

**Papahānaumokuākea Marine National Monument
Agency Report to the Reserve Advisory Council
June 24 – September 15, 2017**

Agency: NOAA/NOS/ONMS/PMNM
Presented by: Athline Clark, Superintendent
Date: October 12, 2017

Agency Accomplishments & Recent Activities

Constituency Building & Outreach

PMNM Participates in Environmental Issues Information Session (CBO-2.3, 3.1)

On July 4, PMNM Deputy Superintendent for Policy and Programs David Swatland represented NOAA at an environmental issue information session and 4th of July potluck picnic in Kailua-Kona on Hawai‘i Island. The event, sponsored by the Hawai‘i County Democratic Committee, brought together representatives from a variety of conservation organizations to provide information on environmental issues, including coral reef health, reducing marine debris, and preserving cultural sites and access. Over a hundred people attended, including several state congressional representatives and the Hawai‘i County staff for Senator Brian Schatz. For more information, please contact David.Swatland@noaa.gov.

PMNM Participates in the Hawai‘i State Library Conservation Mini-Fair (CBO-2.3, 3.1, MCS-3.4)

On June 15, PMNM staff attended the Hawai‘i State Library's “Build a Better World Conservation Mini-Fair and Summer Reading Finale” by hosting an activity table for children. PMNM Education Specialist Kainoa Kaulukukui-Narikawa and PMNM Communications Manager Toni Parras used fun activity sheets to teach children about the unique native flora and fauna that are found within PMNM. Periodically through the event, PMNM staff also gathered children to read the story of Makani the Albatross. The story of Makani educates children about the issue of marine debris and urges them to be good stewards of the land and sea. Over 200 people attended the event. For more information, contact Kainoa.Kaulukukui@noaa.gov.



Left: PMNM Education Specialist Kainoa Kaulukukui-Narikawa shares an activity sheet highlighting the unique flora and fauna in PMNM with visitors. Right: Kainoa reads the story of Makani the Albatross for the Hawai‘i State Library's Build a Better World Conservation Mini-Fair and Summer Reading Finale. (Credits: Toni Parras/NOAA)

PMNM Attends the 2017 ‘Opihi Partnership Summit (CBO-2.3, 3.1, 3.3, MCS-3.4, NHCI-3.1)

On July 17, PMNM staff participated in the 2017 ‘Opihi Partnership Summit. This workshop focused on Hawaii’s nearshore resources, specifically the intertidal ecosystems, and worked to develop effective community-based resource management strategies. The ‘opihi (Hawaiian limpet, *Cellana* spp.) is a prized seafood delicacy in Hawai‘i but its numbers have been diminishing due to many factors including overharvesting. The ‘opihi is one piece of a very complex and important intertidal ecosystem in the Hawaiian Islands. Workshop objectives were to open communication channels and network among participants, share ideas and experiences and develop a shared understanding, and identify actions the group can agree to work toward to better manage resources. Presentations were given on work and outreach done (including the important work done in the Monument) and breakout groups discussed monitoring, management strategies and education. A report will be produced that summarizes the finding of this workshop. For more information, contact Jason.Leonard@noaa.gov.



Left: Presentation on work being done in Hawai‘i intertidal areas. Right: Community member discusses the role of overharvesting in the lack of nearshore resources. (Credits: Jason Leonard/NOAA)

PMNM Participates in First Hawai‘i Coral Nurseries & Restoration Workshop (CBO 3.3, MCS-3.4)

On July 21, PMNM Communications Manager Toni Parras participated in the first Hawai‘i Coral Nurseries & Restoration Workshop held at the Hawai‘i Institute of Marine Biology (HIMB) on Coconut Island in Kaneohe Bay. The goals of the workshop were to share the scope, direction, and timeframe of coral nursery and restoration efforts; understand regulatory framework and permitting process; share success and roadblocks factors; form a collaborative community of researchers; learn of similar efforts in the Pacific and Atlantic/Caribbean; and explore the potential for outreach and education. Approximately 50 people participated. For more information, contact Toni.Parras@noaa.gov.

PMNM Participates in 24th Annual Hawai‘i Conservation Conference (CBO-2.3, 3.1, 3.3, MCS-3.4, TES-1.5)

From July 18-20, PMNM staff participated in various sessions at the 24th Annual Hawai‘i Conservation Conference in Honolulu, attended by 1,300 people.

- PMNM staff hosted a one-NOAA-themed booth with HIHWNMS and the Office of Coastal Management. Displays included a monk seal photo booth and PMNM informational banner, videos from the different programs, the interactive PMNM kiosk, a marine life clay-making activity, and a virtual sandbox, as well as educational activity sheets and promotional materials for the public afternoon. For more information, contact Andy.Collins@noaa.gov.

