

# Re-calibrating the sail plan for Native Hawaiians, Pacific Islanders in ocean sciences

January 3 2024, by Marcie Grabowski

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Native Hawaiian graduate student surveys reef. Credit: Todd Glaser

In Hawai'i and across much of Oceania, Pacific Islanders celebrate the connections between their islands and the ocean that surrounds them.

"As descendants of the ocean, the dearth of Native Hawaiians and Pacific Islanders (NHPI) in [ocean science](#) seems inconsonant," writes a

team of authors that includes University of Hawai'i (UH) at Mānoa faculty, students, and alumni in an [article](#) in a special issue of the journal *Oceanography*, called "Building Diversity, Equity, and Inclusion in the Ocean Sciences." The authors ask, "Where are all our island people in the ocean sciences?"

"To understand the root causes of this disparity and potential solutions, UH faculty, staff and students approached this problem through the lens of voyagers, examining the past course of history of the peoples of the Pacific and attempts to make headwinds in programs focused on increasing participation in ocean sciences," said co-author Rosie Alegado, associate professor in the UH Mānoa School of Ocean and Earth Science and Technology (SOEST).

The article highlights programs in SOEST that are aimed at reducing barriers for Native Hawaiians in the geosciences—including summer bridge programs, internships, and other professional development programs. And, in better defining the persistent, systemic, and collective barriers that NHPI face within the [western society](#) and the academy, the authors identify gaps that conventional professional development programs aimed at minoritized groups in the geosciences have been unsuccessful in filling.

"One of the biggest gaps that we found related to Native Hawaiian-serving programs within the ocean sciences is that while many may be culturally based, few are Native Hawaiian led," said lead author Haunani Kane, SOEST assistant professor.

"Native Hawaiians are often overlooked in the development and leadership of Native Hawaiian and Pacific Islander-serving programs. Programs led by Native Hawaiian scientists and community members ensure that they are culturally centered safe spaces for students to collectively grow their identities as both Native Hawaiians and

scientists."

Importantly, the authors shared lessons learned from building two wa‘a (canoes)—programs specifically designed to carry students forward toward futures that center oceanic ways of knowing.



Maile Mentoring Bridge Program mentors and mentees survey the intertidal zone during the full moon. Credit: Kane, et al., 2023.

## **SOEST Maile Mentoring Bridge**

The SOEST Maile Mentoring Bridge program (Maile) was founded in 2013 with the goal of attracting and retaining more NHPIs into geoscience degree programs and careers. The foundation of Maile was to build and foster robust partnerships with neighboring community colleges within the UH system. Maile mentees are carefully paired with experienced mentors—SOEST graduate students, postdocs, or recent graduates.

"Looking back on the last 10 years of my life, the Maile Mentoring program has made such a huge impact," said Diamond Tachera, study co-author and alumni and co-director of Maile.

"As an [undergraduate student](#), it was so important for me to see people, especially wāhine (women), who looked like me working and thriving in their scientific fields. Being part of the Maile 'ohana as a graduate student mentor also helped me to build confidence in myself as I continued to struggle to find my place and identity in academia. I will be forever grateful for the support and aloha that comes with being part of the Maile 'ohana."

"I believe the Maile Mentoring program has been successful because it places an emphasis on meeting the needs of the whole student, not just their research endeavors," said Alegado. "In focusing on creating a nurturing environment in SOEST, we place a stronger emphasis on retention of students, not just recruitment, which increases completion and graduation rates for NHPI."

## **The MEGA Lab**

To overcome traditional barriers related to retention of NHPIs in the ocean sciences, the multiscale environmental graphical analysis (MEGA) Lab, a predominantly Native Hawaiian-led lab and nonprofit physically located in Hilo, Hawai'i, developed a research program that prioritizes



inclusive research experiences. Foundational to their success has been incorporating [community members](#) and cultural values into research projects, and creating global partnerships that value Native Hawaiian research.



A team of Native Hawaiian researchers conducted an expedition to Papahānaumokuākea Marine National Monument. Credit: Kane, et al., 2023

As a way to creatively explore what Native science and kuleana (responsibility) could look like if research and cultural priorities were equally weighted in all aspects of the research design, the MEGA Lab assembled a Native Hawaiian research team to embark on a 15-day voyage to Papahānaumokuākea Marine National Monument.

"That trip inspired me to re-imagine what research looks like when it's grounded in our 'ōiwi perspectives and how I can contribute to create more room for that to happen," said Kainalu Steward, graduate student in the SOEST Department of Earth Sciences. "That experience helped me find kuleana in this collective work at the monument and reinforced my interest in pursuing higher education."

## Looking to the horizon

"Moving forward, we believe that in order to make progress in the representation, retainment, and success of Native Hawaiians and Pacific islanders in STEM, we must first address the historical and ongoing traumas of Native Hawaiians and Pacific Islanders through active engagement in reclamation of cultural identities and knowledge," said Kane.

"We also believe student success requires building community support systems both within and beyond UH where [students](#) can safely explore their whole identity as Indigenous scientists."

The MEGA Lab founders are also calling for a culture change in academia and their "experiment to disrupt the hierarchical and stereotypical structures that exist in science and act as barriers to inclusion," as they write in [a second article](#) in the special issue of *Oceanography*, provides a template.

"Our goal was to create an interdisciplinary and inter-institutional lab that promotes an inclusive, equitable, and uplifting team environment where everyone can thrive in a fun and productive workspace."

"All of the work we do to support Native Hawaiians, women, and other underrepresented groups (the fish) can only have limited success given our current toxic workplace culture (the fishbowl)," said Barbara Bruno,

faculty specialist at SOEST and co-author of the first article. "The fishbowl —not the fish— needs to change."

"Academia can often be reluctant to change, which is unfortunate as much of the workplace culture can serve as barriers to inclusion in STEM," said John Burns, lead author of the second article and associate professor at UH Hilo.

"We must embrace open-mindedness and be ready to transform the very culture of science in order to enhance diversity. Diverse perspectives and ideas not only foster a healthy work environment but can also serve as our most powerful asset, fueling the drive for new discoveries."

**More information:** Ho'okele ka Wa'a et al, Recalibrating the Sail Plan for Native Hawaiians and Pacific Islanders in the Ocean Sciences, *Oceanography* (2023). [DOI: 10.5670/oceanog.2024.137](https://doi.org/10.5670/oceanog.2024.137)

John H.R. Burns et al, The Culture of Science in Academia Is Overdue for Change, *Oceanography* (2023). [DOI: 10.5670/oceanog.2024.115](https://doi.org/10.5670/oceanog.2024.115)

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