

Ka‘Elele

The Messenger

The Journal of Bernice Pauahi
Bishop Museum | Spring 2016



UPCOMING EVENTS

June



10 | FRIDAY
Museum After Dark Members Event featuring Planet Shark Preview: 6:00 – 9:00 p.m. (Great Lawn, Planetarium, and all galleries). All members are invited to a family night featuring the new exhibit Planet Shark: Predator or Prey, food trucks, music, activities, viewing of collection items, and freedom to enjoy all the galleries. **Members: FREE.** For more information please call (808) 847-8280 or email membership@bishopmuseum.org.

11 | SATURDAY
Planet Shark: Predator or Prey Exhibit Opens (Castle Memorial Building, First Floor).
16 | THURSDAY
Traditions of the Pacific Lecture: Shark Stories I: Science and Ecology, 6:00 – 7:30 p.m. (Atherton Hālau). General: \$10, **Members: FREE.** RSVP required (808) 847-8280 or membership@bishopmuseum.org.

July

21 | THURSDAY
Traditions of the Pacific Lecture: Shark Stories II: Manō Legends of Hawai'i, 6:00 – 7:30 p.m. (Atherton Hālau). General: \$10, **Members: FREE.** RSVP required (808) 847-8280 or membership@bishopmuseum.org.

August

13 | SATURDAY
Journeys: Heritage of the Northwestern Hawaiian Islands Exhibit Opens (J. M. Long Gallery).

13 | SATURDAY
18th Annual Bernice Pauahi Bishop Musuem Dinner, 5:00 – 10:00 p.m. (Great Lawn).
18 | THURSDAY
Traditions of the Pacific Lecture: Shark Stories III: Sharing Our Waters, 6:00 – 7:30 p.m. (Atherton Hālau). General: \$10, **Members: FREE.** RSVP required (808) 847-8280 or membership@bishopmuseum.org.

October

21 | FRIDAY
Dora & Diego: Let's Explore! Member Preview, 5:30 – 7:30 p.m. (Castle Memorial Building, First Floor).

22 | SATURDAY
Dora & Diego: Let's Explore! Exhibit Opens (Castle Memorial Building, First Floor).

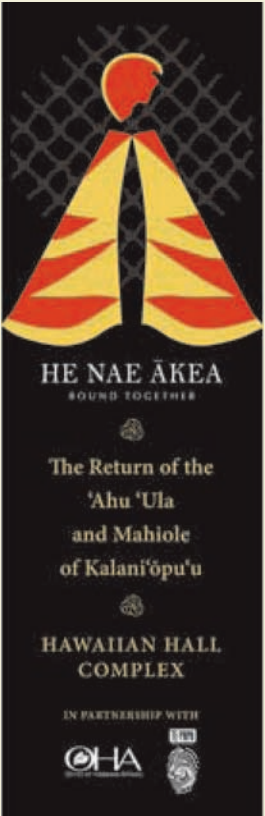
November

24 | THURSDAY
Bishop Museum Closed– Thanksgiving Day.

J. Watumull Planetarium Evening Programs

STARS & GUITARS
Saturdays, 8:00 p.m.
June 4 & 18
July 2 & 16
August 6 & 20
September 3 & 17
October 1 & 15
Planetarium lobby doors open at 7:15 p.m. Please arrive by 7:45 p.m. No late seating. Show length is one hour. Telescope viewing offered after the program, pending weather conditions. Tickets: \$10 adults; \$7 ages 4–12. Members: \$5.
Reservations are required due to limited space. RSVP (808) 848-4168 or online at www.bishopmuseum.org.

On Display



COVER | A newly-weaned Hawaiian monk seal pup rests at Trig Island, French frigate Shoals. Photo by Mark Sullivan, Wikipedia Commons.

Upcoming Exhibits



Planet Shark: Predator or Prey
June 11, 2016 – September 5, 2016
Castle Memorial Building

This exhibit guides visitors through the murky myths and fascinating facts that have surrounded sharks for centuries. It features a 45-minute multi-sensory immersive gallery experience using unique SENSORY4™ technology, and explanations and examinations of almost every aspect of the shark, from evolution and biology to popular culture and the fin trade. Visitors will gain a newfound respect for the ocean's oldest and most effective predator. Created by Grande Exhibitions.



Journeys: The Heritage of the Northwestern Hawaiian Islands
August 13, 2016 – January 29, 2017
J. M. Long Gallery

The Northwest Hawaiian Islands extend thousands of miles west of the main Hawaiian Islands. This part of the archipelago provides a vital connection to the cultural and natural history of Hawai'i. Experience the stark natural beauty and rich history of the islands with multimedia exhibits and hands-on interactives including an interactive map, a Battle of Midway flight simulator, and a virtual reef dive, along with dozens of rarely seen objects from our Cultural and Natural History collections.



Dora & Diego: Let's Explore!
October 22, 2016 – January 8, 2017
Castle Memorial Building

Get ready to explore with Dora and Diego at this new exhibit. It features the beloved characters from Nickelodeon's hit preschool series Dora the Explorer and Go, Diego, Go!, along with their friends Boots, Map, Backpack, Isa, Tico, and of course Swiper. Produced by The Children's Museum of Indianapolis in cooperation with Nickelodeon, the Dora and Diego: Let's Explore! exhibit is presented by the WellPoint Affiliate Foundation.