Significance: supporting the outreach and education mission of PMNM by hosting an informational and educational booth at the Hawai'i Conservation Conference.



Left: PMNM Planning and Evaluation Specialist Nicole Evans greets visitors at the booth. Center: Marine life clay figures created by conference participants. Right: Visitors explore the virtual sandbox. (Credits: left and right Kahi Fujii/NOAA, center Toni Parras/NOAA)

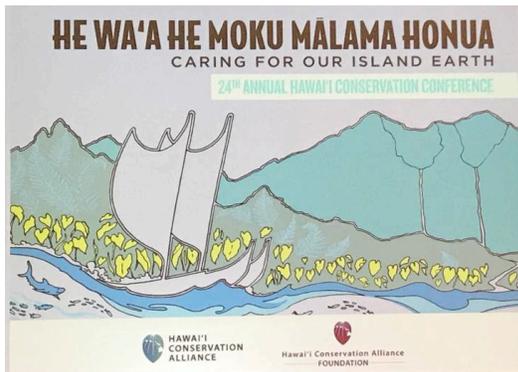
- On July 18, PMNM staff hosted a Communications Training Workshop entitled “What’s Your Punchline? How to Make Your Message Resonate with Different Audiences.” This forum was aimed at resource managers, educators, scientists, practitioners and others working in conservation and resource management who want to learn how to improve their effectiveness in communicating and engaging with various groups. The interactive workshop provided examples of successful and not so successful communications campaigns, tips, tools, and a hands-on exercise to give participants a chance to practice crafting conservation messages for various audiences, including policymakers, students, teachers, and the media. The workshop was facilitated by PMNM Communications Manager Toni Parras, PMNM Education Specialist Kainoa Kaulukukui-Narikawa, and USFWS Outreach Specialist Amy Olliffe, and was attended by 60 people. For more information, contact Toni.Parras@noaa.gov.



Center: Participants engage in a learning exercise during the forum. (Credit: Liz Foote) Right: Breakout groups work on the activity. (Credit: Kainoa Kaulukukui-Narikawa/NOAA)

- On July 19, PMNM hosted a forum entitled “Large-Scale Progression of Co-Management and Cultural Integration.” The forum, a collaborative effort between ONMS and the Office of Hawaiian Affairs (OHA), allowed panelists to recall a timeline of historical events that include several protections and designations, including: a) the NWHI Coral Reef Ecosystem Reserve in 2000 by President Clinton; b) the NWHI Marine Refuge in 2005 by the State of

Hawai‘i; c) the NWHI Marine National Monument in 2006 by President Bush; d) the inscription of the region as the first, and currently only, mixed (natural and cultural) UNESCO World Heritage site in the United States in 2010; and e) the proclamation for the expansion of PMNM in 2016 by President Obama. In a unique arrangement, laws establishing PMNM call for collaborative multi-agency governance and for ‘integrated’ management that places cultural and natural resources on equal footing. Throughout this timeline of events, the co-managing agencies and Native Hawaiian community have taken critical steps towards integration of indigenous Hawaiian values, concepts and practices, which now offers a new model for collaborative partnerships. Nearly 150 people attended. For more information, contact Kalani.Quiocho@noaa.gov.



Left: HCC Program. Right: Panel members talk about PMNM. (Credit: Kaipō Kiaha/OHA)

PMNM Staff Presents at Nā Kama Kai Ocean Safety & Conservation Clinics (OEL-1.1, 1.3, NHCH-5.1, TES-1.5)

On August 6 and 13, PMNM staff presented at Nā Kama Kai community ocean safety and awareness clinics, which aim to help youth nurture a love of the ocean and a sense of responsibility for the environment. The August 6 clinic was held at Poka‘i Bay Beach Park in conjunction with the Wai‘anae Coast Comprehensive Health Center’s Mauka to Makai event, and the August 13 clinic was held at Waikīkī Beach. Participants rotate through five stations: Polynesian wayfinding and navigation, ocean safety, stand-up paddle boarding, canoe paddling, and stewardship and conversation, the last one taught by PMNM Education Specialist Kainoa Kaulukukui-Narikawa, who talked about PMNM, marine debris and megafauna like the Hawaiian monk seal and the Hawaiian green sea turtle. Approximately 300 people attended the August 6 clinic and 100 students ranging in age from 2-18 participated in the August 13 clinic. For more information, visit www.nakamakai.org or contact Kainoa.Kaulukukui@noaa.gov.



