
Introductory Thoughts
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Oregon State University
DEEP Connections Diversity and Science Event
Scripps Institution of Oceanography, January 26, 2021

As a child and while growing up on Maui I was fascinated with maps but there was no "geographic information systems or GIS" then, and I was more focused on becoming an oceanographer and making the 1980 Olympics in the long jump. As a Hawaiian kid I basically went through my childhood in bare feet, and when my coach told me how much faster I could run & jump in shoes, I resisted, perhaps not unlike our Esri users still wedded to the standalone desktop instead of leveraging the new and more powerful web GIS pattern (but I digress)! The only maps that I knew of were in the book *Treasure Island* or the pages of the National Geographic. GIS was nowhere to be found in my educational experience until I landed at UCSB for my PhD. You'll notice in the picture that I am wearing a Texas A&M shirt as I had just come to UCSB after living in Texas.

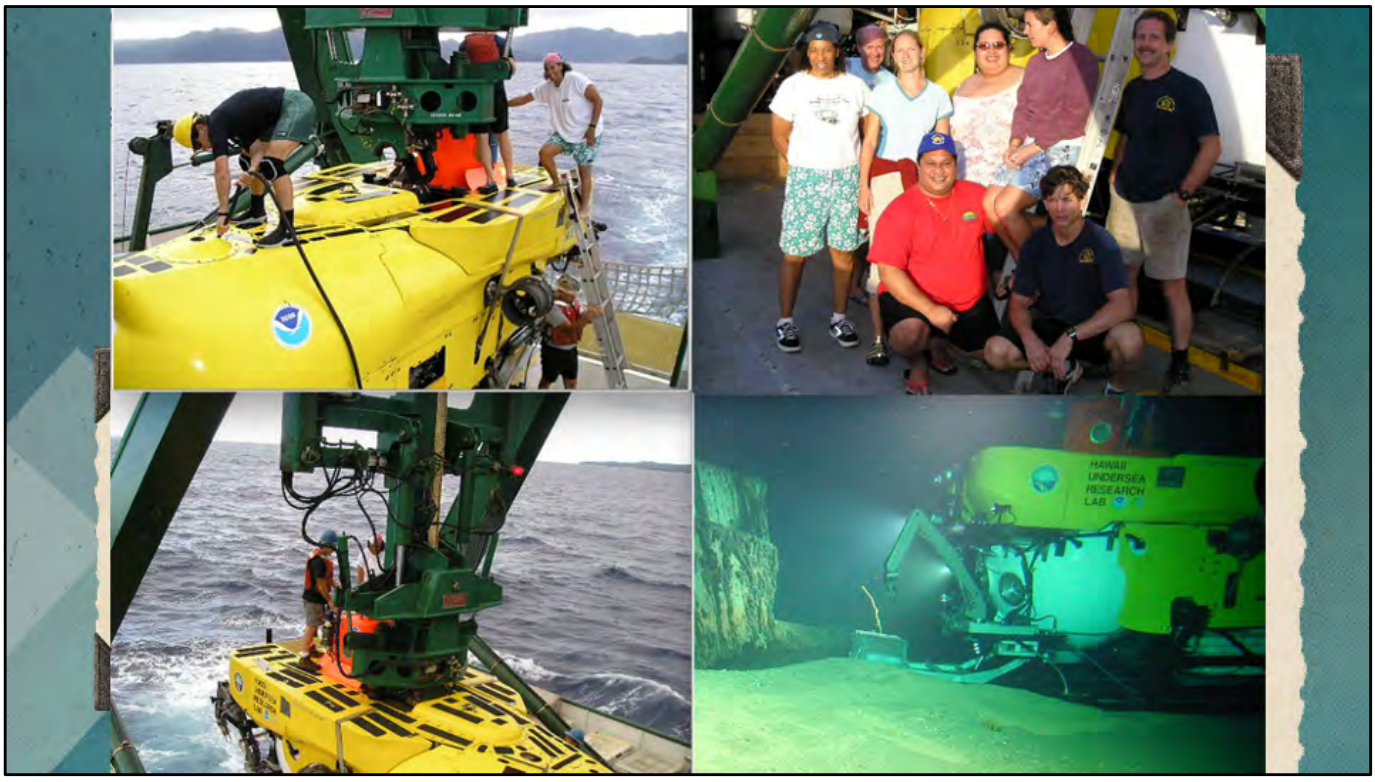
Before getting to the PhD level at UCSB there were quite a few adventures along the way. I think it's appropriate at this point in the presentation to describe a time when I failed and/or felt that I didn't want to continue with my work, and what I was able to do to move beyond the situation:

