



PAPAHĀNAUMOKUĀKEA
Marine National Monument

Lawe i ka mā'alea a kū'ono'ono

Take wisdom and make it deep



SUMMARY OF
ACTIVITIES PERMITTED
IN 2019

2019 Activities

In 2019, a diverse range of activities explored the depths of the natural and cultural resources within Papahānaumokuākea Marine National Monument, the largest protected area in the United States (www.papahanaumokuakea.gov). These activities continued ongoing collaborative research while embarking on new paths of discovery. A common theme of activities conducted in the monument in 2019 may be captured in the Hawaiian proverb (reflected on the cover) “Lawe i ka ma’alea a kū’ono’ono” translated to mean “Take wisdom and make it deep.” The following highlights of projects in 2019 illustrate the depths – both literally and figuratively – that researchers delved into to better understand and protect the monument’s resources.

Cultural Practitioners Collaborate for Research on Mokumanamana

In June of 2019, 13 members of the Edith Kana’ole Foundation departed aboard the M/V *Searcher* enroute to Mokumanamana to study the traditions, cultural sites, and manamana (exponential spiritual power and upright stones) of the island. The Edith Kana’ole Foundation joined members of *Makali’i* voyaging family Nā Kālai Wa’a at Mokumanamana who departed from Kawaihae on Hawai’i Island aboard the traditional voyaging canoe *Makali’i*. Together the two groups conducted research on the manamana and their alignments to various celestial features, such as stars, planets, and the Milky Way.

RV Petrel Discovers Battle of Midway Shipwrecks

During extensive underwater surveying of the Battle of Midway site, the research vessel (R/V) *Petrel*, owned and operated by Vulcan Inc., discovered long lost wreckage from the battle. On October 16, 2019, the R/V *Petrel* crew was able to identify ship remains as those of the Japanese aircraft carrier *Kaga*. On October 20, 2019, they identified sonar images of the Japanese flagship *Akagi*. The 1942 Battle of Midway was a decisive naval battle during World War II that occurred six months after Japan’s attack on Pearl Harbor – which, lasting 3 days, is often referred to as the “turning point in the war.”

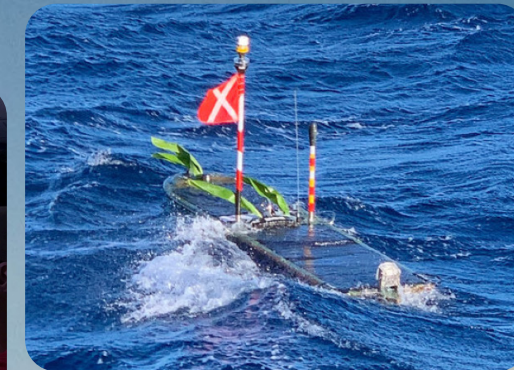
Deep Sea Scientists Explore Necker Ridge

From August 31 to September 29, 2019, scientists and research partners aboard Schmidt Ocean Institute’s R/V *Falkor* examined Necker Ridge and seamounts in and around Papahānaumokuākea Marine National Monument. Led by Dr. Amy Baco-Taylor from Florida State University, the science team gained insights into central and western Pacific seamount lifeforms and distribution, while examining the role of Necker Ridge as a stepping-stone (or blockade) to other parts of the Pacific.

Liquid Robotics Deploys First Unmanned Surface Vehicle in Papahānaumokuākea

In June 2019, the first unmanned surface vehicle (USV) accessed the monument in support of the traditional voyaging canoe *Makali’i* on its journey to Mokumanamana. The USV, known as a Wave Glider, was operated by Liquid Robotics from its remote command and control center in Kawaihae on Hawai’i Island and provided another source of weather data for navigators aboard *Makali’i*. The Wave Glider was an important resource for navigators in this first-time collaboration with unmanned technology and a traditional voyaging canoe in Papahānaumokuākea.

For more information on these stories visit www.papahanaumokuakea.gov.