*Nā Kama Kai participants pretend to be Hawaiian Monk Seals entangled in marine debris.
(Credit: Kainoa Kaulukukui-Narikawa/NOAA)*

Mokupāpapa Hosts National Association of Interpreters Training for ONMS Staff (AC-1.1, CO-2.2, CBO-2.3)

From August 7-11, PMNM hosted Education, Outreach and Communications staff from American Samoa, HIHWNMS and USFWS as well as PMNM staff and volunteers for a week-long Certified Interpretive Guide (CIG) training at Mokupāpapa Discovery Center in Hilo. The training, coordinated by PMNM, was facilitated by two National Association of Interpreters trainers from Monterey Bay Aquarium, and included certification as a Certified Interpretive Guide, one of the core competencies listed for ONMS educators as part of the ONMS Education Strategic Plan. The final day include National Network for Ocean and Climate Change Interpretation (NNOCCI) climate change communication training. All 15 participants passed their tests and will receive their four-year CIG certification. For more information, contact Andy.Collins@noaa.gov.



ONMS Pacific Region staff attend the NAI CIG and NNOCCI training in Hilo, HI. (Credit: Simone Mortan/Monterey Bay Aquarium)

Mokupāpapa Hosts ONMS’s 3rd Annual “Get Into Your Sanctuary Day” Event (CBO-2.3, 3.1, 3.3, MCS-3, 3.4, TES-1.5, NHCH-5.1)

On August 12, Mokupāpapa Discovery Center staff and volunteers hosted a fun day of educational activities for Get Into Your Sanctuary Day 2017. Visitors were greeted with a GIYSD challenge card that took them on a journey of hands-on activities highlighting both PMNM and the entire National Marine Sanctuary system. After getting a stamp at each of the nine activity stations, participants could sign up to be an Ocean Guardian, join our listserv, or win a Wiki Fresh restaurant gift certificate. Activities included a National Marine Sanctuaries Pictionary game, “be an aquarium naturalist,” virtual tours of PMNM and ONMS sites with Liquid Galaxy, a nurdle micro-plastic sand search, model Polynesian canoe racing, ONMS animal ID and fact-finding game, ONMS “Earth is Blue” videos, and a barbless hook lesson with a partner from Department of Land and Natural Resources. Two new permanent exhibits were unveiled – an immersive theater Liquid Galaxy exhibit, and a dedicated children’s area. A total of 539 visitors attended, including a camp group that visits MDC every year from Portland, Oregon and a photographer from the Hawai‘i Tribune Herald. For more information, contact Andy.Collins@noaa.gov.



Left: GIYSD visitors match animal facts to the correct photo and sanctuary. Right: Frequent visitor Kishori Dasi mugs as a Hawaiian Monk Seal. (Credits: Virginia Branco/NOAA)





Clockwise from top left: AmeriCorps intern Gina plays Sanctuary Search with visitors; MDC staffer Clayton facilitates a canoe race; MDC volunteer Katie times guests as they pick nurdles out of sand; PMNM staffer Kahi guides visitors in Sanctuary Pictionary; the new Liquid Galaxy exhibit; a girl admires the unique Hawaiian fish in the aquarium. (Credits: Toni Parras/NOAA)

NOAA Senior Leadership and Congressional staff members from the U.S. House and Senate Visit NOAA’s Inouye Regional Center and Mokupāpapa Discovery Center (CBO - 3.1)

On August 29, NOAA offices at the Inouye Regional Center (IRC) in Honolulu hosted eleven Congressional staffers, primarily from the Senate Appropriations Committee, and a number of NOAA senior officials, including the NOAA CFO, the OMAO Assistant Administrator, the NOS Deputy Assistant Administrator, and the directors of OCM and the Coral Program. The group took a tour of the IRC facility and then made the rounds of the NOAA offices, receiving brief presentations on the offices’ mission and important work each office is doing. For PMNM, the group received briefings on research and the site’s cutting edge dive program, education and outreach, cultural integration, management structure, and permitting. Prior to the Congressional staff visit, ONMS and OCM staff attended an informal “juicer” hosted by NOS Deputy Assistant Administrator Nicole LeBoeuf. Afterwards, a group of about 20 participants comprised of NOAA leadership and U.S. Congressional staff from the House and Senate made a visit to NOAA’s Mokupāpapa Discovery Center in Hilo. Pacific Islands Region Director Allen Tom, PMNM Superintendent Athline Clark, and Acting HIHWNMS Superintendent Jessica Kondel accompanied the group in Hilo. During their time at the Discovery Center, the group toured the facility and were given presentations on both the natural and cultural importance of Papahānaumokuākea. They were also given a behind-the-scenes tour of the aquarium operations and were provided hands-on demonstrations of many of the exhibits. For more information, contact Athline.Clark@noaa.gov.