I had a difficult time with my thesis research for my Master degree at Texas A&M as I was working with some data that was hard to collect and further to understand. It also involved some mathematics that for me were difficult. Despite having a major professor, he was too busy to guide me or offer any real assistance (as this was his first academic job as a young assistant professor). I basically had to teach myself what I needed to do with the help to two senior doctoral students, who were in a different department no less. Further, I had another professor telling me that what I was trying to do was too hard and that any further and similar studies in another part of the world that I was interested in were going to be impossible – too hard to obtain the data. Despite this I managed to finish my thesis and to defend it. I was told by my major professor that, although I had done a good job putting together a study and defending all by myself, that I had barely passed. He further told me that I should give up on oceanography and go to business school or law school. The "rest," as they say, "is history," as my first professional post immediately after obtaining my Master degree was as a seagoing ocean technician, out at sea 6 months out of the year for 3 years, assisting with (and learning about) all kinds of oceanographic science [next slide]. This helped me to get into the great PhD program at UCSB, allowing me to do not only oceanography but geography. Further, I determined to obtain my PhD if for nothing else than to have my own graduate students that I could really guide and mentor properly, never ever neglecting them the way that I had been neglected during my Master degree. At last count I've advised over 50 of my own graduate students through to the completion of their degrees and been involved in helping 100s of others. Moral of the Story: Believe in yourself and NEVER GIVE UP!

