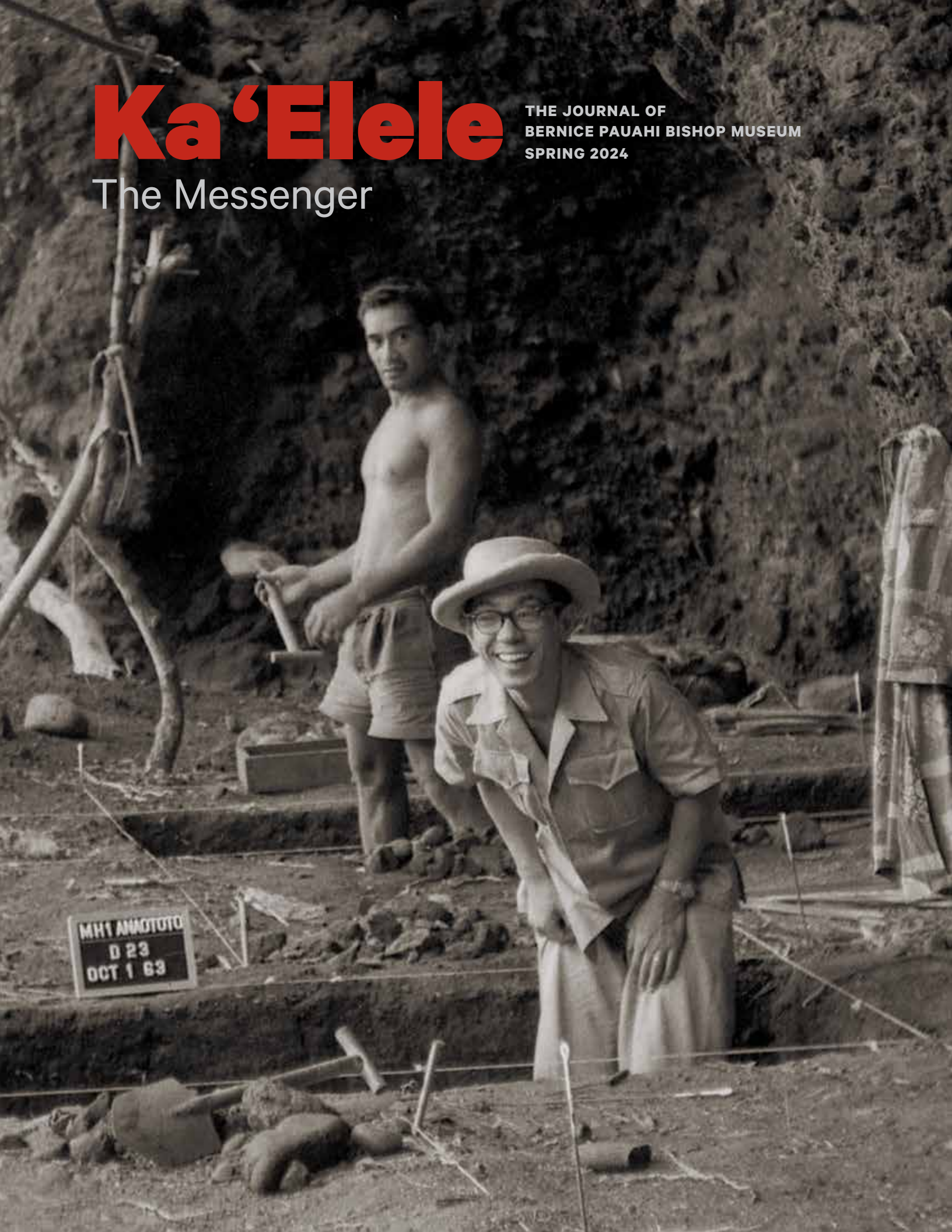


Ka'Elele

THE JOURNAL OF
BERNICE PAUHI BISHOP MUSEUM
SPRING 2024

The Messenger



Exhibitions

Through September 15, 2024

Corned Beef & Kalo

J. M. Long Gallery

This exhibit features *Pisupo lua afe* (Corned Beef 2000) by Michel Tuffery, and *KALO* by Bernice Akamine. It brings together these iconic works of contemporary art to consider how artists make visible issues related to agricultural subsistence, environmental sustainability, and everyday life where food imports and structured land use intertwine.