*ONMS, PMNM and Congressional staff pose together at the Polynesian Voyaging Exhibit.
(Photo: Virginia Branco/NOAA)*



Visiting Congressional staffers and NOAA leadership enjoy an overview of PMNM provided by PMNM/MDC staff. (Photos: Clayton Watkins/NOAA)



Visiting Congressional staffers and NOAA leadership learn about the rare endemic fish on display at MDC, followed by a sneak-peek at the life support systems required for the aquarium.

PMNM Participates in Sea Life Park’s Year of the Monk Seal Keiki Fun Day (CBO-2.3, 3.1, NHCH-5.1, TES-1.5)

On September 3, PMNM staff hosted a booth at Sea Life Park’s Keiki Fun Sunday celebrating the Year of the Monk Seal. Staff engaged with visitors on PMNM and talked about monk seals and other unique features of the Monument, led a monk seal clay-making activity, and shared activity sheets and posters featuring monk seals and other creatures of PMNM. Approximately 300 people visited the PMNM booth. For more information, contact Toni.Parras@noaa.gov.



Left: Visitors enjoy the PMNM monk seal photo booth. Center and right: PMNM intern Sarah Albright shows guests how to make a monk seal with clay. (Credits: Toni Parras/NOAA)

PMNM Leads SAND Students Tour of the Waikiki Aquarium and NOAA Ship *Hi‘ialakai* (MCS-3.2, CBO-3.1)

On September 3, PMNM staff Dr. Randy Kosaki and Keolohilani Lopes Jr. led two Hawai‘i Island high school interns on a tour of the University of Hawai‘i at Mānoa, the Waikiki Aquarium, and NOAA ship *Hi‘ialakai*. The interns are graduates of a summer camp program called SAND (Snorkeling Assessments and New Discoveries), which teaches high school students the hands-on basics of coral reef survey techniques. SAND has been funded for the past five years by annual grants to Lopes from the Federal Programs Office of the NMFS Pacific Islands Regional Office. SAND targets minority students, which are under-represented in STEM fields. For more information, contact Keolohilani.Lopes@noaa.gov.



*Students pose with PMNM staff next to NOAA ship *Hi‘ialakai*. (Credit: Keolohilani H. Lopes Jr.)*

PMNM Wins Global Ocean Refuge Award (AC-3.2, CBO-3.3)

On September 5, the Marine Conservation Institute presented PMNM with a Global Ocean Refuge Award to honor its strong protection of marine ecosystems and biodiversity, earning Platinum status (the highest level) and joining the Global Ocean Refuge System (GLORES) as one of the inaugural Global Ocean Refuges. PMNM was one of three sites to receive the award, which was announced at the 4th International Marine Protected Area Congress (IMPAC4) in La Serena-Coquimbo, Chile. For more information, contact Athline.Clark@noaa.gov.



PMNM Native Hawaiian Specialist Kalani Quiokocho accepts the Global Ocean Refuge Award on behalf of PMNM. (Credits: Russell Moffitt/Marine Conservation Institute)

https://www.facebook.com/russmmo/videos/10101120751062686/?hc_ref=ARTW6N-PGN-YtysPwlPjpKYogGItN7l238e4bHEJVz9Dk56nlPbgIYQxc5L-DD7eN40

Education

PMNM Presents Albatross and Marine Debris Lessons at ‘Iolani Middle School (CBO-2.3, 3.1, 3.2, OEL-1.4)

On July 11, PMNM staff presented lessons from the ONMS Winged Ambassadors curriculum on albatross and marine debris to two middle school classes at ‘Iolani School on O‘ahu. PMNM Education Coordinator Andy Collins and USFWS Education and Outreach Specialist Amy Olliffe taught the 2-hour classes, with a total of 28 students, which were part of a summer enrichment program. Topics covered included a general overview of Papahānaumokuākea, seabird counting activities, albatross bolus analysis, and discussion of marine debris. PMNM has been invited to teach this particular class for the last several years, and ‘Iolani is one of the top private schools in the State of Hawai‘i. For more information, contact Andy.Collins@noaa.gov.