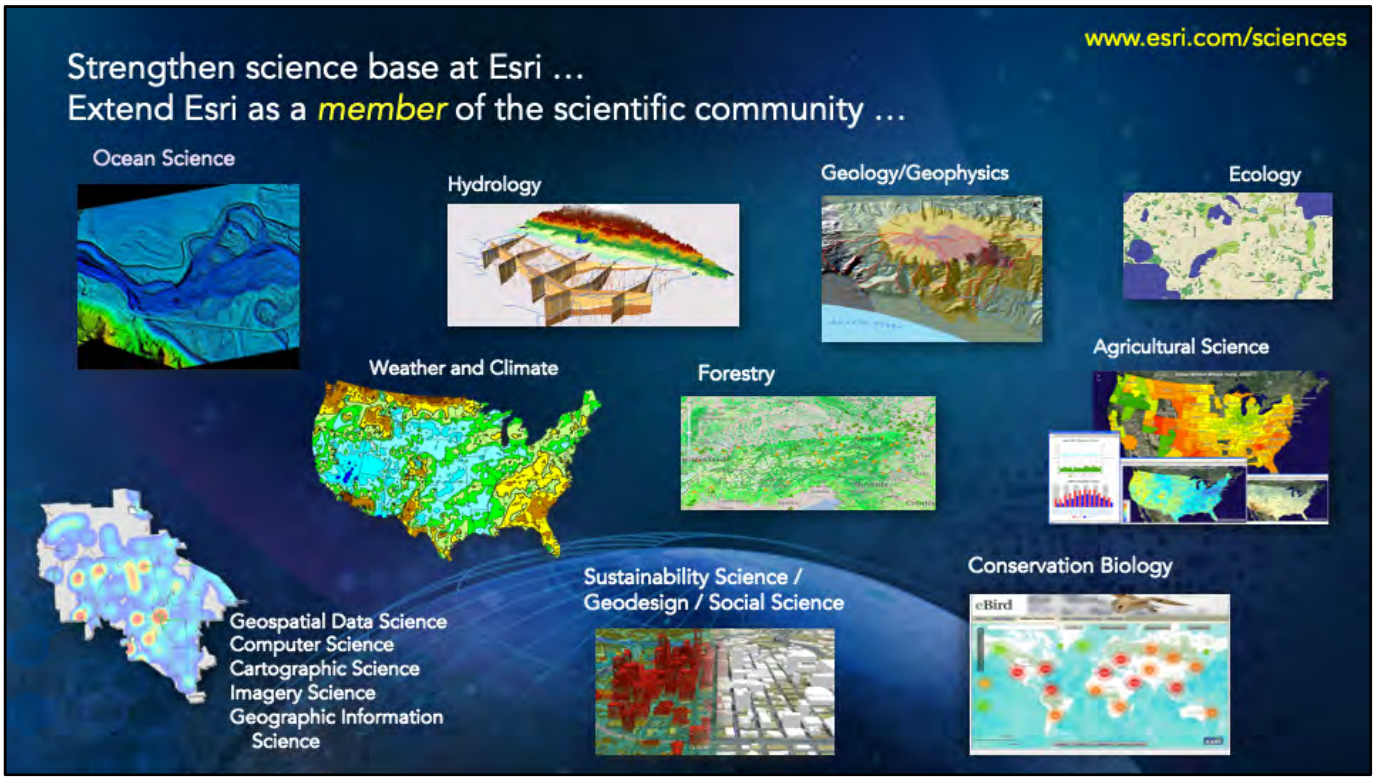
Story #2 about a mistake at MIT: invited by the legendary marine geochemist John Edmond to give seminar while a graduate student at UCSB. We had both sailed on one of the Alvin cruises to the East Pacific Rise that my co-adviser was chief scientist for. He mistakenly thought I had turned the world of marine navigation on its head because he was so impressed with the GIS maps I was making for Alvin divers to take into the sub with them. He was a very famous and distinguished scientist (http://web.mit.edu/12.000/www/m2005/a2/finalwebsite/environ/locale/jedmond.shtml). But as a marine chemist confined mainly to the lab while at sea, leaving it only to board the sub and to fortify himself at the galley, he apparently completely misunderstood the standard practices at sea for navigating and tracking subs like Alvin, and did not realize that all I was doing was receiving the dive tracks from the Alvin pilots (e.g., https://www.whoi.edu/75th/gallery/week35.html) and integrating them into a GIS along with other data. ONLY when he gave his intro of me right before for my talk did I realize what he expected. And this had also explained why I had been given the exhausting visitation schedule of a candidate being interviewed for a faculty position (which I had no intention of getting involved in yet – I was not even ABD). He had told the department chair that I was akin to a MacArthur genius, which was completely inaccurate. I had good material for my talk, drawing from my dissertation, but I certainly had nothing in my talk that was going to turn the entire scientific world on its head as he had apparently advertised to others. His disappointed silence after the talk, as well as the dismissive attitude of the audience, were devastating, especially for a graduate student giving one of her first departmental seminars to an audience far beyond her home campus, and at MIT no less.

Map of where I have been to sea – indian ocean, Antarctica and western pacific was mainly prior to grad school at UCSB. Someone at UCSB named me “Deepsea Dawn” and it stuck like glue, followed me to Oregon State and beyond. Eastern Pacific and SW Pacific dots cover UCSB, Oregon State up to Esri time

Orange star was UCSB dissertation with GIS including Alvin submersible dives; purple star was post-doc GIS work with NOAA