May 25, 2024 through January 19, 2025

Ka ‘Ula Wena: Oceanic Red

Castle Memorial Building

This is an original Bishop Museum exhibition that explores manifestations of red in the landscapes, memory, and created expressions of Oceania. *Ka ‘Ula Wena* originates in Hawai‘i, but we reach out to embrace our cousins across the vast Moananuiākea.

Events

MONTHLY

Second Friday | May 10, July 12, August 9, September 13, October 11, November 8

Museum After Hours

5–9 p.m.
Campuswide

Third Friday | May 17, June 21, July 19, August 16, September 20, October 18, November 15

The Stars Tonight

7–8 p.m.
J. Watumull Planetarium

MAY

Friday | May 10

Museum After Hours: Traditions of the Pacific

5–9 p.m.
Campuswide

Wednesday | May 15

Navigating by the Stars: Kaiwikuamo‘o

7–8 p.m.
J. Watumull Planetarium

Friday | May 17

The Stars Tonight

7–8 p.m.
J. Watumull Planetarium

KA ‘ELELE | Summer 2023

Publication Coordinator
Jon Asato

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Krystal Kakimoto

Stephanie Lambert
Pūlama Lima
Amy Matsunaga

Kaelyn Okuhata
PingFang Wang
Ken Yatomi

COVER | Dr. Yosihiko Sinoto enthusiastically leads an excavation at the Anaototo rock-shelter in Atuona Bay, Hiva Oa, Marquesas, 1963. Photographer Unknown.

Events

MAY (CONTINUED)

Friday | May 24

Ka ‘Ula Wena: Oceanic Red Grand Opening

5–9 p.m.

Saturday | May 25

Ka ‘Ula Wena Opening Weekend Programs

10 a.m.–5 p.m.

JUNE

Saturday | June 15

Celebrate Micronesia Festival 2024

9 a.m.–3 p.m.

Friday | June 21

The Stars Tonight: Trivia Dome

6–7 p.m. and 7:30–8:30 p.m.
J. Watumull Planetarium

JULY

Friday | July 12

Museum After Hours: Makahiki o nā Manu Nahele

5–9 p.m.
Campuswide

Friday | July 19

The Stars Tonight

7–8 p.m.
J. Watumull Planetarium

Tuesday | July 31

Celebrating Lā Ho‘iho‘i Ea

5–9 p.m.

AUGUST

Friday | August 9

Museum After Hours: Remembering Lahaina

5–9 p.m.
Campuswide

Friday | August 16

The Stars Tonight

7–8 p.m.
J. Watumull Planetarium

Wednesday | August 21

Navigating by the Stars: Mānaiakalani

7–8 p.m.
J. Watumull Planetarium

SEPTEMBER

Friday | September 13

Museum After Hours

5–9 p.m.
Campuswide

Friday | September 20

The Stars Tonight: Trivia Dome

6–7 p.m. and 7:30–8:30 p.m.
J. Watumull Planetarium

Saturday and Sunday | September 21 and 22

Honolulu Intertribal Powwow

Campuswide

OCTOBER

Friday | October 11

Museum After Hours

5–9 p.m.
Campuswide

Friday | October 18

The Stars Tonight

7–8 p.m.
J. Watumull Planetarium

NOVEMBER

Friday | November 8

Museum After Hours

5–9 p.m.
Campuswide

Friday | November 15

The Stars Tonight

7–8 p.m.
J. Watumull Planetarium

Wednesday | November 20

Navigating by the Stars: Kalupeakawelo

7–8 p.m.
J. Watumull Planetarium

Tuesday | November 28

Lā Kū‘oko‘a

6–9 p.m.
Hawaiian Hall

For details and program registration
visit bishopmuseum.org/events

Aloha & Mahalo



Aloha Friends and Family of our Bishop Museum,

It's Spring and it IS busting out all over! Everyone is busy! Our lives at Bishop Museum are no different, as we plan and work with "great industry"—as our founders would say!

In my last *Ka 'Elele* message, I shared about our active learning environments at the Museum, staffed by incredible people every day. This *Ka 'Elele* edition shares such a story about invasive corals right here in Pearl Harbor and how our Holly Bolick is working with state and federal partners to prevent these organisms from spreading and damaging our fragile ocean environments. During a recent survey trip in Kohala, Hawai'i, Ken Hayes rediscovered a very rare snail, *Auriculella armata*, unseen for 15 years!