Dear Friends of Bishop Museum:



Allison Holt Gendreau

Aloha Kākou,

As you know, Bishop Museum recently celebrated a wonderful milestone in its 127-year history—the homecoming of the ‘ahu ‘ula and mahiole of High Chief Kalani'ōpu'u on long term loan through partnership with the Museum of New Zealand Te Papa Tongarewa and the Office of Hawaiian Affairs in March. Thousands of people gathered on opening day to be in the presence of these historic treasures, and spent hours waiting in line for their moment to offer mele, oli, and ho'okupu inside Hawaiian Hall. As people continue to pour in to the Museum to share in this momentous return, Bishop Museum's vital role in perpetuating culture and inspiring our community is undeniable.

Kalani'ōpu'u is a new chapter in Bishop Museum's evolving legacy—an unrivaled collection of over 26 million Hawaiian and Pacific artifacts, decades of scholarship and discovery, and educational programs which inspire and delight. Amongst the exciting new stories that lie just ahead, Bishop Museum will proudly unveil Journeys: The Heritage of the Northwest Hawaiian Islands exhibit on Saturday, August 13, 2016, which is the same day that we will celebrate our 18th Annual Bernice Pauahi Bishop Museum Dinner. Table sponsorships and strolling tickets are now available, and I hope you'll be able to join us in raising over \$500,000 to support Bishop Museum's Hawaiian and Pacific collections and come out to enjoy Bishop Museum at its very finest.

Of note, I'm also pleased to share that Bishop Museum welcomed Ku'ulei “Cissy” Farm on June 1 to the role of interim President and CEO, and that museum operations are running full steam ahead. Cissy comes to us from Goodsill Anderson Quinn & Stifel, a member of the Native American Graves Protection and Repatriation (NAGPRA) Review Committee, and serves on the board of the Historic Hawai'i Foundation. Farm received her J.D. from the University of Hawai'i Richardson School of Law, her B.A. from Scripps College and is a graduate of Punahou School, as well as a dedicated museum supporter. We are confident that Cissy will be a tremendous asset to the museum.

Finally, I'd like to take this opportunity extend a personal mahalo for your generosity and support of Bishop Museum in recent months and ask for your continued support of our museum at this important time to ensure that collections care and educational exhibits and programs that we've planned for this year can be realized. Please consider a gift to the Annual Fund, a donation to the Pauahi Dinner, or upgrading your membership support this month as a gesture of support. Mahalo nui loa for your continued support and confidence as we move our museum forward.

Mahalo nui loa,

Allison Holt Gendreau
Chairman of the Board



ABOVE | Marques Marzan, Museum cultural resource specialist, give a fan with the pattern of the Kalani'ōpu'u 'ahu 'ula woven into the design, to Arapata Hakiwai, Te Papa kaihautū, Maori co-leader. Photo courtesy of Te Papa Tongarewa.

BELOW | Opening of the Powhiri ceremony at the Museum of New Zealand, Te Papa Tongarewa. Image courtesy of Te Papa Tongarewa.





KA HO'IHO'I 'ANA

A MOMENTOUS JOURNEY HOME

"...We are only servants and a conduit to open a pathway so all the people of Hawai'i can share in the inspiration of an ancient king who comes alive for a new generation in 2016."

—Kamana'opono M. Crabbe, OHA Ka Pouhana/CEO

In a partnership between the Office of Hawaiian Affairs (OHA), The National Museum of New Zealand Te Papa Tongarewa, and Bernice Pauahi Bishop Museum, the 'ahu 'ula and mahiole of Kalani'ōpu'u have made a monumental journey back to Hawai'i from Aotearoa, where they have been in the collection of Te Papa for many years.

This past March, leaders from OHA and Bishop Museum traveled across the Pacific to Aotearoa on the occasion of the return and were greeted with Māori protocol and ceremony. With much gratitude and appreciation for Te Papa's loan of the feathered treasures, the Hawai'i delegation brought gifts to Te Papa, including a lau hala fan with the pattern of the 'ahu 'ula woven into it by Museum cultural specialist Marques Marzan.

Ceremonies continued in Hawai'i right up until the public opening of the exhibit on Saturday, March 19, to welcome the treasures and celebrate their momentous return with the community.

The mahiole and 'ahu 'ula are displayed on the first floor of Hawaiian Hall in the exhibit, He Nae Ākea: Bound Together.

Made possible by the generous support of:



FACING PAGE, TOP | Members from The Museum of New Zealand Te Papa Tongarewa, the Office of Hawaiian Affairs, and Bishop Museum gather at Te Papa for a group photo around the treasured items before they return to Hawai'i. Photo courtesy of Museum of New Zealand Te Papa Tongarewa.

FACING PAGE, BELOW | A Museum visitor at the public opening reverently gazes at the 'ahu 'ula of Kalani'ōpu'u. Visitors offered oli and ho'okupu to the returned treasures. Photo by Travis Okimoto.

LEFT, TOP | Kamana'opono Crabbe, OHA ka pouhana/CEO, speaks at the Powhiri ceremony at the Museum of New Zealand Te Papa Tongarewa. Photo courtesy of Museum of New Zealand Te Papa Tongarewa.

