



**PAPAĀNAUMOKUĀKEA**  
**Marine National Monument**

*A World Heritage Site*

# **NOAA ONMS Update**

## **October 10 – January 9, 2020**

Presented to the NWHI Coral Reef Ecosystem Reserve Advisory Council  
Presented by: Athline Clark, NOAA Superintendent  
January 9, 2020

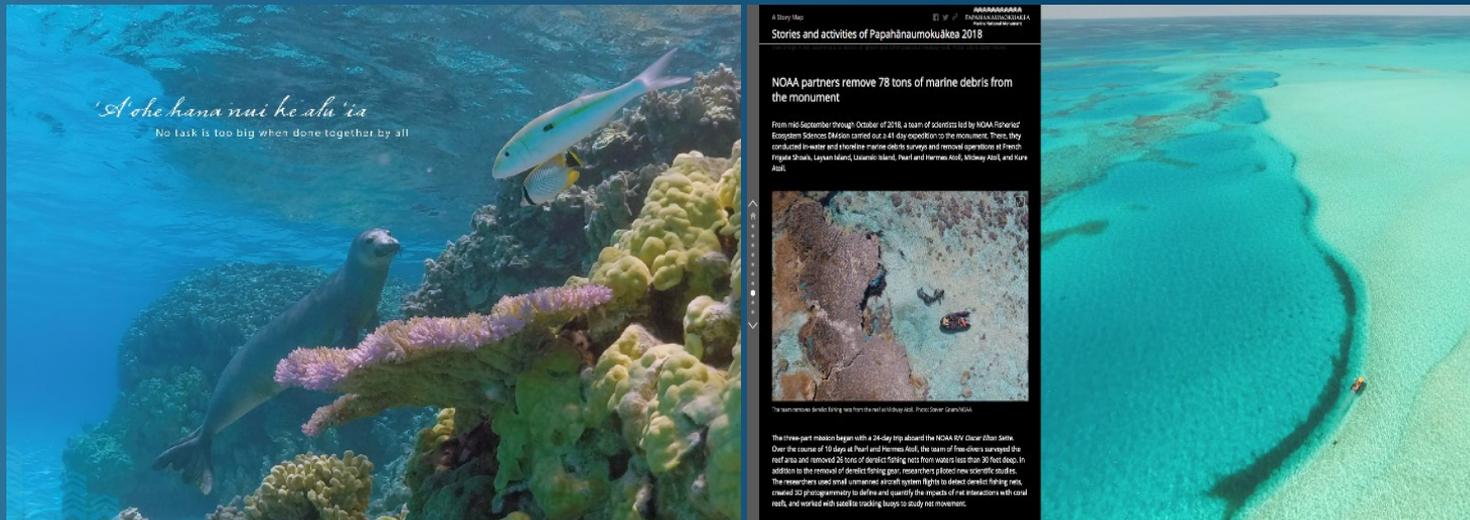




# Agency Coordination



# PMNM Rolls Out Stories and Activities of Papahānaumokuākea - Story Map



*Photo: PMNM's Online Storymap*

The Papahānaumokuākea Marine National Monument Management Board (MMB) has produced the Permitted Activities Report annually since 2007. This year is the first year the report is being made available through an [online story map](#) intended to have a broader public reach