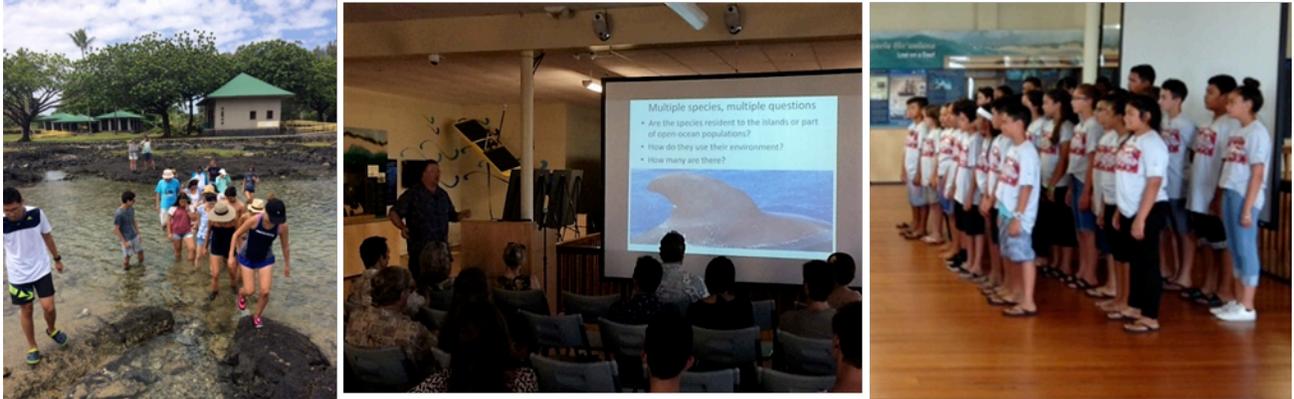


Left: USFWS Education and Outreach Specialist Amy Olliffe teaches students about being an albatross monitor on Midway Atoll. Right: 'Iolani Middle School students investigate the natural and man-made materials found inside an albatross bolus. (Credits: Andy Collins/NOAA)

Mokupāpapa Discovery Center (MDC) Report for June 24 – September 15, 2017 (MCS-3.4; CBO-3.1; OEL-1.6)

Mokupāpapa Discovery Center hosted 14, 470 people during this time. Highlights include:

- Dr. Robin Baird’s presentation “Cetaceans of Hawai‘i” as part of MDC’s monthly Third Thursday by the Bay lecture series.
- The 37th Annual Hawai‘i Volcanoes National Park Cultural Festival and BioBlitz, which Mokupāpapa participated in as science education contributors. This was a great opportunity to connect with other environmental educators and programs, as well as sharing about PMNM with over 550 members of the public.
- Educational programs included outreach at ‘Imiloa, where PMNM educators participated in the “Technologies of Tomorrow” summer science camp. Ages ranged from 5-12 years old. Topics covered included an introduction to the NWHI and the importance of PMNM as part of the National Marine Sanctuary system, observation methods and good record-keeping, sustainable fishing methods, fish anatomy and identification (in English and Hawaiian), and *gyotaku* (fish printing).
- Outreach Associate Justin Umholtz met with The Marine Mammal Center School and Extended Learning Programs Manager Jennifer Walker and Program Coordinator Sara Smith to evaluate and improve the MDC fieldtrip portion of the pilot Hawaiian Monk Seal curriculum Nā Kōkua o Ke Kai in preparation for the new school year. The curriculum currently is being tested at three Hawai‘i Island intermediate schools.
- Hosted a National Association for Interpretation (NAI) Certified Interpretive Guide (CIG) training for participants from American Samoa, HIHWNMS and USFWS as well as PMNM staff and volunteers (see Sit Rep above), and reopened in time to host a fun-filled Get Into Your Sanctuary Day event (see Sit Rep above).



Left: Hawai'i Community College Intensive English Program students explore the tide pool environment. Center: Dr. Robin Baird shares his latest research. (Credits: Justin Umholtz/NOAA) Right: Ho'olauna students oli (chant) to open the ho'ike.