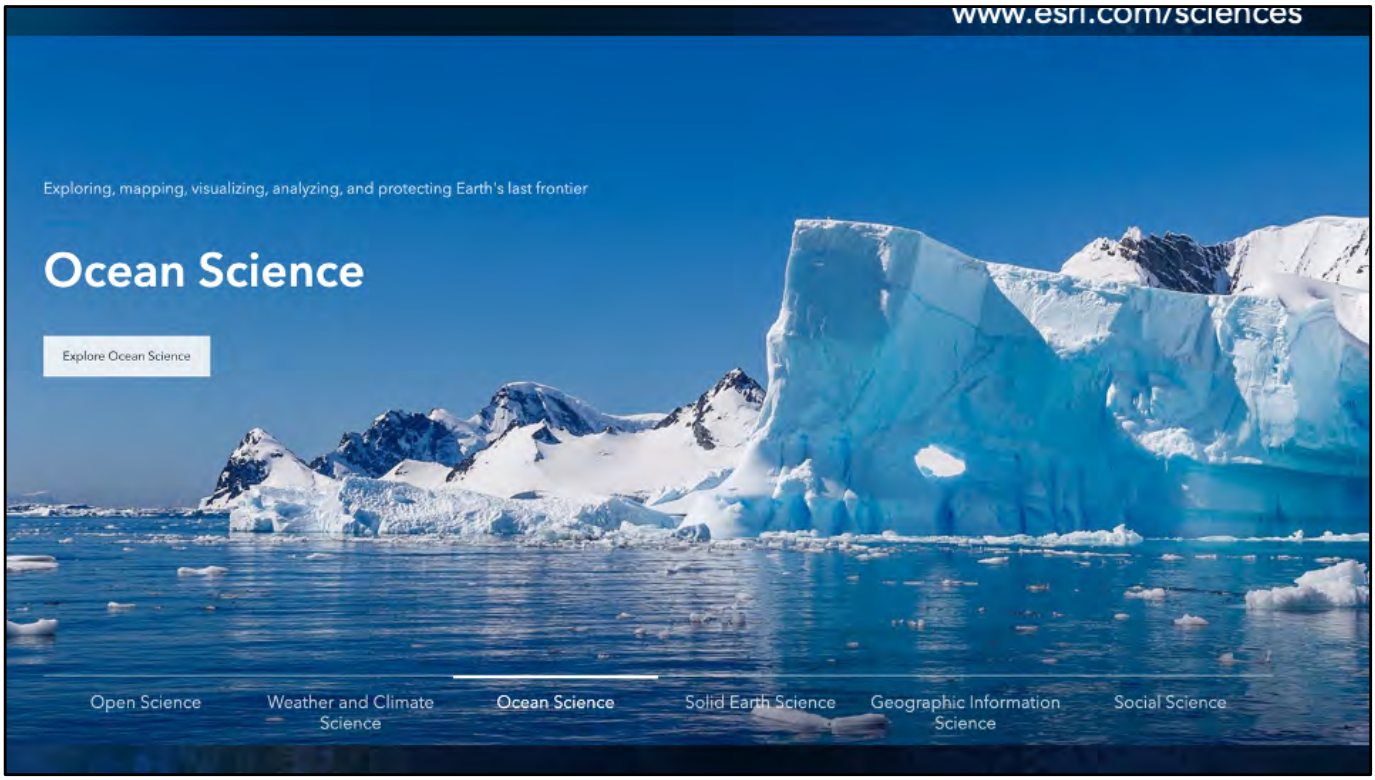
Explorers Club Fellow National, #7453, inducted in 2013 thanks to Don Walsh and Sylvia Earle



But since 2011 I am Esri's Chief Scientist, and also a full professor of geography and oceanography at Oregon State University. As Chief Scientist I foster a program to strengthen the scientific foundation for Esri software and services (especially in the disciplines shown where we have strong scientific expertise and productivity ourselves), while representing Esri to the national/international scientific community on various boards, councils, and research projects. We also work collaboratively with the world's largest Earth science scholarly organizations

MODERN LEGACY OF MARIE THARP is seen in efforts such as our ongoing Ocean Basemap at Esri. It was not only inspired by Marie, the inventor of marine cartography, but resulted in many *years* of cartographic design work in terms of the choice of **colors, color saturation and shading**; label placement, angle, and legibility; the chosen hierarchy of the information on the basemap, the coordinate systems, etc. …

Access the Esri Ocean Basemap within the ArcGIS Living Atlas of the World,



Ocean Science


See also my Courage to Escape blog post
dusk.geo.orst.edu/compass.html
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