

## The Rendezvous with Ms. Blue and the Voyage to the Land of Fossils

The dog days of summer turned into the bone and fossil days of summer. In early July, we visited New Brighton State Beach and saw bones and fossils. We witnessed some unique things such as the bottom of fossil beds, whale bones, some



isopods and even a washed up fish! As part of the trip, we visited Seymour Marine Discovery Center at the UC Santa Cruz campus. We were greeted by Ms. Blue, a massive blue whale skeleton at the entrance which spans

87 feet long and rises 18 feet tall. Compared to Ms. Blue, I felt extremely small and my respect for the large blue whales increased tremendously. Even though we did not tour the inside of the Seymour Marine Discovery Center, we spent some time outside studying Ms. Blue and another gray whale skeleton. Even though blue whales and grey whales are called whales, the feeding techniques are completely different. Due to being Baleen whales, blue whales feed by the filtering mechanism

of taking in water along with food (typically krill) and the water is squeezed out.



*Ms. Blue Skeleton outside Seymour Marine Center*

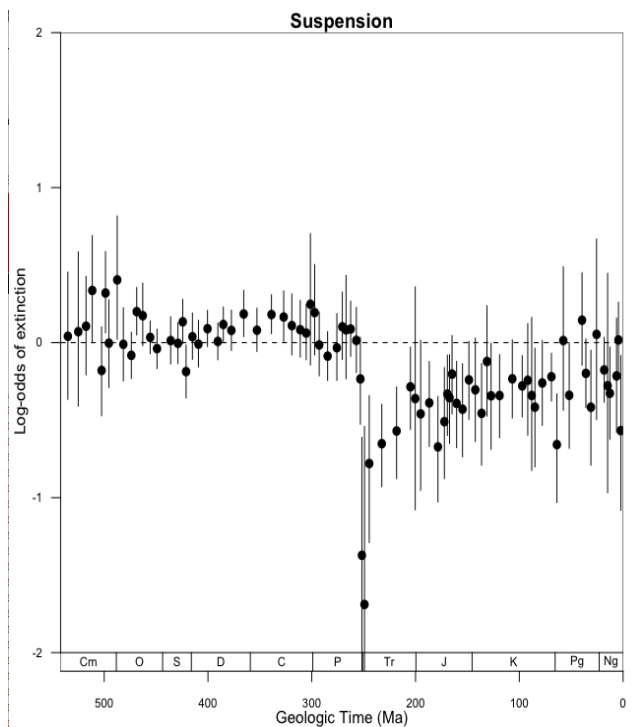


*Gray Whale Skeleton*

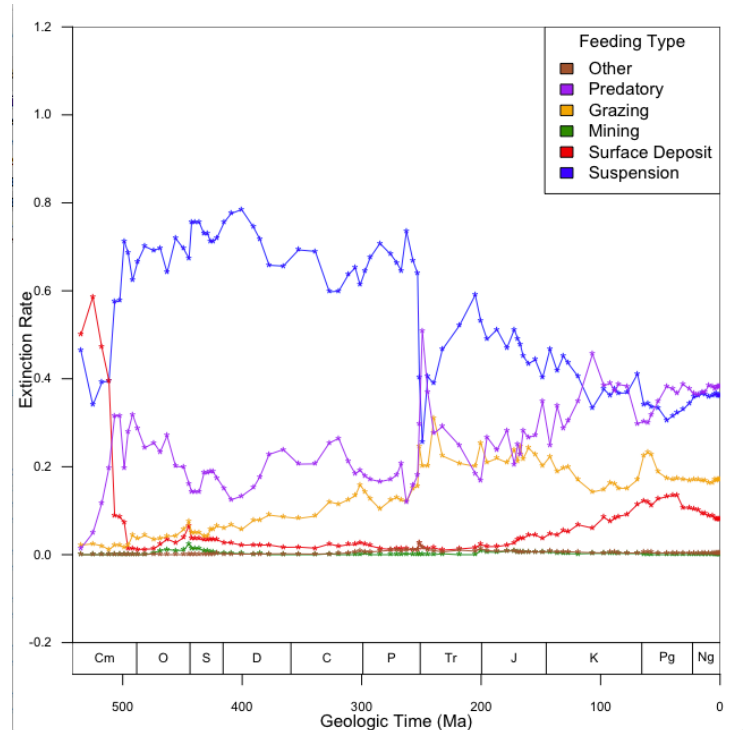
Gray whales swim just above the sea floor and suck mud and sand into one side of their mouths to get at shrimp-like crustaceans called amphipods. They expel the

suspended sediment out the other side of their mouths after consuming the amphipods.

The feeding habits of marine organisms is of special interest to me since my project in the classroom deals with the body size evolution of marine organisms over time. I was especially interested in whether the feeding habits help or hurt the ability of the genera to avoid extinction. I was plotting a time series graph of extinction using body size for each feeding type. I also plotted the logistical



*Logistical Regression of log-odds of extinction for suspension*



*Time Series Extinction rate and body size for each feeding type*

regression of extinction rate and body size over time. The sample graphs are included here.

The overnight field trip to Pinnacles National Park was exciting and tiring. On the way we stopped in Salinas valley to see and collect fossils of crabs, bivalves,



brachiopods, and some gastropods. Some of the rocks with fossils collected by me are in the picture. This may look like a random rock collection but if you look closely you can see the imprints of the animals. I had several encounters with nature. Even though I saw a



small scorpion on a rock, most of the wild life came in the form of the flies and

yellow jackets swarming my tent and the wild coyotes giving me company from a distance. We did couple of hikes and both were strenuous, On the first hike, the view was still amazing, even in the middle of the hill! Mrs. Saltzman pointed out one of the pinnacles, and showed that it looked like a sitting down camel!



The second hike had flowers growing everywhere, even at the sides of hills! Noel pointed out rock structures to us and talked about the unique features each of them had! I saw fallen trees, marked with white, possibly to signify hazards, they were everywhere! The trip involved lot of driving and special thanks to Dr. Noel Heim, who was driving the van I was riding.

Even though I heard that Dr. Heim brings baked items to class, I did not expect him to be a such a good cook. The food was delicious especially the banana cream pie was so good. The Thursday gatherings during lunch was very helpful in understanding various research going on in the Stanford school of Earth, Energy and Environmental Sciences.