

First Lady Of Limu Memories of an Inspiring Mentor and Botanist

by Dr. Celia Smith, Bill Thomas, Kawika Winter, and
Mazie K. Hirono, U.S. Senator

I first met Dr. Isabella Abbott as she emerged from nearly 30 years at Hopkins Marine Station of Stanford University, as its first woman, and first minority, full professor in the Department of Biology. The year was 1976, and Dr. Abbott was already a force of nature. As a visiting professor at the University of Hawai'i at Mānoa's Botany Department, and later as the G. P. Wilder Professor, the Botany Department's endowed chair, Dr. Abbott had returned to her alma mater to teach the stories of her Maui family from Lahaina, the Kailiho 'ohana. Through these teachings, she built a lecture and hands-on lab in the ethnobotany of Hawaiian culture. She is credited with converting many students to a lifelong love of plants and Hawaiian uses. As a part of the cultural renaissance in the 1970s, from 1976 to

1995 Dr. Abbott taught over 1000 undergraduate students who sat in the aisles and crowded into a standing-room-only lecture hall to learn about the science behind Hawaiian cultural uses.

It was some years later that I came to realize the fullness of Dr. Abbott's "other career" – marine botany. Trained at the University of California, Berkeley, Dr. Abbott taught marine botany summer courses for more than 10 years at Hopkins Marine Station. These students were the upcoming leaders in marine botany on the continental U.S. and went on to lead the Department of Botany at the Smithsonian's National Museum of Natural History, teach at marine stations around the country and on university campuses, and her students remained her friends for life. Many things stand out through these years: her discipline (eight books and over 150 papers describing the marine algae of California and over 50 percent of the Hawaiian algal flora); inclusiveness and loyalty (colleagues in Europe, the U.S., and across the Pacific); ability to navigate unknowns (graduate degrees from the University of Michigan and the University of California, Berkeley); and especially her work to perpetuate her culture and her science.

Dr. Abbott, as a Hawaiian, led by example, and lived in two worlds – her culture and her science – with grace and humor. She nurtured diverse generations of mainland and local students while maintaining high standards and also offering a helping hand. As a fitting tribute to an amazing individual, on June 20, 2019, many friends and family gathered to celebrate 100 years of Hawaiian science and culture on the anniversary of her birth. To share one of her favorite sayings, let's all "Be Hawaiian!! Eat limu!!"

-Dr. Celia Smith

During the mid-1980's, while visiting with Dr. Isabella Abbott, who I knew as Aunty Izzie, she turned to me and said, "You know what Hawaiians say: healthy land

means healthy people. A healthy ocean also means healthy people. But healthy lands and ocean means a resilient people. And that's who Hawaiians were." She also added, "Pala ka hala, momona ka ha'uke'uke – When the pandanus fruit ripens, the ha'uke'uke sea urchin is fat." With this 'ōlelo no'eau (proverb), Izzie reminded me of the bigger picture: while Hawaiians ate the sea urchin, the real prize was the parrot fish, which fed on the urchin.

As we talked she went on to tell me that the distance from mauka (inland, toward the mountain) to makai (ocean) in some ahupua'a was so great that it was inefficient for families to access its resources directly. Instead, Hawaiians practiced "ko kula uka, ko kula kai," an informal exchange among "those of the upland" and "those of the shore." Fundamentally, while the ahupua'a system managed mauka-makai resources, it also united Hawaiians from mauka to makai. Aunty Izzie taught these principles to many others, informally while just visiting with her and formally during her tenure as a professor at the University of Hawai'i (UH), influencing many to become current resource management leaders in Hawai'i.

Her path to inspiring so many began in 1976 with her offering of ethnobotany at UH. Over a 20-year period, Izzie provided a transformative experience for over 1,000 students, enthraling them with stories of the many ways these plants provided the underpinnings of culture. She also examined the ahupua'a from a functional perspective. In 1992, she published *La'au Hawai'i: Traditional Hawaiian Uses of Plants*, mainly to explain to students the ahupua'a and why the cultural uses of these plants across mauka-to-makai gradients were critical to Hawaiian society. She made science accessible by tying culture and science together while reinforcing the importance of understanding the intimate connections between the land, ocean, and people, and how complex ecosystems and their resources could be sustained.

