



2. OLA I KE KAI O KANALOA

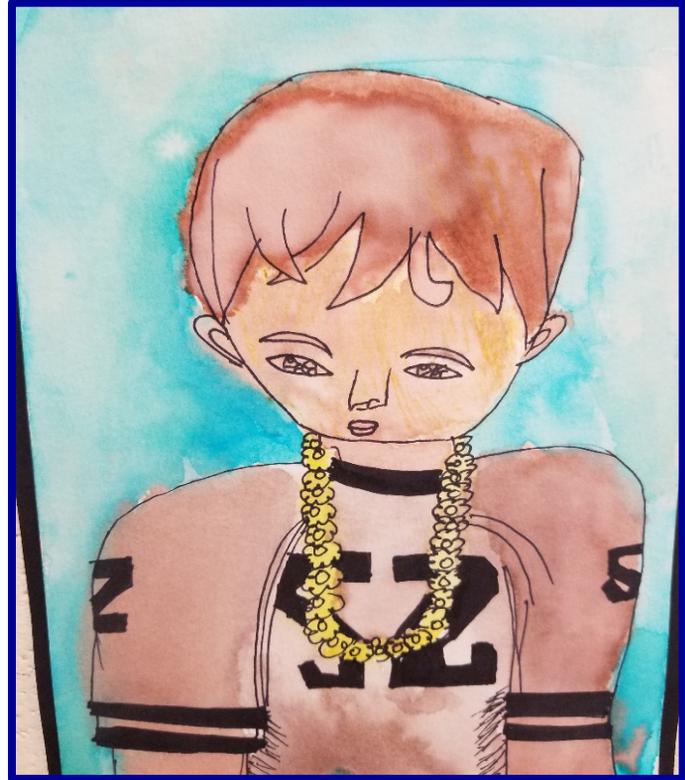
Ocean Resources Management Program

November 2018 to May 2019

Grants

NOAA Bay Watershed Educational Training (B-WET) Grant; Learning 'Āina Through Kaho'olawe and Arts Integration:

● In August 2017, the Ocean Program was one of seven B-WET grant recipients in Hawaii. This grant is focused upon providing Pōmaika'i Elementary School 4th grade educators first-hand field experiences into managing/protecting a complete watershed system which will increase their knowledge in environmental literacy. The experiences will be integrated with Hawaiian cultural stewardship practices on Kaho'olawe. These on site field workshops utilize holistic management within an ahupua'a system of mauka to makai relationships. This grant will strengthen the teachers content knowledge and pedagogy skills to teach through the arts an understanding of the state of watersheds. The results of these workshops will create a database of art integrated lesson plans and resources compliant with the State of Hawaii Dept. of Education standards. Program staff will continue to support the educators in the enrichment and implementation of all curriculum created after completion of the workshops. Additionally, by digitally capturing these experiences they can be shared, taught and implemented in the classroom and other communities through video stories. This \$79,333 grant will run through July 2019. To date, the 4th grade teaching team has been to Kaho'olawe twice and the curriculum developed from the accesses have influenced over 200 students over the course of two school years. The history of Kaho'olawe, the current restoration efforts and the future possibilities for the island taught in a Science Technology Arts and Math (STEAM) format has covered subject matters from Hawaiian history to ecology to alternative energy to music composition. This broad spectrum of learning all done around a signal focal point, Kaho'olawe, is just one of the things that makes this project so unique and hopefully can serve as a leaping platform for other educational projects.



A rendering of Kimo Mitchell done by 4th grade student Naiomi Ibera



B-WET participating teachers pose with Restoration Manager, Paul Higashino. L to R: D. Sakuma, J. Shishido, Paul, W. Ortega, J. Isoe



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On Going Projects

Crew Training & Violator Reporting:

• In January, program staff participated in 'Ohua crew training held in Honokanai'a Bay. Exercises in the training covered everything from "man overboard" drills to discharging flares to safety equipment location and utilization. During the same access crew spotted an unauthorized fishing vessel in the Reserve near Kaka Pt. Photos, location and vessel identification were submitted to DOCARE personnel. KIRC staff onboard at the time provided witness statements to the officer handling the case.



"Under-World" documented in the Reserve

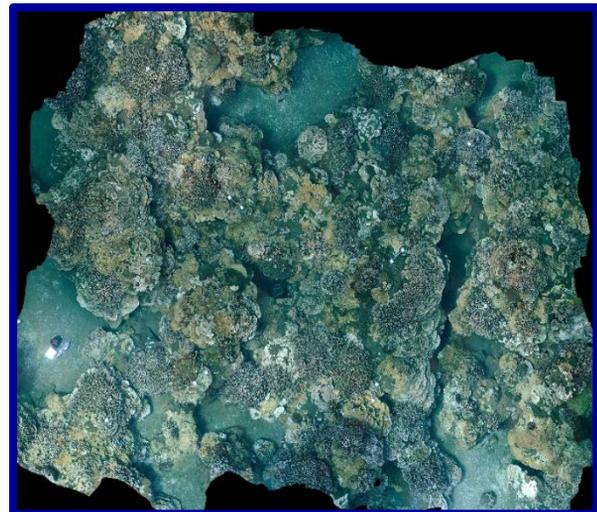


'Ohua Captains, Grant (left) and Lopaka (right) each display the proper technique in dispatching different types of flares.



3 Dimensional Reef Mapping:

• Program staff was contacted again by the Scripps Institute of Oceanography personnel to re-survey four reef areas along the north coast of Kaho'olawe, last done in 2017. The 3D mapping project is funded by the 100 Island Project. The survey areas where the mapping occurred were at Kuikui, Kūheia, Oawapalua and Kealaikahiki. This catalog of data provides the KIRC with a sample of coral diversity, health and abundance in each area and is a strong visual baseline for future comparisons to be made against should major events such as bleaching, massive runoff, tsunami, etc., alter the area. Each survey area is approximately a 30 m X 30 m area.



Still image of the 3D map collected in Kūheia