LEFT, CENTER | Hālau Mele perform a chant in honor of Kalani'ōpu'u at the public opening of the He Nae Ākea: Bound Together exhibit.

LEFT, BOTTOM | Crowds lined up outside Hawaiian Hall, some for over an hour, to see the returned 'ahu 'ula and mahiole of Kalani'ōpu'u. Photo by Kelli Soileau.



18TH ANNUAL BERNICE PAUHI BISHOP MUSEUM DINNER
SATURDAY | AUGUST 13, 2016

PROCEEDS BENEFIT BISHOP MUSEUM'S
HAWAIIAN AND PACIFIC COLLECTIONS

SPECIAL EVENT ■

OUR MUSEUM. OUR LEGACY.



PHOTOS COURTESY OF: DAVID FRANZEN, NOAA, AND THE MUSEUM OF NEW ZEALAND TE PAPA TONGAREWA.

We invite you to “dress for the journey” and join us for an elegant evening on the Great Lawn for the 18th Annual Bernice Pauahi Bishop Museum Dinner on Saturday, August 13, 2016. This festive evening gala has evolved in recent years to become a truly one-of-a-kind opportunity to experience Bishop Museum at its very finest, and to interact with the Museum’s collections, exhibits, staff, and volunteers through unique museum presentations created just for the occasion.

With your support, this event will raise \$500,000 for Bishop Museum through table sponsorships, strolling ticket sales, and our signature Auction Pacifica, featuring all things Pacific. Proceeds will benefit Bishop Museum’s Hawaiian and Pacific Collections.

EVENING HIGHLIGHTS

- 5:00 p.m. **Cocktails & Journeys**
Experience the Northwestern Hawaiian Islands (J. M. Long Gallery)
- 6:30 p.m. **Dinner & Entertainment**
Featuring Hawai‘i’s top chefs and musicians.
- 8:30 p.m. **Deep Dive**
Go deeper with Bishop Museum in Planet Shark: Predator or Prey (Castle Memorial Building)

RESERVE NOW

www.BishopMuseum.org/Pauahi

For personal assistance
(808) 848-4187 or development@bishopmuseum.org

TABLE SPONSORSHIPS

\$25,000 DIAMOND*

- ◆ Recognition as a Diamond Sponsor in printed event materials and during the program
- ◆ Premium seating, dinner service, and favors
- ◆ Wine Pairings, Champagne Pour and After Dinner Spirits

\$15,000 PLATINUM*

- ◆ Recognition as a Platinum Sponsor in printed event materials and during the program
- ◆ Preferred seating, dinner service, and favors
- ◆ Wine Pairings and Champagne Pour

\$10,000 GOLD*

- ◆ Recognition as a Gold Sponsor in printed event materials and during the program
- ◆ Reserved seating, dinner service, and favors
- ◆ Premium wine service

\$5,000 SILVER

- ◆ Recognition as a Silver Sponsor in printed event materials
- ◆ Table for 10 guests and a strolling dinner

STROLLING TICKETS

\$500 PER PERSON

Strolling dinner and wine bar, a wonderful choice for a fun evening with your special someone.

**Premier Table Sponsors also receive preferred valet service.*

DONATIONS

If you are unable to attend, please consider a cash or in-kind donation in support of this event.

You may also donate your table purchase to the Museum.

SILENT AUCTION

Our Auction Pacifica will feature all things Pacific— island getaways, excursions, Pacific apparel, dining, entertainment, and a wide array of Hawaiian and Pacific artwork and hand-crafted materials. Your in-kind donation can help bring the Auction Pacifica to life! Contact development@BishopMuseum.org or 848-4172.

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*Table sponsorships are tax-deductible less the fair-market value of goods and services received. Tables are limited.
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SINK YOUR TEETH INTO AN AMAZING "OUT OF WATER" SHARK EXPERIENCE

PLANET SHARK™

• PREDATOR OR PREY •
THE EXPERIENCE

JUNE 11 – SEPTEMBER 5, 2016 | CASTLE MEMORIAL BUILDING

Bishop Museum is excited to host a new multimedia exhibit exploring one of the world's most feared yet most misunderstood, predators in the world, Planet Shark: Predator or Prey. Whether sharks fill you with fear or fascination, you will be hooked from start to finish.

Leave the outside world behind as you dive into the incredible underwater world of sharks—without even getting your feet wet. Trace millions of years of evolution, come face-to-face with the great white shark, learn the true impact of the shark-fin trade, and gain newfound respect for the ocean's oldest and most effective predator.

Produced on a size and scale never seen before, the exhibit Planet Shark: Predator or Prey includes awe-inspiring shark models cast from real animals, an extraordinary collection of real teeth and jaws, and extremely old and rare fossils, some up to 370 million years old. Cutting-edge SENSORY4™ technology provides a walkthrough, multi-sensory cinematic experience that will leave you deeply immersed in the story of this magnificent animal.

This ground-breaking exhibition could not have come at a better time. Years of fishing pressure and media

misrepresentation have pushed the shark to the brink of extinction. Their last hope for survival lies with public education and awareness, and the launch of the exhibit Planet Shark: Predator or Prey is a vital first step. Don't miss out on this unique opportunity for young and old alike.

