Newsletter 2025

Swedish Mobility 10th to 14th March

Wetlands and sea ecosystem: biodiversity and food, water in farming and in energy

Visit Varberg fortress and lecture about "Bockstensmannen"

During our visit to Varberg, March 11, we visited Varberg Fortress. The fortress, which was built as early as the 13th century, is located at the center of Varberg overlooking the sea. Now the fortress serves as a cultural history museum with exhibitions such as "Fish and Ships" and Bockstensmannen.

At the museum we got a very appreciated guided tour about Bockstensmannen. The man was found on Bockstens mosse near Varberg in the early 1900s. Due to the chemical content of the bog, his body, as well as his clothes and equipment, were well preserved even though he died in the 14th century.

In the afternoon we were visiting the nature reserve of Getterö. The Bird guide informed us that there are a variety of birds in the Nature Reserve. Throughout spring and fall, many migratory birds rest in the reserve, most leave after the summer breeding season, whilst others choose to remain, and stay throughout the winter, such as sea eagles. The students received a short training on how to use binoculars which they used to look for Getterön's different bird varieties that standing outdoors at one of the area's various observation towers. It was very impressive and created enthusiasm to be able to look far away around the area for different birds.

Inside Naturum Getterön they have a permanent exhibition. It’s suitable for teaching students about the different types of nature we have in Halland as well as what birds are there and how they have adapted to different areas and food. Apart from the various stuffed birds that the exhibition had to offer, students could spend time on their own with activities such as painting and listening to different bird sounds for educational purposes.

Visiting Tjärnö Marine Biological Research Station

On Wednesday, March 12, we traveled by bus to the Tjärnö Marine Biological Research Station. There, we took part in the following program: We listen to a lecture on the two problems caused by increased carbon dioxide levels in the atmosphere due to the high combustion of fossil fuels. Professor J. Havenhand illustrated through words and images how the development of marine life has been affected by rising water temperatures and decreasing pH levels.

We visit the Tjärnö Aquarium, with marine animals from the Skagerrak and Kattegat. During the visit, students had the opportunity to touch several of the marine animals, such as lobsters, starfish, and sea cucumbers. We also took part in a laboratory work, where students examined how marine organisms (mussels, starfish, and shore crabs) react to changes in pH, temperature, and salinity. These investigations were supervised by marine biologists from the research station.

The purpose of the activity was for students to gain both theoretical and practical experience of marine ecosystems and how they are affected by climate change (warmer oceans) and ocean acidification due to combustion of fossil fuels.