Yes, we are busy, and soon we will be even busier! The year 2024 begins with housekeeping in mega proportions. Everywhere we look we are fixing things — leaking roofs, rusted walkways, and failing air conditioners. We are adding long-needed fire protection for our collections and breaking ground for a new collections warehouse on campus. As we inventory our collection, we are in the process of digitizing our 25 million objects and specimens. We are even working on cleaning up Bishop Hall to allow for future planning on restoration.

We have been waiting to do this critical work for a very long time, and now we can begin, thanks to wise investors who know the value we bring to the State, the Pacific, and the World. Our donors, grantors, and our State (our legislators and our Governor) have given us much needed funding to give us a strong foundation to stand on and confidence to fly. We thank such believers in our Mission and the 'ohana that fulfill it everyday.

Dee Jay Mailer
President & CEO

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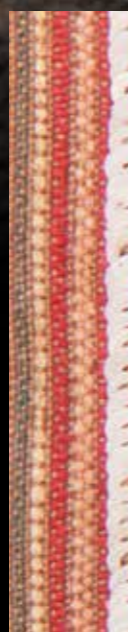
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Poho pōhaku; Hawai'i.
02981. Photo by Brandon Ng.



Ka 'Ula Wena

OCEANIC RED

'O Ka 'Ula Wena: Oceanic Red, aia ana nō mai ka lā 25 o Mei 2024 a ka lā 19 o Ianuali, 2025. He hō'ike hou kēia na ka Hale Hō'ike'ike 'o Bihopa no ka 'ula e like me kona 'ano ma ka 'āina, ka hali'a, me nā hana a ko Moananuiākea. 'O Hawai'i nō ke kahua o Ka 'Ula Wena, a ke kono aku nei mākou me ke aloha i nā lāhui pili mo'okū'auhau o Moananuiākea!

'O "ka 'ula wena" ho'i, he 'ula e weweo ana me he kapa pa'i'ula lā i hohola 'ia maila ma luna o ka 'āina i ka puka 'ana mai o ka lā i Kumukahi, ka pe'a kaulana i ka hikina o nā moku. 'O ka ikaika ia o ka lā nui a Kāne, i māhuahua a'e i loko o nā lā'au o ka 'āina a me nā holoholona āna e hānai ai. He 'ula kēia ua 'ikea i loko o ka mele a me ka mo'olelo, a i waena ho'i o nā pilikana. Kinikini hōkū ka nui o nā 'ula like 'ole o kākou. 'Ikea ka 'ula ma ke kino, ka na'au, ka pili 'ohana, a me ke aloha wela-wela. Ma ona lā nō e kapu ai ka mea kapu, a waiho ka'awale 'ia ai ho'i ka mea noa.

Ke ho'ohiwahiwa a'e nei 'o Ka 'Ula Wena: Oceanic Red i nā 'ula like 'ole o Moananuiākea, pū nō me ka 'ula o ko kākou pilina.

Ka 'Ula Wena: Oceanic Red, to be held May 25, 2024–Jan. 19, 2025, is an original Bishop Museum exhibition that explores manifestations of red in the landscapes, memory, and created expressions of Oceania. Ka 'Ula Wena originates in Hawai'i, but we reach out to embrace our cousins across the vast Moananuiākea.

The phrase "ka 'ula wena" refers to a glowing red, one whose warmth envelops Hawai'i each day, first at Kumukahi, the storied easternmost point of the islands. It is the strength of the sun but also the bounty of reds found in the plants and animals it nourishes. Ka 'ula wena is a red experienced beyond seeing. This redness is felt in mele (song), mo'olelo (stories), and the wena (warmth) of kinship. Red conveys a constellation of ideas densely populated by meaning. Red, beyond color, shade, or hue, elevates the senses, shifts emotions, affirms kinships, enlivens passions, consecrates the sacred, and sets apart the profane.

Ka 'Ula Wena: Oceanic Red celebrates the distinctly unique reds of Oceania and the redness of our connection.



LEFT TO RIGHT

Moka kina; Mount Hagen, Western Highlands, Papua New Guinea. 1989.400.0204. Photo by David Franzen.

Tevau; Solomon Islands. 1989.258.001. Photo by David Franzen.

Dohr; Pohnpei, Caroline Islands. 03360. Photo by David Franzen.