Exhibit elements include:

- A unique multi-sensory immersive, cinematic walkthrough experience
- Shark cages and authentic artifacts
- Stories about human/shark encounters
- Detailed examinations of shark size, biology, hunting strategies, and sensory systems
- Information on shark satellite-tagging programs and conservation efforts
- Interactive, educational displays, and entertaining hands-on experiences

To support Bishop Museum's Exhibition Fund make a donation online at www.BishopMuseum.org or contact the Development Department at (808) 848-4187 or development@BishopMuseum.org. Mahalo for your support.

Support for this exhibit has been provided by:



bloomingdale's



SENSORY4™
IMMERSIVE EXPERIENCE



Family Night on the Great Lawn!
Friday, June 10, 2016 • 6:00 – 9:00 p.m.

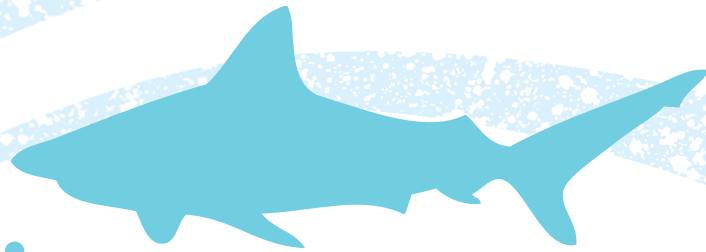
Come for an exclusive night of family fun on Bishop Museum's Great Lawn, with access to all galleries—Castle Memorial Building, Hawaiian Hall Complex, and the Science Adventure Center as well.

Bring your blanket and picnic fare, or buy something from the food trucks, and join us under the stars for a family night.

- Special preview of our featured exhibit, **Planet Shark: Predator or Prey**, in the Castle Memorial Building.
- Food trucks, music, activities, viewing of collection items, and freedom to also enjoy Hawaiian Hall and the Science Adventure Center.

RSVP by Wednesday, June 8, by calling 847-8380 or email membership@BishopMuseum.org.

Ki'ilani



From the M. W.
Beckwith Collection
of Notes

Hawaiian
Ethnological Notes
(HEN) Vol. 1, p. 1437



Kamohoali'i

Copied from one
of Kalākaua's
memorabilia scrap
books, pp. 32–34,
under Nā Manō o
Hawai'i Nei (The
Sharks of Hawai'i Nei).

Hawaiian Ethnological
Notes (HEN) Vol. 1,
pp. 702–703

ICHTHYOLOGY

DEEPLY UNIQUE:

ENDEMISM IN THE NORTHWESTERN HAWAIIAN ISLANDS

by Richard L. Pyle

The biodiversity of Hawai'i is special for many reasons. Perhaps the most important is that so many of the plants and animals native to the islands occur nowhere else on Earth. Scientists have a word to describe species that are unique to a particular location: *endemic*. Species that are endemic to Hawai'i are particularly important for conservation, because if they are threatened here, they are at risk of going extinct on a global scale. In addition to the many endemic plant and animal species on land, Hawai'i is also home to one of the highest rates of endemism on Earth among coral-reef fishes. If you swim across a coral reef in Hawai'i, nearly a quarter of the fish species you see are endemic to the Islands. The only other location on Earth that even comes close is tiny Rapa Nui (Easter Island).

Over the past 30 years, Bishop Museum researchers have pioneered the use advanced diving technology exploration to study coral-reef habitat at depths of 200–500 feet, far deeper than can be safely accessed using conventional SCUBA gear. One of the interesting and unexpected discoveries we've made is that as you go deeper on a coral reef, the proportion of endemic fish species increases.

Dr. Randall Kosaki, deputy superintendent of NOAA's Papahānaumokuākea Marine National Monument (which manages the protection of the Northwestern Hawaiian Islands), has led a collaborative effort over the past seven years along with researchers at Bishop Museum and the University of Hawai'i to explore and document the deep coral reefs within the Monument. This work not only found that nearly half of all fish species recorded on deep reefs are endemic (nearly double the rate of endemism compared with species on shallow reefs), but also that the rate of endemism increases as one moves farther northwest up the Hawaiian Archipelago.

During the most recent NOAA deep-diving cruise to the Northwestern Hawaiian Islands, we made one of the most exciting discoveries so far. On a series of dives to 300 feet (the deepest surveys yet completed



UPPER LEFT | Every fish in this photograph taken at a depth of 300 feet at Kure Atoll is endemic to the Hawaiian Islands.

ABOVE | Endemic species such as these (from left to right: wrasse, urchin, and damselfish) are found nowhere else on Earth.

BELOW LEFT | The Hawaiian grouper (hāpu'u; *Epinephelus quernus*) is one of the largest endemic fishes in the Hawaiian Islands. They can achieve lengths of about three to four feet.

Photos by Richard L. Pyle

within the Monument) at Kure Atoll, the farthest northwestern atoll in the archipelago, we documented the highest rates of marine endemism ever recorded. *One hundred percent* of the fishes recorded on the surveys were Hawaiian endemics! No other marine environment on Earth even comes close.

This extraordinary discovery has important implications both for the Northwestern Hawaiian Islands specifically, and deep coral reefs in general. Despite centuries of research and exploration, we continue to uncover incredible mysteries about the rich and unique biodiversity within our precious Islands.

