

## Impact Statement

April Truong, Grade 12

***Limu and Her Lady of the Sea*, 2025**

Digital Art

Poway High School, Poway, CA

Unsung Hero: Isabella Abbott

Dr. Isabella Abbott's biography immediately captivated me. She was driven by curiosity, and it was clearly evident in her work. Limu. It was like magic to her. This fascination with limu, the Hawaiian word referring to edible underwater plants like algae, led to her lifelong career, discovering over 200 species of algae and earning the name "The First Lady of Limu." But she was more than a scientist. She pioneered a Ph.D. in science for Native Hawaiian women, later becoming the first female Stanford biology professor. In an area without representation, she sought to make a change for herself and future generations without compromising who she was. I decided to represent Dr. Isabella Abbott's legacy because of the curiosity that drove her to become a renowned scientist who honored herself.

To my surprise, I had never heard of her. Having taken environmental science, we learned the significance of algae and seaweed in our ecosystems. Not only are they a food source and shelter, but they also produce most of the world's oxygen and sequester carbon dioxide. Carbon dioxide causes ocean acidification, and as its name suggests, the ocean becomes more acidic as carbon dioxide increases. This creates an issue for aquatic life: Ocean acidification harms species sensitive to pH changes and those with calcium shells and skeletons, stripping their minerals. The increase of this greenhouse gas also leads to global warming, heating the Earth and harming many forms of life, including ourselves. Dr. Isabella Abbott understood limu's importance environmentally, but also culturally. In Hawaii, limu has a variety of uses. Used for food, medicinal, and religious purposes, she linked her research and heritage, creating ethnobotany as a major at the University of Hawaii. It was important to teach them what she had learned through her work and heritage. She taught them how to use resources sustainably, but most importantly, the innate relationship we have with nature. Through her work as a scientist and mentor, she has inspired thousands of students who continue to honor her legacy in their work.

Thinking about her story, I knew I wanted to represent her love for Limu and the inseparable relationship between her and her work. To represent her life's dedication to the field, I drew two versions of Dr. Abbott: young and old. I knew I wanted to use cool colors for her younger face to represent the ocean, the place she spent much of her life loving, which dictated how she would spend the rest of her life. The various greens in her older face represent nature to indicate her strong relationship to it. I knew I wanted

to use culturally significant limu, so I selected species used in cuisine: limu 'akiaki, limu wawae'iole, and limu palahalaha, as well as limu kala, used in important ceremonies. I also included fish native to Hawaii because of their relationship to Dr. Abbott's work. Her impact goes beyond limu. It helps protect ecosystems that rely on these plants.

All the colors were analogous; they were harmonic, but something felt missing. I wanted a pop of color to stand out against her skin. After researching, I chose two newly discovered limu, the purple and red ones, to contrast with the yellows and greens of the rest of the piece, emphasizing the impact of her research on generations. And fittingly, the red limu was named in her honor, *Martensia abbottiae*. It was necessary that her face smoothly blend with the different limu. I wanted the transition between her face and plants to be indistinguishable because her work and interests were intertwined, unable to be separated clearly. Many of her colleagues and students stated that there seemed to be no barrier between work and hobby, often using limu as an ingredient in her cooking, which was brought to potlucks.

Art is communication. It impacts people visually and emotionally, which is why it was important for me to illustrate Dr. Abbott's story. Through this artwork, Dr. Abbott encourages me to pursue my passion, no matter the obstacles and fears created by my perceived thoughts. I am motivated by her undying passion to continue art, and I intend to honor her work by telling her story through my art online and my school's art show. Learning about Dr. Abbott has changed how I perceive my heritage. As a Vietnamese-American, I often feel disconnected from my culture. I never learned to speak the language, only understanding a few sentences my parents would say. But Dr. Isabella Abbott had the same struggles because she couldn't understand what her parents would say to each other, but she eventually learned. She learned the language and learned about her culture's cuisine, which is what helped spring her passion for limu. Seeing how she honored it made me realize that the first step is learning. If she had not pursued her knowledge of limu from harvesting with her mother, she would have never made the lasting impact she did. Through this artwork, I aim to inspire others to keep that childlike curiosity and for people to pursue their deepest passions, because you'll never know what will happen until you try.