



## Impact Statement

Annie Hong, Grade 11

***Abbott's Ocean***, 2026

Gouache, pen on paper, 11 x 15.5 inches

The American School in Japan, Chofu, Japan

Unsung Hero: Isabella Aiona Abbott

I came across Dr. Isabella Abbott while looking for someone whose work connected science and cultural tradition, two things I really care about. Growing up in Japan, I've always been surrounded by a culture that keeps its traditions alive in everyday modern life, so when I learned about Dr. Abbott, something about her story felt familiar to me. What I admire most about her is that she never saw her Hawaiian roots and her scientific career as separate things. She found a way to bring them together, and to me, that's what makes her such an inspiring role model. She proved that where you come from doesn't hold you back; it can actually be what drives you forward.

Dr. Abbott was born Isabella Kauakea Yau Yung Aiona on June 20, 1919, in Hana, Maui. Growing up, she spent a lot of time at the ocean with her Native Hawaiian mother, who taught her how to collect and prepare edible seaweed, called limu, for traditional Hawaiian meals. Those early memories stayed with her and shaped the direction of her entire life's work. Most people don't think much about algae and seaweed, but Dr. Abbott dedicated her career to showing the world just how important they are. Algae produce around 70% of the oxygen in Earth's atmosphere, and without them, the ocean's food chain would be completely different. Today, scientists are also looking at seaweed as a way to fight climate change, repair damaged ocean ecosystems, and even create renewable fuels. A lot of that recognition came because of the foundation Dr. Abbott helped build.

Beyond her research, she broke a lot of barriers. At 31 years old, she became the first Native Hawaiian woman to earn a Ph.D. in any field of science, getting her doctorate in botany from UC Berkeley. In 1971, she became the first woman and first person of color to join the faculty of Stanford University's biological sciences department, even though she had already been teaching there for over ten years without that title. After she retired from Stanford in 1982, she went back to Hawaii to teach at the University of Hawaii, where she created a new program in ethnobotany, which is the study of how different cultures use plants. She worked directly with Hawaiian elders to preserve oral histories and traditional ocean knowledge that were slowly being forgotten, and she turned that knowledge into university courses so future generations could carry it on. Over her career, she wrote nearly 200 books and articles and discovered more than 200 new species, many of which were named after her. She passed away in 2010 at 91 years old, near the ocean she had loved her whole life.

For my artwork, I wanted to show all the different sides of her legacy in one scene. The central image is Dr. Abbott carving knowledge of seaweed onto a rock, which is a reference to the Hawaiian tradition of preserving stories and knowledge by engraving them into stone. I chose this image because it ties together both parts of who she was: the scientist and the Hawaiian woman rooted in her culture. Books are scattered throughout the piece, floating in the sky and sitting on the beach, representing the nearly 200 publications she left behind. There are also children surrounding her to represent the future generations she spent her life teaching. I used gouache as my main material because it let me layer colors and capture the details of the coastal environment, including the transparent quality of the books in the sky. I then added pen on top to make certain parts stand out more, like the lettering on the rock and the figure of Dr. Abbott herself.

Learning about Dr. Abbott has made me think a lot about how tradition and progress can exist together instead of pulling against each other. She didn't have to give up one to have the other, and that's something I want to carry into my own life. I hope that when others see this piece, they come away with a greater appreciation for nature and also a deeper understanding of why cultural preservation matters. Her story is one that I think a lot of people, especially younger generations, need to hear, and I'm glad I got the chance to tell it through my art.