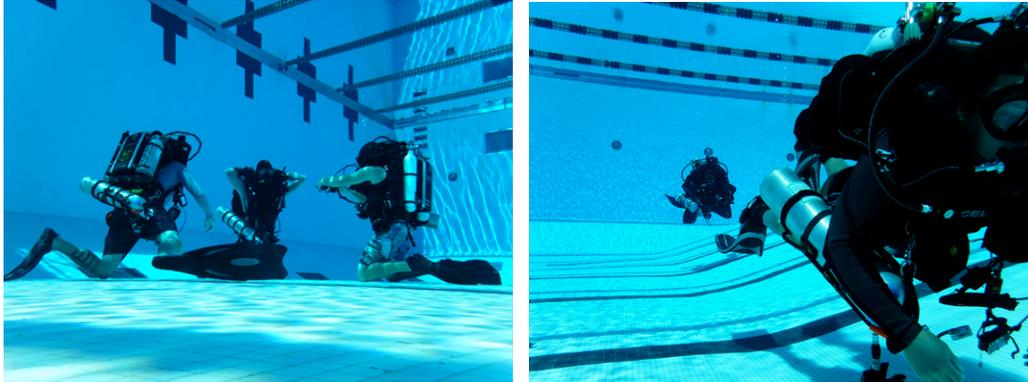


Left: Kaliko High shares about coral reefs at the HAVO BioBlitz. (Photo credit: Justin Umholtz/NOAA) Right: Justin Umholtz explains traditional Hawaiian names of the NWHI at the HAVO BioBlitz. (Photo credit: Kaliko High/NOAA)

Research & Field Operations

PMNM Dive Team Conducts Training on Closed Circuit Rebreathers (CO-2.2)

From July 18 to 21, PMNM's Field & Research Team conducted cross-over training on the Poseidon Se7en Closed Circuit Rebreathers (CCRs). These advanced CCRs were recently approved by the NOAA Diving Control and Safety Board. PMNM is looking to adopt this advanced technology for research and monitoring in the under-explored and under-researched Monument. Classroom and dry diving were done to familiarize divers on the new units and multiple dives were conducted first in a pool then in open ocean conditions. Extensive training was also done on mitigating emergencies for any situation that may arise during a dive. For more information, contact Keolohilani.Lopes@noaa.gov.

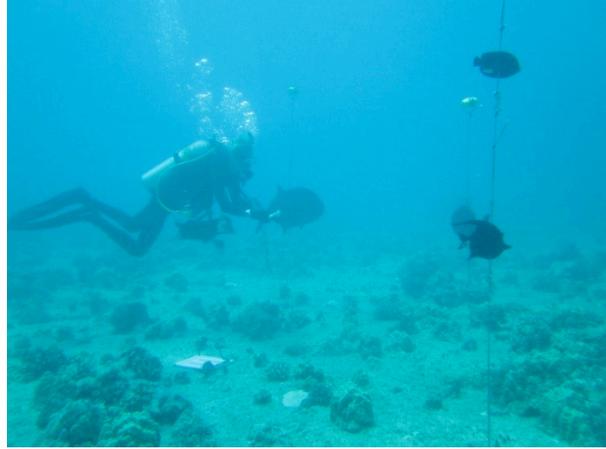


Left: Instructor leads PMNM divers Brian Hauk and Stephen Matadobra in an emergency scenario drill. Right: PMNM divers Jason Leonard and Atsuko Fukunaga test the trim on their new dive units. (Credits: Keo Lopes/NOAA)

PMNM Implements New Method for Analyzing Coral Reef Monitoring Data (MCS-1.1, 1.2)
PMNM scientists Atsuko Fukunaga and Randy Kosaki published a paper describing a novel statistical tool for coral reef monitoring. This method, known as a distance-based multivariate control chart (MCC), will allow managers to set “alarms” to indicate when significant changes in reef community structure are detected between time periods. An MCC places biological data from each time period in multivariate space based on any measure of community structure. When the distance between a new observation and either the centroid of all previous data points or the centroid of baseline data exceeds upper confidence limits, an alarm is triggered and users can quickly identify specific changes at individual sites. The study extended the method to account for differences in reef habitat and utilized coral reef fish monitoring data from PMNM’s Reef Assessment and Monitoring Program (RAMP) with emphasis on abundances of relatively common species. It was published in the open-access scientific journal *PeerJ* and is available at <https://peerj.com/articles/3651/>. For more information, contact Atsuko.Fukunaga@noaa.gov.

PMNM Trains the Next Generation of Researchers (MCS-3.2, CBO-3.1)

From August 7 to 11, PMNM’s Field & Research Team conducted training for three University of Hawai‘i students in preparation for the upcoming Reef Assessment and Monitoring Program (RAMP) expedition to PMNM, which will give these students experience and a rare look into one of the most pristine marine ecosystems in the world, PMNM. The training, conducted jointly with instructors from NMFS PIFSC, taught students how to quantify fish populations and assess coral reef habitats using the standard suite of protocols used by NOAA throughout the insular Pacific. For more information, contact Brian.Hauk@noaa.gov.