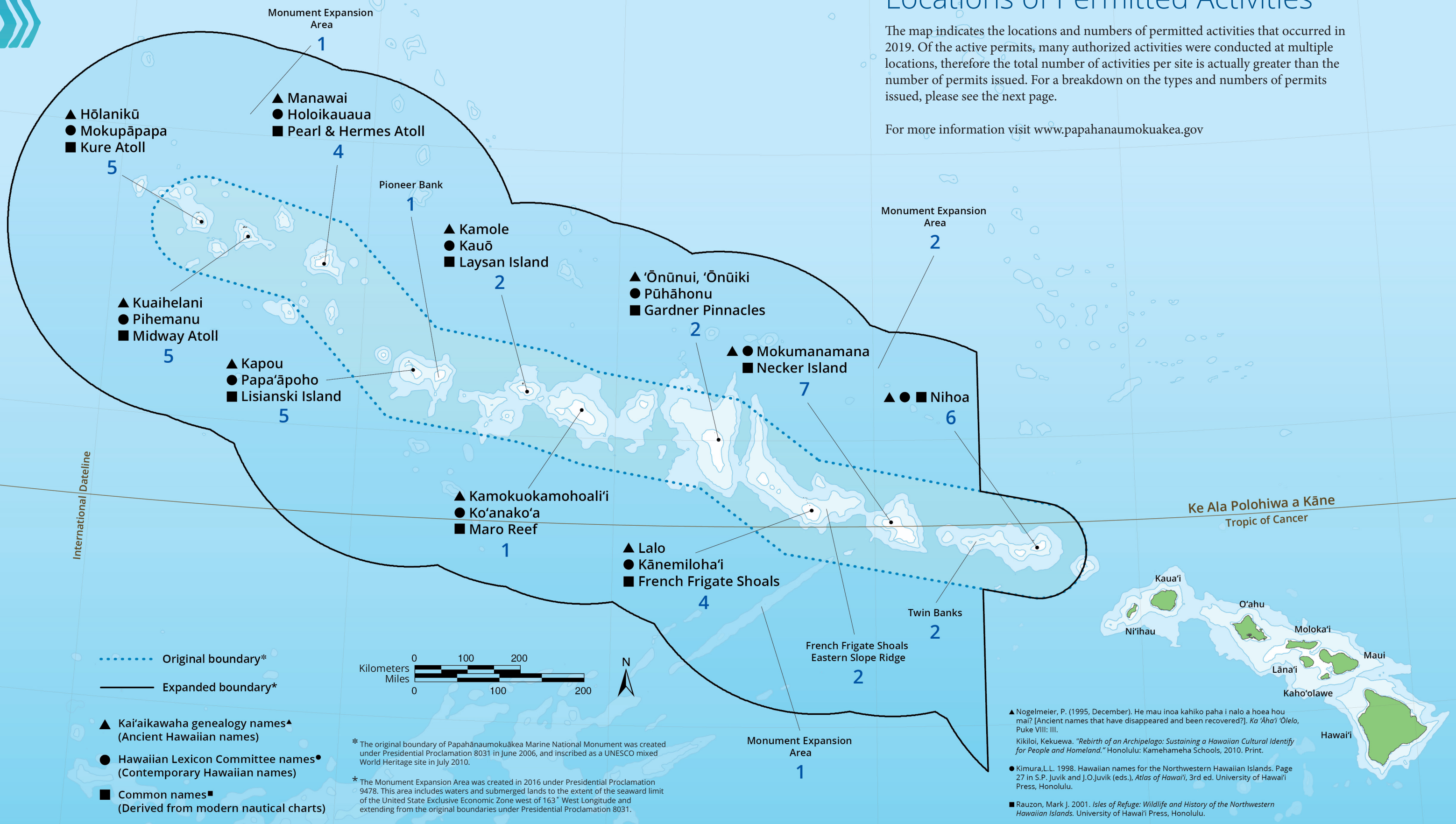
Background image: An EKF team member watches sunset on Mokumanamana. Photo by Brad Ka’aleleo Wong/OHA. Overlaid images from left to right: *Kaga* gun mount (Photo by R/V *Petrel*/Vulcan Inc.). Chief Scientist Brendan Roark monitors live underwater video aboard the R/V *Falkor* (Photo by Andy Collins/NOAA). The Wave Glider *Europa* sets sail from Puako for Papahānaumokuākea Marine National Monument (Photo by Beth Goodwin/Jupiter Research Foundation).

