“Ka wā ma mua, ka wā ma hope” conveys the manaʻo of reflecting and celebrating where we’ve come from so that we can fix our gaze and intentions upon realizing future visions and goals.

While the term “ka wā ma mua” means “the past,” it literally means “the time in front,” implying the future. Similarly, ka wā ma hope means “the future,” but literally means “the time behind.”

Kanaka Maoli historian Lilikalā Kameʻeleihiwa states, “It is as if the Hawaiian stands firmly in the present, with his back to the future, and his eyes fixed upon the past, seeking historical answers for present-day dilemmas. Such an orientation is to the Hawaiian an eminently practical one, for the future is always unknown, whereas the past is rich in glory and knowledge.”

It’s a monumental year for celebrating Papahānaumokuākea Marine National Monument and UNESCO World Heritage Site.

Recently, we marked 20 years since the establishment of the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve, creating the single largest nature preserve in the United States at the time. This bold action is a milestone in protection, leading to the 2006 designation of the monument and the 2016 expansion.

The establishment of the reserve was the catalyst for the creation of the Reserve Advisory Council in 2001, with representatives from a variety of local user groups and the Native Hawaiian community. This year, we celebrate 20 years of the council, providing advice and recommendations to NOAA’s Office of National Marine Sanctuaries (ONMS). To honor their commitment and contribution, we highlight their stories with past and present council member profiles.

The Reserve Advisory Council contributed greatly to the draft management plan for a national marine sanctuary, called for in the designation of the reserve. A draft management plan became the basis for the marine national monument established by President George W. Bush under the Antiquities Act in June, 2006. With expansion in 2016, Papahānaumokuākea Marine National Monument is the largest contiguous fully protected conservation area under the U.S. flag, and one of the largest marine conservation areas in the world. It encompasses 582,578 square miles (1,508,870 square kilometers) of the Pacific Ocean.

June, 2021 will mark the monument’s 15th anniversary. We will be celebrating 15 years of accomplishments made in cooperative conservation and co-management, restoration, and discovery, recognizing the role of Hawai‘i in ushering in the birth of large-scale ocean management. Watch for news about the anniversary in June!
During the temporary pandemic closure of Mokupāpapa Discovery Center in Hilo, staff have been maintaining the beautiful 3,500 gallon saltwater aquarium with its unique fish species from Papahānaumokuākea. While you cannot currently visit them in person, you can enjoy the exhibit virtually through a new high definition webcam installed in partnership with our National Marine Sanctuary Foundation. The live feed has come in handy for our virtual lesson where students try to identify reef fish adaptations. You can even watch the tank at night when some of the nocturnal fish are more active, like the bright red soldierfish, or ʻaweoweo. Several of the fish were collected during research expeditions to the monument, including a Prognathodes basabei or orange-margin butterflyfish, that only recently received a scientific name. See if you can find it! In the coming weeks we will be adding short video commentaries from our aquarist, Michael Caban, stay tuned. Enjoy!

**Visit Papahānaumokuākea virtually via our webcam at Mokupāpapa**

**Mokupāpapa’s Virtual Voyage of Discovery**

As teacher requests for virtual live lessons increase, Mokupāpapa Discovery Center staff are adapting and designing science and culture based classes to meet the current needs of students and teachers. As we expand our virtual presence, our goal is to engage students through experiential learning activities that foster respect and stewardship of our natural and cultural environments. Initial offerings include:

**Hānau ka ʻukukoʻakoʻa: Born is the Coral Polyp**

For ages K-4th grade. Students learn about Hawaiian cosmogony and the natural history of the Hawaiian archipelago through the Kumulipo—the Hawaiian Creation Chant.

**All About Albatross: A Virtual Albatross Bolus Dissection**

Adaptable for 3rd-12th grades. Students learn about the importance of Papahānaumokuākea as nesting grounds for the Laysan and black-footed albatross. They virtually help us dissect a real bolus (dried regurgitation) as we identify our human impacts on these amazing birds and discuss positive actions to protect them.

Lessons will be hosted on Thursdays and Fridays. Please contact Justin Umholtz at justin.umholtz@noaa.gov for more information and to reserve a time.

**Adaptations on the Reef**

For ages 4-6th grades. Students learn about the Kumulipo and how it reflects the practice of kilo, or deep observation to build a body of knowledge. Students will practice kilo using our live aquarium feed, focused on observing possible fish adaptations that help them survive on the reef.

**View webcam**
Learn more about PMNM with our new Science on a Sphere Explorer Tour

The Mokupāpapa Discovery Center obtained a Science on a Sphere Explorer (SOSx) exhibit in 2020 and were inspired to create a custom tour called “The Life Cycle of a Hawaiian Island.” After nine months of efforts and great technical support from the NOAA SOS team, the tour will soon be available to anyone who downloads SOSx Mobile, a free app that puts amazing information about the Earth and space at your fingertips. The tour will also be available across the nation at all SOSx exhibit locations. The interactive tour takes participants on a journey from island formation at the Hawaiian hotspot through the transformation to coral atolls, sharing the story of the creation of the Hawaiian archipelago. The tour draws on videos, animations, and global data visualizations such as earthquakes, volcanoes, and seafloor age to highlight basic plate tectonics and the importance of the Northwestern Hawaiian Islands. Participants can use the SOSx tools to measure distances, explore tectonic plate boundaries, and see earthquake magnitude and frequencies across time. For more information, contact Justin Umholtz at justin.umholtz@noaa.gov.