Saqa Moli; Fiji. 06974. Photo by David Franzen.



Dr. Sinoto excavating a wooden patu at Vaito'otia, Huahine in 1973.

Celebrating 100 Years

Digitizing Dr. Yoshihiko H. Sinoto's Archaeological Archives

Dr. Yoshihiko H. Sinoto, a luminary in the field of archaeology, has left an indelible mark on our understanding of Pacific history through his groundbreaking research. As we celebrate Dr. Sinoto's 100th birthday this year, the Archaeology department reflects on the legacy of his work, and the Museum's digitization efforts to share and preserve Dr. Sinoto's archaeological archives. Serving as the Chairman of Bishop Museum's Anthropology department from 1970 to 1989, Dr. Sinoto was instrumental in laying the foundations for archaeological research in the Pacific.

Among his contributions was the development of archaeological models that illuminated the epic voyages of Pacific Islanders as they traversed Moananuiākea. His analysis of fishhooks remains a landmark endeavor, providing a crucial framework for the ongoing research of Oceanic material culture. Dr. Sinoto also played a pivotal role in Historic Preservation programs in Hawai'i and the Society Islands. His leadership extended beyond the academic realm, leaving an enduring impact on the preservation of cultural heritage.

Today, Bishop Museum's Archaeology Department is undertaking a large scale, multi-year project to digitize Dr. Sinoto's research archive. This ambitious work is part of the Museum's Digital Futures Initiative and is indicative of our commitment to maintaining and enabling access to archival materials for generations to come. This three-pronged project focuses on Dr. Sinoto's field notebooks, binders, and images so that we can digitally retain research materials relating to his extensive career.



The Field Notebook Project is a top priority, as the notebooks are a testament to Dr. Sinoto's meticulous approach to documentation. Dr. Sinoto ordered specialized field notebooks crafted specifically to record archaeological projects undertaken by the Museum. Dr. Sinoto and other Bishop Museum archaeologists filled more than 530 notebooks, stamped and embossed with unique numbers, that have since been used extensively as critical reference material for research and publications. Unfortunately, the paper used in these notebooks were not as durable as they were expected to be. Over time, the pages have begun to flake and crack, posing a risk of losing such valuable information. To counter this, PingFang Wang, a conservator and collections manager in the Cultural Resources division, has employed innovative techniques to stabilize the fragile pages, making it possible for them to be digitized. To date, 329 notebooks have been digitized, ensuring the preservation of this information before it is irretrievably lost.

The Binder Digitization Project complements the Field Notebook Project, and involves digitizing thousands of pages of field forms, specimen records, catalog cards, and photo logs from archaeological field work led by Dr. Sinoto. Heading this work is Shoko Hisayama, a collections technician in the Archaeology Department. Shoko collaborates with volunteers Muffet Jourdane, Toni Han Palermo, and Eric Komori, all of whom were former mentees of Dr. Sinoto. Together, they are digitizing over 130 color-coded binders linked to Dr. Sinoto's projects. Approximately 3,600 pages from 22 binders have been scanned. This will provide researchers with easier access to information in the future.

The Slides/Negatives Project is the third aspect of this comprehensive digitization effort. Twelve filing cabinet drawers filled with thousands of color slides and black-and-white negatives from Dr. Sinoto's projects await digitization. This image archive is a visual record of his extensive research and includes photographs of field work, sites, and artifacts.

In collaboration with the Informatics department, these digitized materials will migrate to the Museum's centralized database, as part of Bishop Museum's commitment to stewarding collections, conducting collections-based research, and sharing knowledge around those collections with communities. In undertaking this digitization project, Bishop Museum's Archaeology Department not only pays homage to Dr. Yoshihiko H. Sinoto's legacy but also ensures that future generations of researchers can access, study, and build upon his work in the field of Pacific archaeology.



ABOVE
Anthropology Field Notebook No. 92 used by Dr. Sinoto to record his excavations at Reao in the Tuamotu Islands.



ABOVE
Collections Manager, PingFang Wang, preparing a field notebook page for digitization.

LEFT
Toni Han Palermo, Shoko Hisayama, and Eric Komori working in Dr. Sinoto's office on the Binder Digitization Project.