Dr. Richard L. Pyle is associate zoologist in the Natural Sciences department at Bishop Museum.





INSET | Mokumanamana has the highest concentration of ceremonial sites anywhere in the Hawaiian archipelago. Photo by Kekuewa Kikilo.

THIS PAGE | Red-footed boobies sit atop a driftwood tree at Tern Island, French Frigate Shoals, Papahānaumokuākea Marine National Monument. Photo by Koa Matsuoka/NOAA Fisheries.

FACING PAGE | Black-footed albatross family on French Frigate Shoals, Papahānaumokuākea Marine National Monument. Photo by Mark Sullivan/NOAA Fisheries.



UPCOMING EXHIBIT ■

JOURNEYS

HERITAGE OF THE NORTHWESTERN HAWAIIAN ISLANDS

AUGUST 13, 2016 – JANUARY 29, 2017 | J. M. LONG GALLERY

Most think that when the sun sets over the island of Kaua'i, the day is done in the Hawaiian Archipelago. People don't realize that the island chain extends another thousand miles to the northwest, to a chain of small islands, atolls, and barely submerged reefs that were once—millions of years ago—tall, active volcanic isles.



This part of the archipelago, the Northwestern Hawaiian Islands, provides a vital connection to the cultural and natural history of the main Hawaiian Islands and is the subject of Bishop Museum's new exhibit, Journeys: Heritage of the Northwestern Hawaiian Islands.



LEFT | Nearly all Hawaiian green sea turtles go to French Frigate Shoals in Papahānaumokuākea Marine National Monument to nest. Photo by Koa Matsuoka/NOAA Fisheries.

MIDDLE | Each year, millions of Laysan albatross flock to Midway Atoll National Wildlife Refuge to nest. Photo by Kittipong.

RIGHT | Papahānaumokuākea Marine National Monument provides critical habitat for the endangered Hawaiian monk seal, like this juvenile resting on a beach at Tern Island, French Frigate Shoals. Photo by Mark Sullivan/NOAA Fisheries.

Centuries ago, native Hawaiians journeyed to these small remote islands, building shrines and agricultural terraces and creating works that seem, to many, unlike any found in the main Hawaiian Islands. Archaeological evidence of habitation comes from both Nihoa and Necker (Mokumanamana), the islands closest to the main Islands. It is thought that the numerous religious structures on Mokumanamana were related to navigation due to the island's proximity to the Tropic of Cancer, an important celestial marker to signal the changing of the seasons. The exhibit will highlight a number of objects that have never before been displayed by Bishop Museum, including a number of ki'i (carved figures) from Mokumanamana. Voyages to the Northwestern Hawaiian Islands in the nineteenth century were typically less conscientious than they are today. During this early period many of the islands in the chain were systematically exploited for resources like guano or seabird feathers and their fragile ecosystems were almost completely destroyed. Remarkably, some of the unique species of birds, plants, insects, snails,

and other animals that make these isles and atolls their home have managed to survive. In the twentieth century, repeated visits by scientists from Bishop Museum and other partnering institutions attempted to catalogue and understand these precious habitats. By the 1930s, trips to the Northwestern Hawaiian Islands were sometimes made via air and the exhibit will feature memorabilia from the "Golden Age of Air Travel," when Midway was a key stop on transpacific routes. The exhibit will also feature the story of the Battle of Midway, the turning point in the Pacific Theater in World War II. The islands from Nihoa to Kure were granted protected status as a bird reservation more than a century ago by President Theodore Roosevelt. In 2006, the Northwestern Hawaiian Islands were declared the nation's first Marine National Monument by President George W. Bush and a year later it was named Papahānaumokuākea. Recognized for its rich cultural and natural heritage, it was designated as a mixed UNESCO World Heritage Site in 2010.



Today, access to the Northwestern Hawaiian Islands is carefully managed to ensure lasting ecological and cultural integrity. Fortunately, visitors to the exhibit Journeys: Heritage of the Northwestern Hawaiian Islands can experience the stark natural beauty and rich history of the islands with multimedia exhibits and hands-on interactives including an interactive map, a Battle of Midway flight simulator, a virtual reef dive, and a life-sized, realistic Hawaiian monk seal statue, along with dozens of rarely seen objects from our Cultural and Natural History collections. To create this exhibit, Bishop Museum worked with a number of partners, including the co-managers of Papahānaumokuākea, which include agencies from the National Oceanographic and Atmospheric Administration (NOAA), the U.S. Fish and Wildlife Service (USFWS), the State of Hawai'i, and the Office of Hawaiian Affairs.

Mahalo to our contributors:



Kekuewa Kikiloi

UPCOMING EXHIBIT



LEFT | Red pencil urchin on a reef at Midway Atoll National Wildlife Refuge. Photo: James Watt/NOAA Office of National Marine Sanctuaries.

BOTTOM | Aerial image of Kure Atoll, the last emergent feature in the Hawaiian archipelago. Photo by RJ Shallenberger/USFWS.

Inspired and delighted by original Bishop Museum exhibits? Your generous gift to the 2016 Annual Fund is tax-deductible and will fuel new exhibits, shared collections, and great stories in the year ahead. Donate online at www.BishopMuseum.org.