Hanauma Bay Reserve Webinar Series for Mahina ‘Ōlelo Hawaiʻi - Hawaiian Language Month

February, every Thursday from 6:30pm-7:30pm

Hanauma Bay Education Program partners with organizations across Hawai‘i to showcase educational talks with leading researchers, environmental leaders, natural resource managers, and cultural practitioners.

For the month of February, in celebration of Mahina ‘Ōlelo Hawai‘i - Hawaiian Language Month, the NOAA Office of National Marine Sanctuaries - Papahānaumokuākea Marine National Monument through NOAA’s Office of National Marine Sanctuaries will co-host the weekly webinar series in partnership with Hale Kuamoʻo Hawaiian Language Center at the University of Hawai‘i at Hilo. All talks will highlight the importance of historical Hawaiian language literature and the innovative applications of ‘Ōlelo Hawai‘i to mālama natural and cultural resources of Papahānaumokuākea and Hawai‘i nei.

February 4, 2021: Ola ka Inoa - Examining the Legacies of Inoa ‘Āina for Papahānaumokuākea

• Kekuewa Kikiloi, Director, Kamakūokalani Center for Hawaiian Studies, University of Hawai‘i at Mānoa; Nohopapa Hawai‘i; Huliauapa’a
• Kepo‘o Keli‘ipa‘akaua, Nohopapa Hawai‘i; Huliauapa’a
• Kama Ka‘aiakaula, Nohopapa Hawai‘i; Huliauapa’a

February 11, 2021: Nunulu i ka lani - Profound reverberations for Hawaiian naming processes and Papahānaumokuākea

• Hōkūokahelelani Pihana, Papahānaumokuākea Native Hawaiian Cultural Working Group
• Hōkū Cody, Papahānaumokuākea Native Hawaiian Cultural Working Group

February 18, 2020: Nānā i ke kumu - Exploring cultural dimensions of marine species in the Hawaiian Archipelago

• Sheldon Rosa, NOAA Education Partnership Program with Minority-Serving Institutions Scholar 2019
• Arielle Blacklow, NOAA Hollings Scholar 2019

February 25, 2020: Ola ka ‘Ōlelo Hawaiʻi - Revitalizing and normalizing Hawaiian language through collaborative development of education and outreach resources for Papahānaumokuākea

• Kamalani Johnson, Hawaiian Language Curriculum Specialist, Hale Kuamo‘o Hawaiian Language Center, University of Hawai‘i at Hilo
• Kalani Quiocho, Native Hawaiian Program Specialist, PMNM

February 25, 2020: Ola ka ‘Ōlelo Hawai‘i - Revitalizing and normalizing Hawaiian language through collaborative development of education and outreach resources for Papahānaumokuākea

• Kamalani Johnson, Hawaiian Language Curriculum Specialist, Hale Kuamo‘o Hawaiian Language Center, University of Hawai‘i at Hilo
• Kalani Quiocho, Native Hawaiian Program Specialist, PMNM

Register for webinar

Register for webinar

Register for webinar

Register for webinar

Register for webinar

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Register for webinar

Register for webinar
Wave glider uses sound to document humpbacks in the monument

From January through March 2020, Jupiter Research Foundation conducted a passive acoustic survey of the waters of Papahānaumokuākea using the autonomous wave glider “Europa.” The study listened for whales in the monument to better understand their presence and activity, particularly in locations understudied in the winter season.

Europa traveled more than 2,500 nautical miles, and collected acoustic recordings, weather, and oceanographic data throughout the survey. Multiple marine mammal species were detected by sound, including at locations not previously documented during the winter. Humpback whale song was recorded to help answer the question, “Where in the monument do humpback whales occur?”

Analysis of the data shows that humpback whale song was present at nearly every bank or shoal the glider visited. The results suggest a broad but clustered distribution of humpback whales across the monument during the survey period.

These results provide evidence that humpback whales occur throughout the monument and that it is likely an important breeding habitat for the population.

State of the Monument Webinars

Last year over 4,700 viewers from around the world attended webinars hosted by Papahānaumokuākea and the National Marine Sanctuary Foundation as part of Mokupāpapa Discovery Center’s Third Thursday by the Bay and the ONMS Webinar Series. They learned about fascinating research being conducted in the monument and efforts to inspire the next generation of conservation leaders. With the release of the State of the Monument Report last October on the status and trends from 2008 to 2019, we will focus upcoming webinars on the findings from the report and future research and management efforts. Please join us for these upcoming talks:

February 18 at 12 PM HST: PMNM Research Coordinator Dr. Randy Kosaki will give a talk on Understanding Marine Biodiversity in Papahānaumokuākea Marine National Monument. Register for webinar

March 18 at 12 PM HST: JIMAR Resource Protection Manager for PMNM Brian Hauk will give a talk on Aliens in Papahānaumokuākea Marine National Monument; Some are Green, but None are Friendly. Register for webinar

April 15 at 12 PM HST: Supervisory Marine Biologist for the Hawaiian Monk Seal Program Thea Johanos will give a talk on Hawaiian monk seal population update: signs of a fragile recovery. Register for webinar

May 20 at 12 PM HST: Supervisory Biologist for the U.S. Fish and Wildlife Service Refuges Program will give a talk on the status of seabirds of Papahānaumokuākea Marine National Monument. Register for webinar