

Curios of the Future
(Weather on Steroids: the Art of Climate Change Science)

The project that would change my life started with a vague invitation and a hasty request for an independent study course. Professor Judit Hersko invited me to be part of a collaborative exhibition involving local artists and scientists from the Scripps Institution of Oceanography. The objective was to combine art and science to bring attention to climate change, but the exhibit focuses specifically on how climate change affects the Californian open and coastal ocean, the effects of rising temperatures and water quality on marine life, and ultimately the consequence of extreme weather on local communities. The goal of the exhibit is to offer an educational environment revealing the intricate web of connections between the community and oceanic ecosystems.

Feeling honored and nervous, I requested an independent study course with professor Hersko, during which we could discuss my contribution to the exhibition. I knew that I was a decent sculptor, but hoped that with professor Hersko's help I could make an installation with a relevant and profound concept.

The development phase took two weeks of notes and two meetings with professor Hersko to decide upon an aesthetic direction. I expressed interest in curio cabinets and specimen jars and proposed this theme, to which professor Hersko responded positively. She introduced me to Dr. Frederik Ruysch (1638-1731), a famous anatomist and botanist whose innovation in the preservation of dead tissue was considered groundbreaking in the seventeenth and eighteenth centuries. He was known for his bizarre specimen jars, which he decorated with help from his daughter, Rachel Ruysch. It turned out that the morbid yet beautiful style of Dr. Ruysch was exactly the inspiration I needed, and I decided to sculpt several different species of endangered fish and display them in decorative

specimen jars as a tribute to Ruysch. Now, with a direction to follow, I could start on my research.

Before I could meet with any of the scientists who were involved with the exhibition, I mostly used the CSUSM library website and Google, as well as my own knowledge of climate change to find credible articles for my research. Just from speaking with professors a lot, I knew that immediate concerns for Californian fish were slow winds and warm water, the “warm blob” of water off the coast, and toxic blue-green algae.

These main research topics led to the development of a complex picture. Strange wind patterns and the severe drought had caused a large section of warm water to form off the California coast. The “warm blob” of water kept growing as regular upwelling became less frequent, due to the lack of wind, and toxic blue-green algae followed. The algae produces a strong neurotoxin called domoic acid, which builds in small fish and bottom feeders, passing on to larger animals such as marine mammals, fish, birds, and humans. Domoic acid over stimulates the nervous system and can cause seizures, brain damage, and death, but this isn’t only a concern for people who eat fish. It affects the fisheries that support the US economy, and oceanic ecosystems. Sea lions are showing signs of such brain damage, which involves erratic changes in hunting behavior and sometimes death. These animals are also faced with food shortages due to a lack of cold-water nutrients. With less upwelling of deeper, cooler water, fatty copepods are not available for fish to eat, so fish either move north or they die.

Upon meeting with two Scripps scientists Ralph Keeling and Art Miller, I was able to ask further questions to make sure that I wasn’t leaving important elements out of my research. They generally liked my direction, but advised that I make sure to paint the

sculptures as realistically as possible, because preserved specimens can change color in strange ways. On that note, Keeling offered to give me a tour of the Scripps marine vertebrate collection, and it is because of this invaluable resource that I was able to create such believable sculptures.

My sculptural installation in the exhibition is called “Curios of the Future,” and it includes four dead-looking endangered cold-water fish (California Steelhead, Rough Sculpin, Coho Salmon, Bonytail Chub), and three lively invading warm-water species (Hopkin’s Rose Nudibranch, Spanish Shawl Nudibranch, Yellow-bellied Sea Snake). The juxtaposition is meant to point out the fact that fish common to us now could become curiosities of the future, while warm-water species once alien to this area could invade and become the norm. I hope this installation makes people seriously consider the impact humans have on the environment.

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