Islands of Mystery

THE ARCHAEOLOGY OF NIHOA AND MOKUMANAMANA

Mai Kahiki mai ke kini o ke kua
From Kahiki came the multitude of gods



Scattered throughout the islands of Polynesia are thirteen islands that archaeologists refer to as “mystery islands.”

On these islands, early European visitors recorded cultural sites, but no inhabitants. The islands quickly became shrouded in mystery. Where were the people who built the cultural sites that dotted the landscape? Did they abandon the islands intentionally? Did they die out? Were the islands ever permanently inhabited?

Two of Polynesia’s “mystery islands,” Nihoa and Mokumanamana (Necker), are located in the Northwestern Hawaiian Islands. Although we know that Native Hawaiians visited these islands often, they were not permanently inhabited from the late 1700s onward. Visiting ships first recorded their locations in the 1780s. Captain J. A. King and his crew were sent by the Provisional Hawaiian Government to annex Mokumanamana in 1894. Members of the crew recorded stone platforms with upright stones and ki’i, or stone figures, some of which they collected, but they did not survey the island fully.

In 1923–24, Bishop Museum researchers, including ethnologist Kenneth P. Emory, embarked on the Tanager Expedition to explore the natural and cultural history of the Northwestern Hawaiian Islands. Emory’s goal was to record cultural sites on Nihoa and Mokumanamana. He recorded 66 sites on Nihoa, including houses and ceremonial platforms, as well as agricultural terraces. Based on the number of sites,

he estimated that at least 150 people may have lived on the island on a permanent or semi-permanent basis. On Mokumanamana, Emory encountered a very different cultural landscape. There, he recorded 33 ceremonial platforms with stone uprights, as well as eight bluff shelters and a few terraces. He suggested that this island was not permanently inhabited, but that it had served as a gathering place for carrying out religious rites. He also drew connections to ritual landscapes in the ancestral homeland of Tahiti.

More recently, archaeological research has continued on Mokumanamana and Nihoa. Kekuwa Kikilo, assistant professor of Hawaiian Studies at the University of Hawai’i at Mānoa and a research affiliate in Bishop Museum’s Cultural Resources Division, has been conducting archaeological research on the islands since 2002. His 2012 doctoral dissertation solved the “mystery” of the islands and explored their importance to sociopolitical development in ancient Hawaiian society and their significant cosmological role.

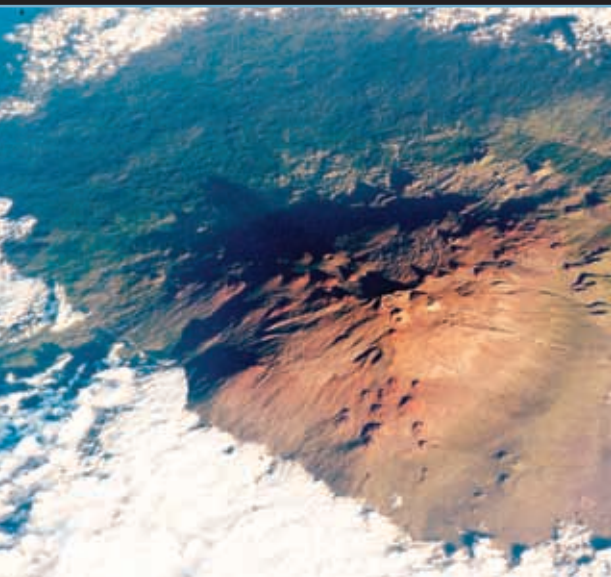
To learn more about Kekuwa Kikilo’s work, listen to a podcast of his Bishop Museum Traditions of the Pacific lecture entitled “The Archaeology of Nihoa and Necker Islands: Towards a New Understanding for Hawaiian Pre-Contact History” at: www.BishopMuseum.org/podcasts.

FACING PAGE, TOP | Four stone ki’i (carved images) from Mokumanamana (Necker Island) collected in 1894 and now in the Bishop Museum Ethnology collection. Photo ca. 1910.

FACING PAGE, BELOW | Nihoa island. Wikipedia Commons photo, Ryan Hagerty, USFWS Pacific Region.

TOP, LEFT | The reading of the proclamation of annexation by the Provisional Government of Hawai’i, Mokumanamana (Necker Island), May 27, 1894. From left to right: Mr. Gregory, Capt. J. A. King, Capt. Freeman of the Iwalani, and three sailors. This ceremony took place atop what was later called “Annexation Hill,” the highest point on Mokumanamana. Photo by Ben H. Norton, Chief Engineer of the Iwalani.

TOP, RIGHT | Kekuwa Kikilo, Bishop Museum research affiliate, visits the Anthropology lab to look at the objects that will be a part of the Journeys exhibit. Photo by Kelli Soileau.



CELESTIAL ISLANDS

Using NASA Earth Sciences to Reach Hawai'i's Educators and Students

ABOVE LEFT | This photograph of Mauna Kea was taken in November 2015 by an astronaut on board the International Space Station (ISS). The observatories on the summit appear as white dots. Image courtesy of the ISS Crew Earth Observations Facility and the Earth Science and Remote Sensing Unit, Johnson Space Center.

ABOVE RIGHT | NASA operates an array of Earth-observing satellites utilizing cutting-edge technologies. Illustration courtesy of NASA's Earth Observing System (EOS) Project Science Office.