Papahānaumokuākea Marine National Monument Map

Locations of Permitted Activities

The map indicates the locations and numbers of permitted activities that occurred in 2019. Of the active permits, many authorized activities were conducted at multiple locations, therefore the total number of activities per site is actually greater than the number of permits issued. For a breakdown on the types and numbers of permits issued, please see the next page.

For more information visit www.papahanaumokuakea.gov

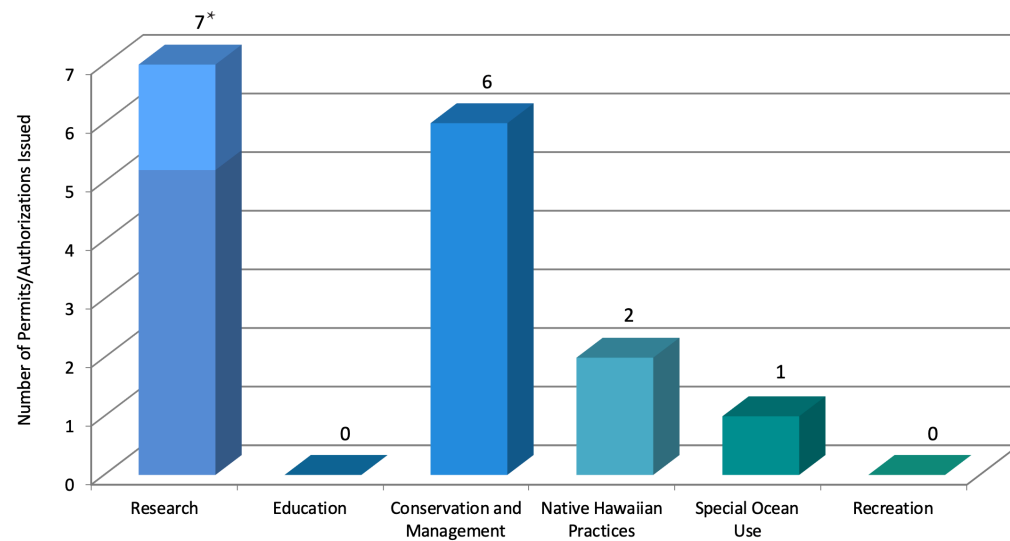


Permits Issued in 2019

Each year the co-trustees issue a number of permits for a variety of activities to occur in Papahānaumokuākea. The following section provides an analysis of these permits by type, levels of use, and numbers of persons per permit.

In 2019, 21 permit applications were received and 16 activities were permitted or authorized (Figure 1) including 12 activities in the original monument boundaries, two activities solely within the Monument Expansion Area (MEA), and two in both. All permit applications must complete a rigorous process of environmental and cultural review and documentation of meeting the applicable permitting criteria, which include the Findings in Proclamation 8031 and federal regulations 50 CFR Part 404. As permit applications are reviewed and processed, individual applicants may elect to withdraw a permit application. This year, four applications were withdrawn and one was denied as the proposed activity could not meet all permitting criteria.

» Figure 1. Number of PMNM Permits/Authorizations Issued in 2019 by Permit Type.



*Five research permits were issued for activities within the original Monument boundaries and two authorizations for activities solely within the MEA.

The number of new and renewal activities authorized is reported and tracked by the Monument Management Board (MMB). In 2019, there were nine new activities and seven renewal activities authorized. In order for a permit application to be considered a renewal, the proposed activity must have been a previously permitted project activity in the Northwestern Hawaiian Islands (NWHI). This metric provides a quick estimate of the number of new projects permitted (note that permits requesting renewal of activities with a new principal investigator are counted as “new” permits). Both new and renewal applications undergo the same rigorous joint-permitting review process.