FROM MAU KA LEO:

The “Aloha Kou” Ipu Lē‘ī

By Marques Hanalei Marzan; Kamalu du Preez; Emma Bornstein; Library & Archives

OPPOSITE, TOP

Ipu lē‘ī named “Aloha Kou.” The bowl-shaped base is made of wood and the cover is fashioned from a gourd; a label written in ‘ōlelo Hawai‘i is affixed to each. Bishop Museum Ethnology Collection, Queen Emma Collection. 00541. Photo by Brandon Ng. Bishop Museum Archives. Q 216737.

OPPOSITE, BOTTOM LEFT

Gourd cover of ipu lē‘ī with label written in ‘ōlelo Hawai‘i. Bishop Museum Ethnology Collection, Queen Emma Collection. 00541. Photo by Brandon Ng. Bishop Museum Archives. Q 216743.

OPPOSITE, BOTTOM RIGHT

Wooden bowl base of ipu lē‘ī with label written in ‘ōlelo Hawai‘i. Bishop Museum Ethnology Collection, Queen Emma Collection. 00541. Photo by Brandon Ng. Bishop Museum Archives. Q 216742.

This ipu lē‘ī (fishhook container) is from the collections of Queen Emma. Affixed to the base and lid is a beautiful set of labels, handwritten in ‘ōlelo Hawai‘i (Hawaiian language). Each label features the heading: “From H. M. Queen Emma,” as well as the ipu lē‘ī’s name: “Aloha Kou.”

Typically, a container like this would have been used to store hooks and lines while fishing. It was suspended in a net for carrying and was designed to float if dropped in the water.

Most likely, this ipu lē‘ī came to the Museum with the labels already attached. However, we cannot know for certain who wrote them. Does the cursive handwriting belong to the ali‘i herself, or an individual of her household? Additionally, the labels are too damaged to be read in their entirety. But some remaining words, like place names (Kamuku, Makaka, Ahulua), offer clues about the full text.

Recently, one of our Library & Archives staff members noticed that the larger label resembles a mele from the legend of Kawelo, which was first printed in the Hawaiian newspaper *Ka Hoku o ka Pakipika* in 1861. In the story, Kawelo travels to Kaua‘i, his birthplace, to fight an oppressive chief, leaving his wife Kou behind on O‘ahu. As he sails away, the hero expresses his love in a chant, recounting places where he and Kou spent time together:

**Aloha Kou e aloha Kou,
Ke aloha mai nei Kou ia‘u,
Ka hoa haele i ka makani,
I ka apaapaa anu o Ahulua ne—i,
E ualo mai ana ia‘u na niu hea o Pai,
E [e]naena mai ana i kuu maka,
Ke aa o Kuamanuunuu.
I-i au, e kii e kui e lei,
Na akulikuli papa o Huia nei la—e,
E ualo mai ana.**

(Mele translation from Fornander, 1918)

*Farewell to thee, Kou; farewell, Kou.
The love of Kou is within me,
My companion of the windy days
And the cold of Ahulu[a].
The coconut trees at Pai are calling me back;
They appear as raging fire to my eyes,
Like the volcanic rocks at Kuamanuunuu.
I am tempted to get them, to string them and to wear them,
The akulikuli blossoms there at Huia,
For they are calling me back there.*

Last year, Bishop Museum launched *Mau ka Leo*, an online storytelling space that documents, shares, and preserves the vital knowledge and multigenerational stories around the Museum’s collections. Featuring staff and community voices, *Mau ka Leo* offers meaningful access to the Museum’s digitized collections, allowing the exploration of the living cultures of Hawai‘i and the Pacific from anywhere in the world.

The stories in *Mau ka Leo* often reveal unexpected connections between items in Bishop Museum’s care,

as well as the interconnectivity of land, people, customs, and contemporary experience. The story featured here — about an ipu lē‘ī (fishhook container) from the Queen Emma Collection—is the collaborative work of multiple Bishop Museum staff members and departments. It shows how conversations and knowledge-sharing across disciplines can deepen our understanding of material culture. Readers can explore more of this and other stories at BishopMuseum.org/MauKaLeo. To suggest stories you’d like to see next, please fill out the Provide Feedback form on *Mau ka Leo*.

Support for Mau ka Leo is provided by the National Endowment for the Humanities American Rescue Plan: Humanities Organizations program (ZDH-283709), and through generous donations to the Museum’s Digital Futures Initiative.