Left: Atsuko Fukunaga, JIMAR/PMNM Ecological Research Statistician and Chief Scientist for the upcoming RAMP cruise, hones her skills on conducting state-of-the-art 3-D photogrammetry benthic surveys. (Credit: Stephen Matadobra) Right: An intern diver calibrates his fish sizing by utilizing fish models. (Credit: Jacob Asher/NOAA)

PMNM Instructs ONMS and FWS Staff in Life Saving Techniques (CO-2.2)

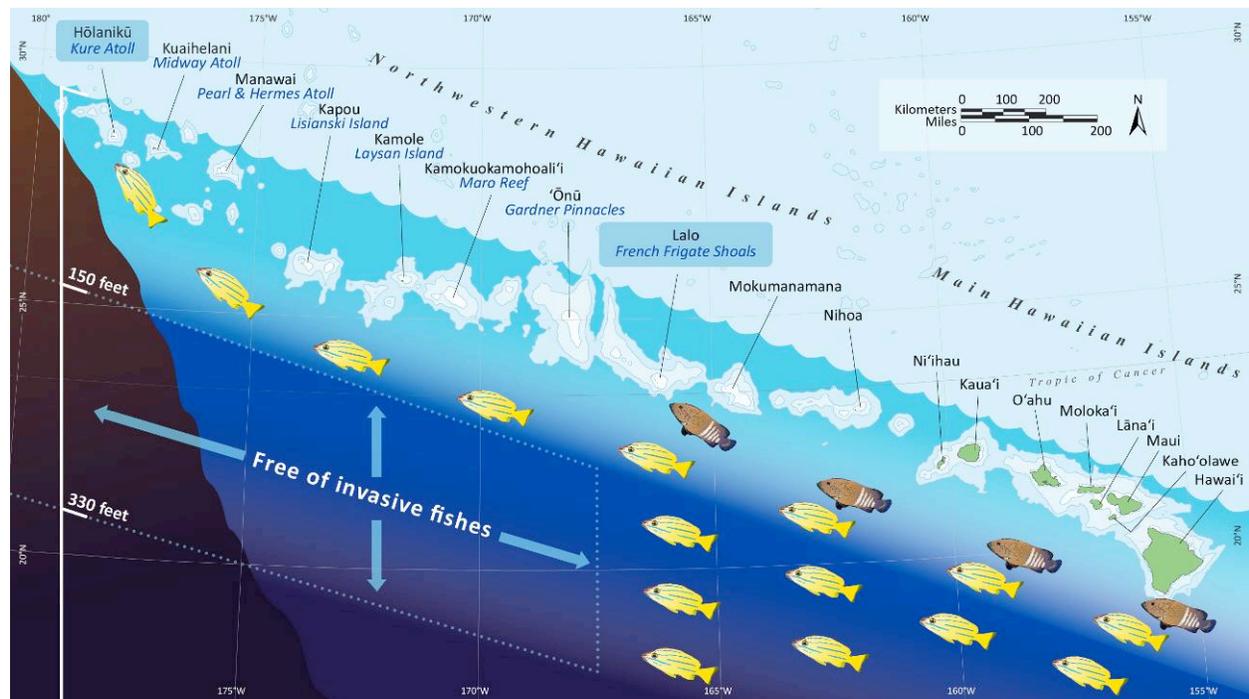
On August 14, ONMS and USFWS service staff attended a Divers Alert Network class taught by Emergency Medical Technician and JIMAR/PMNM Science Operations Associate Stephen Matadobra. The course covered CPR, AED, First Aid and Oxygen Administration training. A newer manikin was used which had real time feedback to include depth, recoil, rate and amount of gas delivered allowing all of the participants to improve their CPR. These life saving techniques will not only be useful in the office and at home but also vital in the remote field setting. For more information, contact Stephen.Matadobra@noaa.gov.



Left: Participants use CPR, AED and Oxygen to resuscitate a simulated dive injury. Right: Sample screen shot of live feedback while using the CPR manikin. (Credits: Stephen Matadobra/NOAA)

PMNM Scientists Discover Large Refuge from Invasive Species in the NWHI (MCS-3.4; CBO-3.1, AS-8.2)

On August 28, PMNM scientists Atsuko Fukunaga, Randy Kosaki, and Brian Hauk published a paper in the scientific journal *BioInvasions Records* describing the complete absence of the introduced, invasive bluestriped snapper (*Lutjanus kasmira*) across a large region of Papahānaumokuākea. Mesophotic (deep) coral reefs between 50 and 100 m in the northwestern half of the NWHI were surveyed using mixed-gas rebreathers, and were found to be completely devoid of the widespread invasive fish. In comparison, large schools of bluestriped snapper are common on shallow and deep reefs across all of the inhabited main Hawaiian Islands (MHI), as well as in the southern half of Papahānaumokuākea. These deep reefs in the NWHI serve as a refuge for native and endemic species, which are able to thrive in the absence of the invasive snapper. The scientists also noted the complete absence of the introduced peacock grouper (*Cephalopholis argus*) on reefs north of French Frigate shoals in the center of the archipelago. The scientists speculated that cooler waters to the north and/or at depth limit the distribution of these invasive species. The open access journal article is available online at <https://doi.org/10.3391/bir.2017.6.3.12> (or direct link to PDF: http://www.reabic.net/journals/bir/2017/3/BIR_2017_Fukunaga_etal.pdf). For more information, contact Atsuko.Fukunaga@noaa.gov.