The monument co-trustees grant both single- and multi-year permits. In calendar year 2019, the monument permitting team tracked 39 activities, 25 of which were authorized and active prior to 2019. All active permits, regardless of year issued, were monitored for permitting and reporting requirements in 2019. Multi-year permits are issued specifically for projects that span two or more calendar years. In accordance with Hawai‘i Administrative Rules (HAR), the duration for a monument permit in the state of Hawai‘i waters is limited to no longer than one year from the date of issuance (HAR Title 13 § 60.5-6). Multi-year permits may be issued for activities that occur outside the state of Hawai‘i waters (defined as 0-3 nautical miles from emergent land, excluding Midway Atoll) for up to five years.

Levels of Human Presence

Human presence is necessary to carry out resource management objectives and conduct necessary scientific and cultural research. Effectively tracking monument permits and the associated number of permitted vessel and permit related aircraft entries within the monument allows for accurate reporting of levels of human presence. The level of human presence in the monument is strictly managed and continually evaluated to monitor and mitigate for cumulative impacts.

The only location equipped to accept aircraft within the monument is Midway Atoll. In 2019, there was a total number of 34 permitted flights to and from the monument which is a 10 percent decrease from 2018.

Permitted vessel entries and exits are defined as any instance in which a vessel is permitted to enter the monument to conduct authorized activities and subsequently exits the monument. For reporting purposes, any further authorized entry of the same vessel is counted as a second vessel entry. In 2019, there were a total number of 18 permitted vessel entries into the monument done by a total of 10 permitted vessels.

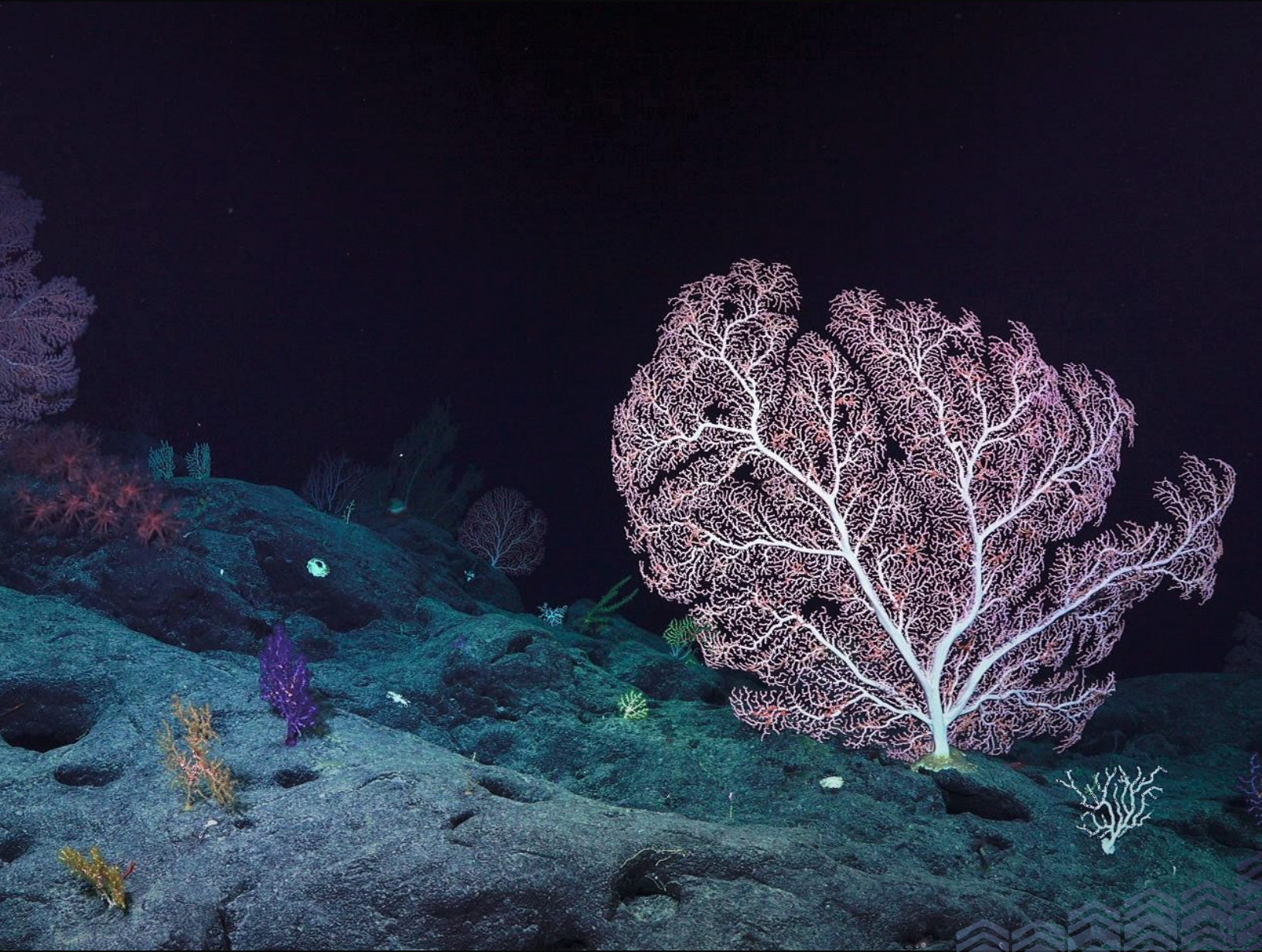
Permitted Versus Actual Visitation Records