A Collaboration of Storytelling



The ipu lē'i's possible connection to this mele is thought-provoking. Was the person who gifted the container inspired by the figure of Kawelo, a skilled fisherman as well as a great warrior? Were they inspired by the hero's love for his wife, or his nostalgia for homeland? Whatever the answer, we can appreciate the sentiments of aloha that are preserved in this piece.

References:

Fornander, Abraham. *Fornander Collection of Hawaiian Antiquities and Folk-lore*. Vol. 5. Honolulu: Bishop Museum Press, 1918.

Kawailiula, S. K. "Moolelo no Kawelo. Helu 3." *Ka Hoku o ka Pakipika*, Volume 1, Number 3, October 10, 1861



Mau ka Leo: After Fishing

By DeSoto Brown and Emma Bornstein





This photo was taken after a fishing excursion along a rural O‘ahu coastline (possibly on the Mokulē‘ia side of Ka‘ena Point) between 1953 and 1956. The group’s catch-of-the-day — held by the man in the center — is a kūmū, or whitesaddle goatfish. This endemic fish is highly prized as a food source and is used in religious ceremonies.

This picture also highlights innovations in fishing tools. On the left, the man in the hat is holding a speargun. On the ground at right are black rubber swim fins — a fairly new invention at the time.

The fishermen’s cars are probably Chevrolets, identifiable by appearance, but also because that was the most popular make of car in Hawai‘i at that time.

Photo by Oscar Wikeen, Bishop Museum Archives. SXS 14304.

See more photos like these online at bishopmuseum.org/maukaleo

CORNERED BEEF & KALO

J.M. Long Gallery | March 9–September 15, 2024

By Healoha Johnston

RIGHT

Bernice Akamine, *KALO*, 2015 (detail). Ink, newsprint, pōhaku (stone). Bishop Museum, 2021.077.001 a,b

Corned Beef & Kalo brings together two iconic works of contemporary art to consider how artists make visible issues related to agricultural subsistence, environmental sustainability, and everyday life, where food imports and structured land use intertwine. *Pisupo lua afe* (*Corned beef* 2000) by Michel Tuffery is on loan from Te Papa, and is featured alongside Bernice Akamine's *KALO*, a relatively recent addition to Bishop Museum's permanent collection.

The term “food sovereignty” gained recognition at the World Food Summit in 1996, when farmers mobilized together to oppose agricultural trade policies that marginalized local foodways in favor of global networks. This collective action was indicative of many localized efforts around the world to maintain traditional ecological knowledge, invest in the health of natural resources, and grow food in a manner that is beneficial at the community level. A primary aspect of what has since been referred to as a food sovereignty movement is an increased understanding that people affect the environment, and the environment affects us in a shared ecology.

The ways in which people around the world approach this interconnectedness between humans and nature, as well as food sovereignty issues, are often the result of worldviews that are supported by government policies. Food as medicine, as ancestor, as an indication of political autonomy is central to many cultural identities, in part because of the environmental knowledge that is passed down from one generation to another, allowing the connection between people and place to continually flourish.

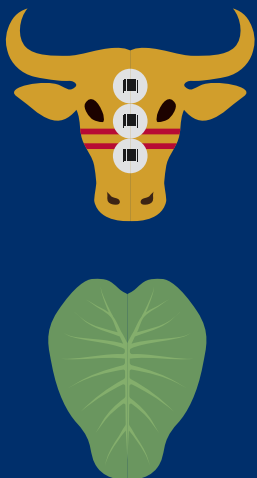
In *Pisupo lua afe* (*Corned beef* 2000), Tuffery grapples with the convergence of everyday consumer items, customary practice, and commercialized foodways in the Pacific. Tuffery transforms common, disposable convenience food packaging into art materials, and allows viewers to see in vivid detail the manufactured aspect of processed meats as printed on the label. Bar codes stamped on the cans punctuate this sculpture and draw our attention to the way products such as corned beef are widely circulated as global commodities. These details illuminate the way many people today are made aware of the nutrients we eat — by reading labels attached to food containers purchased from grocery stores.

Akamine's *KALO* installation features pages from what are widely known today as the Kū'e Petitions of 1897–98.