BELOW | On September 2, 2015, the GOES-15 weather satellite captured this image of four storm systems simultaneously passing around Hawai'i—typhoon Kilo, hurricane Jimena, tropical storm Ignacio and tropical depression Fourteen E. Miraculously, the Islands were spared a direct hit by any of them. NASA Earth Observatory image by Jesse Allen with data from the NASA/NOAA GOES Project Science Team.

Last month Bishop Museum opened a new exhibit on NASA's Earth-observing system called Celestial Islands in the lobby of the J. Watumull Planetarium.

Everyone knows that NASA studies space; few people know that NASA also studies the Earth. Since the agency's creation over fifty years ago, NASA has been a world leader in space-based studies of our home planet. That spirit continues today as NASA launches and operates an array of advanced Earth-observing satellites, many developed through international partnerships.

Our new exhibit blends hands-on displays with content about NASA's "missions to Earth." Visitors can use a gravity well, four feet across, to see how an orbiting object's speed increases as it moves closer and closer to Earth. They can also experiment with an infrared camera to see how NASA gathers various information by tracking different wavelengths of light, or operate a robot arm to attempt to repair a satellite. In the weather-tracking area, visitors themselves create high- and low-pressure zones as they spin storms across the Pacific. The new exhibit also features models of and back stories on a wide array of NASA satellites and illuminates ways in which NASA explores the different spheres of the Earth—the atmosphere, hydrosphere, geosphere, and biosphere.

The new exhibit is funded by Bishop Museum's 2012–16 NASA award *Celestial Islands: Using NASA Earth Sciences to Reach Hawai'i's Educators and Students*. The

various products of this grant include:

- The NASA and Hawai'i-themed Earth System Science curricula that our NASA teacher team has created, which is now available online at <http://bishopmuseumeducation.org/>;
- Teacher's workshops in February and March 2016, where we shared that curricula with teachers across the state;
- The new onsite planetarium program "Eyes on Island Earth," which shows daily in the Science on a Sphere theater;
- A Digitalis portable digital planetarium dome that is taking the show "Eyes on Island Earth" to schools and science nights across the state.

Celestial Islands is part of NASA's Competitive Program for Science Museums and Planetariums, an important tool by which NASA shares its work and its science content with school children and the general public.



CONNECTING THE PAST WITH THE FUTURE:

IMPROVING ACCESS TO ARCHIVAL PHOTOGRAPHS ON RAPA NUI

by Mara Mulrooney

Within the walls of Bishop Museum's Archives lies the largest photographic collection from Oceania. Among these are well-known historical images depicting people and places from particular points in history. Many date to the early twentieth century, a time when Bishop Museum researchers were embarking on scientific expeditions across the region.

In 1934–35, Alfred Métraux, a French anthropologist, and member of the Franco-Belgian Expedition, traveled to Rapa Nui (Easter Island). After six months on the island conducting interviews and gathering information, he was awarded a Bishop Museum Fellowship to travel to Honolulu to write up his material and prepare his monograph, *Ethnology of Easter Island*, which was published by Bishop Museum Press in 1940. Following publication of the monograph, his field notes and photographs remained in the care of Bishop Museum.

Fast-forward to 2014, when Paula Valenzuela Contreras, director of Rapa Nui's Museo Antropológico Padre Sebastián Englert (Father Sebastián Englert Anthropological Museum) visited the Bishop Museum Archives looking for images to include in an upcoming exhibit. As we combed through the photographic collections, I was impressed by her ability to identify individuals in Métraux's eighty-year old photographs, and she told me that there were many photos she had never seen before. She also speculated that the community of Rapa Nui would be able to identify every single person in the photos if given the opportunity.

We then started thinking about how to improve access to the collections while also increasing knowledge about them. With assistance from staff members and interns in Bishop Museum's Library & Archives and Anthropology Departments, we inventoried and scanned the collections, which include over 300 photographs, just twenty-one of which were published in Métraux's monograph.

In February 2016, I traveled to Rapa Nui to share the collections with the local community and transferred the digital scans to the archives of the local museum. We invited the community to come to the museum to work together to identify the people



UPPER LEFT | Alfred Métraux's "Native boy with statues," 1934–35; Bishop Museum Archives. The boy has been identified as Santiago Pakarati Rangitaki. SP 18400.

ABOVE LEFT | Historian Cristián Moreno Pakarati (left) and Carlos Paoa Huke (right) identify the individuals in photographs during a public presentation at the local museum on Rapa Nui, February 25, 2016. Photo by Philipp Schorch.

BELOW | Alfred Métraux's "Natives in Sunday attire," 1934–35; Bishop Museum Archives. The riders have been identified as Daniel Chavez Manuheurora (nickname Poroni) and Isabel Haoa Araki (nickname Rita). SP 18396.

in the photos. The project is being carried forward by local collaborators Carlos Paoa Huke and Cristián Moreno Pakarati, who are working to compile all of the information. Once the project is completed, we will add the identifications to the existing inventories at both museums so this valuable information is not lost to history. Looking forward, we also hope to publish a book that includes the entire photographic collection.

Dr. Mara Mulrooney is an anthropologist at Bishop Museum. She specializes in Pacific archaeology and leads current projects in Hawai'i and Rapa Nui.