Aunty Izzie took the ahupua'a, an amorphous concept to many, and gave it

substance. She taught students about staple crops from the land and gifts from sea, clothing made from kapa, cordage for all occasions (the botany of canoes as she would say), and the sticky plant sap that allowed birds to be caught for a feather or two and released unharmed. She gave them the insight to see how a complex land-sea gradient could allow mature Hawaiian communities to thrive. And they loved her for it.

-Bill Thomas

It is said that one does not choose their own legacy, but rather one's legacy is decided by those they leave behind. In the case of Dr. Isabella Abbott, a woman who had touched the lives of thousands of people in her 93 years on this earth and deeply influenced the lives of several hundred, including mine, the definition of her legacy is ours to tell. In my case, I was one of her last students, and I certainly benefited from the experience and wisdom she gained over a long and illustrious career.

As an undergraduate, I was in the last ethnobotany class that Dr. Abbott taught before she retired. While pursuing a Master's degree, my ability to do a thesis in Hawaiian ethnobotany would not have been possible without the path she paved, and she knew my research was to be a part of her legacy. After finishing my PhD and working for more than a decade in biocultural resource management, I took the helm of the recently designated National Estuarine Research Reserve (NERR) in He'eia, O'ahu.

Founded in 2017, the He'eia NERR's 1,385 acres include the estuary of the He'eia ahupua'a on Kāne'ohe Bay. It was initiated because community leaders saw the powerful role science could play in saving the place that they loved, and is the culmination of more than 25 years of community-based efforts. It is the newest NERR and the first in the nation to incorporate indigenous culture into its

structure and function. It wasn't long before it hit me that the work that is happening in the He'eia NERR, melding indigenous and conventional science, is an integral part of Dr. Abbott's legacy. Not only was the designation process led by people who learned from her, but the people leading the restoration of the He'eia ahupua'a and conducting the research are former students of Dr. Abbott's, in one way or another, and whose journeys would not have been possible without her.

Dr. Abbott was also a trailblazer for Hawaiian faculty and scientists at the University of Hawai'i (UH) and beyond. At the age of 31, she earned a PhD in botany from the University of California, Berkeley and became the very first Native Hawaiian to earn a doctoral degree in the field of science. Several years later she became the first woman faculty member in biological sciences at Stanford before returning home to Hawai'i in 1982 to teach at UH and not only share her passion with her students, but work tirelessly to provide students of Native Hawaiian descent the opportunity to follow in her footsteps.

To name just a few of her past students or mentees, Kanekoa Kukea-Shultz is the executive director of Kāko'o 'Ōiwi; Hi'ilei Kawelo is the executive director of Paepae o He'eia; Celia Smith is a full professor at UH Mānoa teaching students about limu; Karla McDermid is a full professor at UH Hilo; and Rosie Alegado is an associate professor in the UH Mānoa Department of Oceanography and conducts collaborative research within the NERR. In addition, faculty members throughout the Hawai'i Institute of Marine Biology at UH Mānoa were touched by Dr. Abbott through her influence on this institution in its formative years until today.

Without Dr. Abbott, none of us could be walking the paths that we are now on; but, because of her, we are all walking on this path together.

-Dr. Kawika Winter

Dr. Isabella Kauakea Yau Yung Aiona Abbott will forever be an icon in Hawai‘i for her academic achievements, revolutionary seaweed research, various accolades, and over a hundred limu-related publications. However, it’s the values she embodied as a person that make her a timeless inspiration to Native Hawaiians and to the entire state of Hawai‘i.

Dr. Abbott grew up in an era when Native Hawaiians confronted harmful misconceptions and offensive stereotypes, and a time when women were seen as lesser than men. She rejected those narratives and instead lived authentically as a passionate young Native Hawaiian woman who became the world’s leading expert on algae in the Pacific. She always credited her love for algae to the limu lessons she learned from her mom while playing on the beach as a child. Her upbringing led her to understand that Hawaiians have always been scientists. She uplifted Hawaiian culture and the relationship that Western science has with Hawaiian culture throughout her algal research in Hawai‘i and California. She inspired University of Hawai‘i at Mānoa to create a Hawaiian ethnobotany bachelor’s degree and touched the lives of countless students through her teachings. She once said in an interview, “Hawaiian culture is unbelievably sophisticated,” and every day she embodied the meaning of those words.

Dr. Abbott is a treasure to scientists, Hawai‘i, Native Hawaiians, and anyone told that they can’t do something because of their background. She will always be remembered and honored as one of Hawai‘i’s most inspirational leaders.

-Mazie K. Hirono, U.S. Senator

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