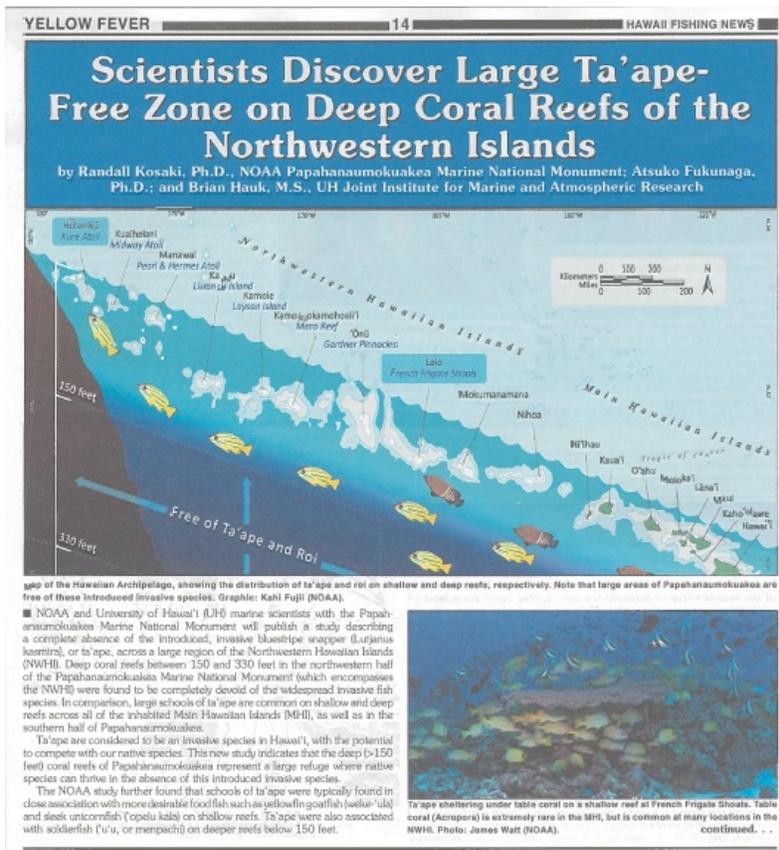


Map of the Hawaiian Archipelago, showing the distribution of invasive bluestriped snappers and peacock groupers on shallow and deep reefs, respectively. Note that large areas of PMNM are free of these introduced invasive species. (Graphic: Kahi Fujii/NOAA)

PMNM Scientists Discover Large Refuge from Invasive Species in the NWHI (MCS-3.4; CBO-3.1, AS-8.2)

The September 2017 issue of *Hawaii Fishing News* features an article titled “Ta‘ape-Free Zone in the NWHI” based on a study also published this month in the scientific journal *BioInvasions*

Records. The article, written by Atsuko Fukunaga, Randy Kosaki, and Brian Hauk, describes the complete absence of the introduced, invasive bluestriped snapper (*Lutjanus kasmira*) on mesophotic (deep) coral reefs between 50 and 100 m in the northwestern half of the NWHI. These deep reefs in the NWHI serve as a refuge for native and endemic species, which are able to thrive in the absence of the invasive snapper. Hawaii Fishing News is a monthly magazine with a circulation of approximately 10,000. For more information, contact Randall.Kosaki@noaa.gov.



Story of ta'ape-free zone in PMNM appears in the September issue of Hawaii Fishing News.

Staff Changes:

New Hires: Naomi McIntosh, Senior Adviser
Jon Martinez, Research Specialist

Departures: Kainoa Kaulukukui-Narikawa, Education Specialist

Calendar:

SOEST Open House
 October 20, 2017 (Friday) 8:30 AM - 2:00 PM
 October 21, 2017 (Saturday) 10:00 AM - 2:00 PM
 Free Admission. UH Manoa campus in the HIG, POST, and MSB buildings

Heads Up:

Papahānaumokuākea will be featured in a UNESCO exposition on World Heritage coral reefs at the Aquarium of Paris from October 1, 2017, until the end of the year.