Kamehameha Federal Credit Union Membership: AN ADDED MEMBER BENEFIT



Thanks to the efforts of the Bishop Museum Association Council, Bishop Museum members are now eligible to join the Kamehameha Federal Credit Union (KFCU) effective June 1, 2016. KFCU shares with Bishop Museum the legacy of honoring Bernice Pauahi Bishop and has proudly served the financial needs of employees, alumni, students, and families of Kamehameha Schools and Bishop Museum since 1957.

As our friendly hometown neighbor, KFCU will extend benefits such as free online banking, keiki savings, auto loans, and personal loans and other benefits to Bishop Museum members. In addition, KFCU also provides real estate loans and home equity lines of credit.

Kamehameha Federal Credit Union also plays a vital role in giving back to its community in a number of ways and is a contributing sponsor of Bishop Museum's upcoming exhibition, Planet Shark: Predator or Prey, open this summer from June 11 through September 5, 2016.

"Building strong community bonds is a KFCU core value," said Stephen Hatakeyama, KFCU president and CEO, "and we are excited to partner with an institution with values that are in line with our own."

It is evident that KFCU is comprised of people who care deeply about the community they serve, providing beneficial resources to families and enriching their lives through family-oriented sponsored events. This is perhaps why the KFCU motto, "E Kōkua Pākahi Kākou: We Help Each Other," is a statement that both KFCU and Bishop Museum can work together to uphold.



Mahalo to Our Supporters!

On behalf of the Board of Directors, staff, and volunteers of Bishop Museum, we wish to recognize and thank those who contributed to Bishop Museum between January 1, 2016 and March 31, 2016. Mahalo for your support of the Museum.

Kamehameha Federal Credit Union is conveniently located in the Kamehameha Shopping Center. Bishop Museum members need only show their membership card to join.

*You can reach them at
(808) 000-0000 or
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Te Papa chief executive Rick Ellis, Gloria Hakiwai, Bishop Museum Board Chairman Allison Holt Gendreau and Te Papa collections manager Grace Hutton at the donor preview of He Nae Ākea.

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Student Body President of Kamehameha Middle School, Taylor Cox, with her family after she gave a speech in honor of Museum founder Charles Reed Bishop in celebration of his birthday in January.



Island Princess Candies at the member preview of the exhibit Sweet: A Tasty Journey gave out samples and coupons.



Candy lei making activity at the Sweet: A Tasty Journey exhibit member's preview.



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As “The Museum of Hawai‘i,” Bernice Pauahi Bishop Museum’s mission is to be a gathering place and educational center that actively engages people in the presentation, exploration, and preservation of Hawai‘i’s cultural heritage and natural history, as well as its ancestral cultures throughout the Pacific.

Bishop Museum is open daily, 9 a.m. – 5 p.m.
Closed Thanksgiving and Christmas Day.

Admission:

Adults	\$22.95
Seniors (65+)	\$19.95
Youth (4 – 12)	\$14.95
Children (3 and Under)	FREE
Bishop Museum members	FREE

Kama‘āina and military rates available. Admission fees include guided tours, live demonstrations, music and dance performances, select planetarium shows, and admittance to all exhibits, including the Richard T. Mamiya Science Adventure Center. For more information or the current daily schedule, please call (808) 847-3511 or visit our website at www.BishopMuseum.org.

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HAWAII’S GOOD GUYS | BAD GUYS

Good Guy: Bluestripe butterflyfish (*Chaetodon fremblii*), Kīkākāpu

With a scientific species name that rhymes with “friendly eye,” this is one of the more unusually-colored butterflyfishes. Most members of this family feature patterns of yellow and black accented with white, but the electric-blue stripes of the bluestripe butterflyfish set it apart from others. In fact, this species of butterflyfish is truly set-apart from the rest of the members of its family because it is found nowhere else on this planet and its closest genetic relative is unknown. The bluestripe butterflyfish thrives in the Hawaiian Islands, feeding mostly on marine invertebrates (tube-worms, coral polyps, and small crustaceans) while avoiding predatory fishes like moray eels. Bluestripe butterflyfish are more common in rocky, shallow coral-strewn areas, but they have also been recorded at great depths (200–600 feet). Their maximum size is about six inches, but they commonly range from four to five inches.

Butterflyfishes are among the most diverse families of reef fish, and are widely distributed throughout the Indo-Pacific region wherever coral reefs flourish. It is likely that the many different kinds of butterflyfishes evolved at the same time that corals developed and spread through tropical



seas. Their common name, butterflyfishes, comes from the impression they give of flitting through coral reefs like butterflies through shrubbery. That habit and their usually bright colors and squarish body-shape distinguish them from most other reef fishes.

Visit the [Hawai‘i Biological Survey list of Good Guys & Bad Guys at hbs.BishopMuseum.org/good-bad/list.html](http://hbs.BishopMuseum.org/good-bad/list.html).

Kū’ono’ono ka lua o Kuhaimoana.

Deep indeed is the cave of Kuhaimoana.

Said of a prosperous person. The cave of Kuhaimoana, a shark god, is at the islet of Ka‘ula.

Selection no. 1923 from Mary Kawena Pukui’s ‘Ōlelo No‘eau: Hawaiian Proverbs and Poetical Sayings, Bishop Museum Press, 1983.