The number of individuals permitted to access the monument and conduct activities is often not reflective of the actual number of people who conducted work in the monument. For example, monument permits authorize limited access to personnel qualified to conduct specific activities; however, the actual number of individuals who access the monument is often less than the number permitted due to scheduling conflicts and other logistical complications that necessitate flexibility when selecting a team to conduct permitted activities. In other instances, permits that are active for more than one calendar year are included in the total count of permitted individuals but may not utilize their permit each year due to scheduling conflicts, lack of funding, or focus on other priorities. Table 2 shows the difference in the number of permitted individuals compared to the actual number of individuals who took part in a permitted activity.

» Table 1. Number of individuals permitted in 2019, compared to the actual number of people who conducted permitted activities in the monument by permit type¹.

Permit Type	Number of People Permitted	Actual Number of People Who Performed Permitted Activities
Research	151	52
Education	0	0
Conservation & Management	455	202
Native Hawaiian Practices	41	41
Special Ocean Use	41	41
Recreation	0	0
TOTAL	688	336

¹ Data presented in all tables and figures reflects only information from permit reports submitted to PMNM upon completion of a PMNM access and/or project. Not all permit reports have been received for activities that occurred in 2019 at the time of publication.



Papahānaumokuākea Marine National Monument is administered jointly by four co-trustees – the Department of Commerce, the Department of the Interior, the State of Hawai‘i, and the Office of Hawaiian Affairs. The day-to-day management of the monument is overseen by a seven-member management board: NOAA’s Office of National Marine Sanctuaries, NOAA Fisheries, U.S. Fish and Wildlife Service National Wildlife Refuges and Ecological Services, State of Hawai‘i Division of Aquatic Resources and Division of Forestry and Wildlife, and the Office of Hawaiian Affairs. Co-management takes all agencies working together, and all have unique expertise to bring to the table. Papahānaumokuākea celebrates 10 years as the first mixed (natural and cultural) UNESCO World Heritage Site in the United States in July 2020.

For more information about the stories and activities of Papahānaumokuākea, please visit www.papahanaumokuakea.gov.

Front cover photo by Ruben Carrillo and back cover photo by Schmidt Ocean Institute/ROV *SuBastian*.