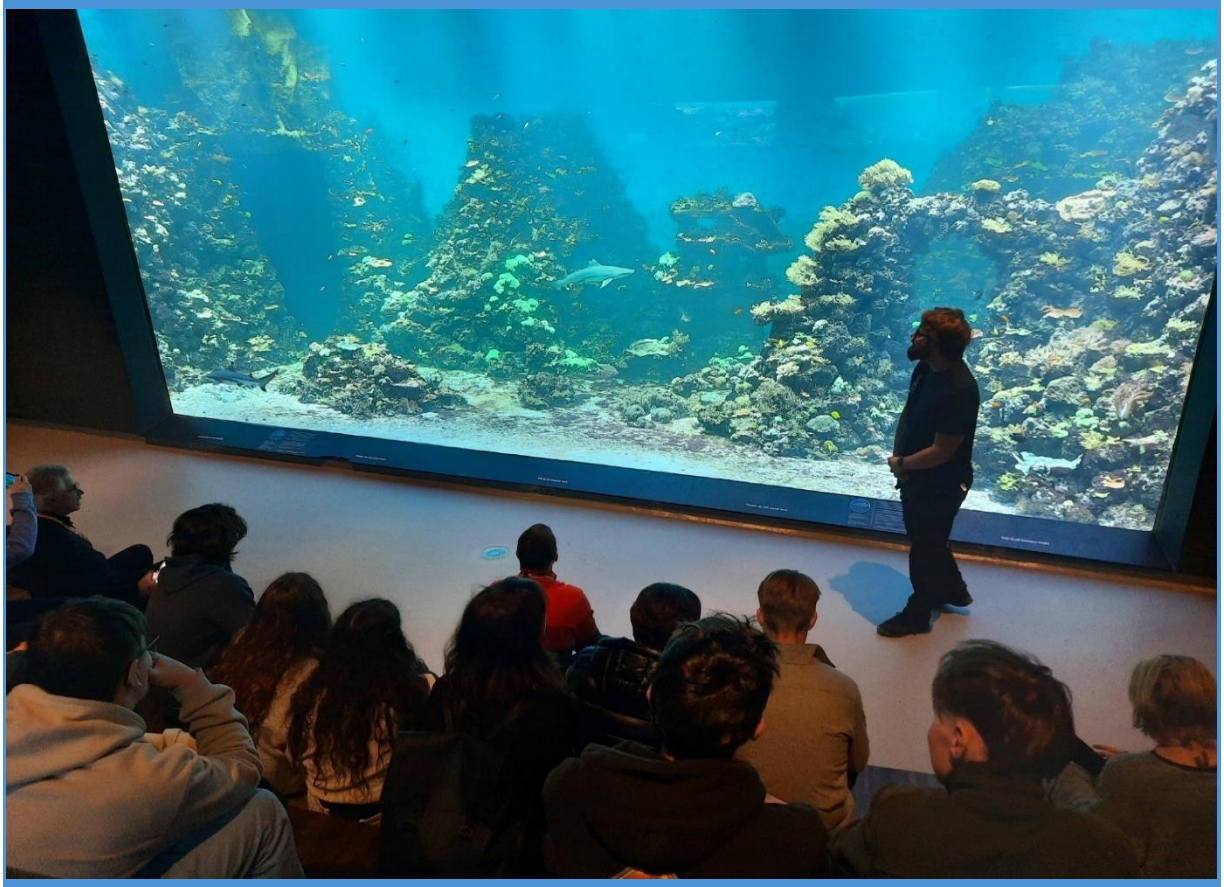
Visit at Maritime Museum and Aquarium Gothenburg Ocean Farming

The day March 13, began with an engaging and inspiring lecture by Grazzia Matamoros, a researcher at the University of Gothenburg. The lecture focused on the blue planet, the ocean and its biodiversity, as well as several of the major threats that marine ecosystems face today.

Following this, Maria Bodin, a marine biologist at the university, presented different methods of seaweed cultivation currently being explored at multiple locations in Gothenburg. Unfortunately, we visited a bit too early in the season; otherwise, we would have had the opportunity to visit some of these research sites in Gothenburg's harbor. Instead, we attended a lecture at the museum.

After the lecture, the students were divided into groups where they had the opportunity to taste different seaweed-based products, sample dried seaweed, and even create their own seaweed salt. Additionally, they measured the salinity of water samples from different marine regions along Sweden’s coastline.

The museum we visited houses one of the world's largest coral reef aquariums, and naturally, we attended a fascinating lecture on the various coral species and their ecological adaptations. The students also explored different aquarium exhibits, featuring a diverse range of fish and marine habitats, including an impressive kelp forest.



Visit at Chalmers University of Technology and lecture about "Wave power and water energy"

Thursday afternoon was spent at Chalmers University of Technology in Gothenburg. We arrived at the student driven café "Bulten" where we were warmly greeted by Professor Jonas W Ringsberg, head of the Division of Marine Technology. He gave a presentation on the opportunities with renewable wave energy. Different models of wave power devices were displayed, as well as an historical perspective of water and waves as sources of energy. Professor Ringsberg also presented some dilemmas when developing this new technology. For instance, the maritime zones where the most energy can be harvested are not always the best places for installing wave power plants.

Another critical issue with wave power is how to transfer the energy to the electricity grid, and how to lower the costs; issues that the professor believes will be solved in the near future. The students asked many relevant questions about the technology and economy surrounding this new technique to harvest energy.

After the lecture, we were all invited into a brand-new laboratory with a water tank containing a model of a wave power device. When the tank created different wave conditions, we could directly observe the behavior of the device. Amazingly, we were the first guests to visit the laboratory and felt very privileged.

https://museumhalland.se/varbergs-fastning/

https://www.naturumgetteron.se/

Presentation about ocean acidification.pdf

https://www.gu.se/tjarno

https://www.gu.se/evenemang/vetenskapsfestivalen-bli-havsbonde-for-en-dag

https://www.sjofartsmuseetakvariet.se/

https://www.chalmers.se/

Wave Energy Chalmers University 2