturing is *Isochrysis*, which is commonly used to feed oysters and shrimp larvae due to its high content of polyunsaturated fatty acids such as docosahexaenoic acid (DHA), stearidonic acid and alpha-linolenic acid. Jaimie is still in the beginning stages of our culture and will soon be feeding it to the Oysters to see how they respond!



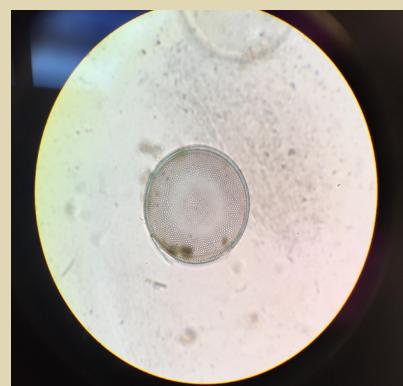
Washington Spring Bloom 2019

To the right is a photo of a concentrated sample of the Spring Plankton Bloom, taken from Puget Sound, WA. Here, you can see chains of small organisms called diatoms. Worldwide, these small, single celled organisms account for approximately 20% of the Earth's oxygen. The cell itself is surrounded by a two-part, silicate-based cell wall called the theca, which fits together like a box, with a top and bottom. While some diatoms live in chains as shown here, others live life solo, floating in the ocean sunlit upper layer. The hardiest diatoms are some of the first to bloom in the spring; however, they are by no means the only ones.

The Plankton is Coming!

By Emily Bjornsgard

As the sun begins to stay above the horizon for longer and longer periods of time, there are all sorts of changes going on in the surface layer of the ocean. A phenomenon that occurs each year, yet is unknown to most people visiting the coast, the spring plankton bloom of the Northeast Pacific is vital to nearshore life from Alaska to California.



Coscinodiscus sp.

Since diatoms are photosynthetic, they are one of several types of microscopic plankton that make up the producers, a low level on the food web. As soon as the food source grows, the consumers follow. In this ecosystem, primary consumers are made of heterotrophic dinoflagellates, single celled organisms that prey on other single celled organisms. They are preyed upon by fish and invertebrate larvae (such as these Acorn Barnacle Nauplii).

Once the Spring Bloom comes to an end, individual species of plankton will locally bloom, often outcompeting many of the other species. You may be familiar with the bioluminescent algae occasionally found along our coastline, its glowing blue and teal hues. It is caused by a species of marine dinoflagellate called *Noctiluca scintillans*.

In some locations, it can even build up and be seen as a reddish-orange film during daylight hours.



Volunteer Highlight Art Nathan



Born and raised in Sacramento, Art went to the University of California, Davis. There he received a Bachelor of Science degree in Plant Science, with an emphasis in Viticulture. After graduation Art planted and managed vineyards all over the California north coast for ten years. When the opportunity came up to get into winemaking, he took advantage of it and went back to Davis to take Enology classes. He made wine for 30 years, retiring after working for Beringer as the head of winemaking for their Central Coast operations.

Upon retirement in 2009, Art got interested in volunteering. Besides becoming a UC Master Gardener, he volunteered for seven years at the top-rated Monterey Bay Aquarium as a Guide (docent). Upon moving to Oregon, he continued with his interest in both gardening and oceanography, completing the training to become an OSU Master Gardener as well as training to volunteer at the Oregon Coast Aquarium. He is enthusiastic about volunteering at HMSC, and we are happy to welcome him to our program!