# Resource Monitor and Media Coordination

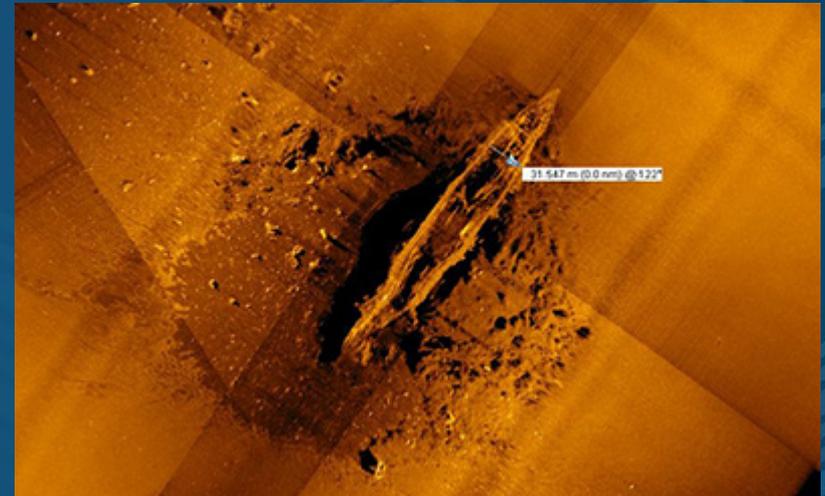


Credit: Athline Clark

## WWII Japanese warships discovered off Midway by R/V *Petrel*



Kaga barrette. Credit: R/V *Petrel*/Vulcan Inc.



Sonar image of Akagi. Credit: R/V *Petrel*/Vulcan Inc.



# CONSTITUENCY BUILDING & OUTREACH





**Waikiki Aquarium  
Marine Educator's Night (100+  
teachers)**  
*(Credit: Jennifer Crawford)*

**SOEST Open House  
October 25 & 26  
(4,000 students, teachers  
and community members)**  
*(Credit: Jennifer Crawford)*



**Mokupāpapa Discovery Center's  
Annual Hilo Black and White  
Night (almost 2,000 in attendance)**

*(Credit: Andy Collins)*



# Papahānaumokuākea Participates in UNESCO World Heritage Meeting Hosted by DOI

*(Credit: Athline Clark)*



# PMNM Scientist Filmed for Documentary on Sustainably Sourced Seafood

*(Credit: Randy Kosaki).*

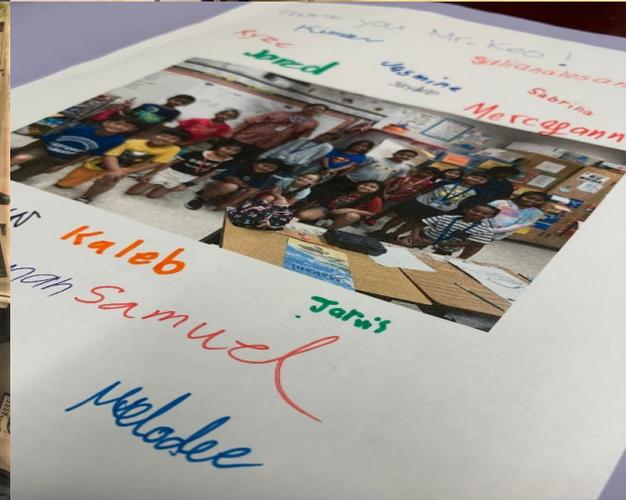




# EDUCATION



# PMNM Field Team Oahu Island Wide Education Tour



(Credit: PMNM Staff and Partners)



# MOKUPĀPAPA DISCOVERY CENTER HIGHLIGHTS





Hawai'i Science and Technology  
Museum Science Camp.  
*Credit: Justin Umholtz*



Craft Night Creations  
*Credit: Clayton Watkins*



Kamakai at MDC  
*Credit: Justin Umholtz*



Waiuli Ocean Festival  
*Credit: Logan @HHS*



# FIELD & RESEARCH



## Four New Species of Algae Described from PMNM's Deep Coral Reefs



Left: *Martensia abbottiae*, pressed specimen, Pearl and Hermes Atoll, 305 ft. (Coll.: R. Kosaki, Photo: K. Fujii, NOAA). Right: *Martensia lauhiekoeloa*, in situ, French Frigate Shoals, 165 ft. (Photo: G. McFall, NOAA).

# PMNM Field Team Members publish paper describing the effects of SCUBA Bubbles on Fish Surveys within the Monument.



Left: Keolohilani H. Lopes Jr. obscured by a cloud of large Jacks attracted to the SCUBA bubbles during a survey. Right: A pair of acrobatic manta rays swoop pass diver Keo Lopes, unbothered by diver presence, due to the bubble free attribute of the closed-circuit rebreather

*(Credit: Andrew Gray).*

## Calendar:

- When: Sunday, February 16 Ho`ike`ike Pili Kai
- What: Papahānaumokuākea Celebration
- Where: Waikiki Aquarium, Honolulu, Oahu (9:00 a.m. – 2:00 p.m.)