The combination of pōhaku and newsprint as art materials makes direct reference to many aspects of the 19th-century Aloha 'Āina movement, which was focused on maintaining Hawai'i's sovereignty as an independent country. Akamine's use of newsprint as the surface upon which to reproduce the Kū'e Petitions alludes to 19th-century Hawaiian-language newspapers and the role newspapers played in Hawai'i's anti-annexation efforts. Together, Bernice Akamine and Michel Tuffery bring our attention to the way a society's worldviews and governments inform everyday actions within larger food systems.

Corned Beef & Kalo, featuring the work of artists Bernice Akamine and Michel Tuffery, has been developed in partnership with Ed “Makahiapo” Cashman, Director of Ka Papa Lo'i 'o Kānewai at Hawai'i inuiākea School of Hawaiian Knowledge, University of Hawai'i at Mānoa, in conjunction with the Mālama Hāloa Kalo Festival & Symposium 2024 and the Festival of Pacific Arts & Culture 2024.





Documenting Ocean Biodiversity with Advanced Technology

Introducing EXCORE

It's often said that one cannot effectively protect what one does not fully understand. Documentation of biodiversity within nature is fundamental to understanding what we need to protect. This is the basis of the Center for the Exploration of Coral Reef Ecosystems (EXCORE) at Bishop Museum, led by Richard Pyle, Brian Greene, Cassie Ka'apu-Lyons and Ken Longenecker. EXCORE, decades in the making, began right here at Bishop Museum...

In 1946, a 22-year-old student at UCLA with a passion for marine biology purchased an early SCUBA rig at an Army-Navy surplus store. Although he didn't know it at the time, that marked John E. "Jack" Randall's first step towards becoming the greatest ichthyologist in history.

Jack Randall went on to spend most of his professional career as the senior Ichthyologist at Bishop Museum. During his lifetime, Randall discovered, documented, and named over 800 new species of fishes, and it is unlikely that this achievement will ever be matched. He led the way in underwater photography and invented a method of imaging fish specimens.

As successful as Jack was, SCUBA limited the depths to which he could descend. Twenty years later, Richard Pyle and Brian Greene became students and protégés of Jack Randall. Under his mentorship at Bishop Museum, they began a multi-decade effort to develop and refine equipment and protocols incorporating advanced diving technologies like rebreathers and digital imaging to document coral reefs at depths far deeper than what Jack could access using SCUBA. In doing so, they've played an important role in awakening the scientific community to the diversity and ecosystems inhabiting coral-reef habitat at depths down to 150–200 meters.

Along with Rich and Brian's ongoing work, the research and exploration continues. Bishop Museum researcher Cassie Ka'apu-Lyons, who began working at Bishop Museum in 2022, is completing her doctorate degree at the University of Hawai'i's Hawai'i Institute of Marine Biology, studying fish larvae — early life-stage fishes that drift with the plankton. Taking advantage of the latest in molecular analysis technologies, she is revealing new insights into long-standing mysteries about this enigmatic part of nearly all marine fishes. Ken Longenecker, who has worked at the Museum since 2004, is developing the use of sophisticated 3D stereo camera systems to record detailed information on the life-history of reef fishes, in order to assist local fishing communities throughout the Pacific to manage their fishery resources more effectively.

Marine habitats, and especially coral-reef ecosystems, remain poorly understood, with thousands of species yet to be discovered. We are in a race to discover and document biodiversity inhabiting the unexplored 85% of global coral reefs, and answer questions about the capabilities of marine organisms before this precious global resource is lost forever. A new paradigm for undersea exploration is needed to accelerate the pace of biodiversity discovery and documentation to maintain any hope of winning this race.

Building upon the pioneering work of Jack Randall, the Center for the Exploration of Coral Reef Ecosystems (EXCORE) at Bishop Museum is focused on systematically and comprehensively documenting marine biodiversity across the vast Indo-Pacific Region using a wide range of advanced technologies. Additionally, EXCORE is engaging the public through education and outreach programs that emphasize the importance of understanding these critical and imperiled habitats.

Bishop Museum has partnered with a company that develops advanced autonomous robots for NASA intended to explore oceans on moons of Jupiter and Saturn, to modify them to help explore and document deep coral reefs. The modified robot, known as the Coordinated Operational Platform for Underwater Science (COPUS) will generate high-resolution 3D maps of undersea habitats, capture stunning high-resolution images, and collect water samples for DNA analysis to discover which species occur nearby (known as "environmental DNA," or "eDNA" analysis).

**Learn
more about
EXCORE in
coming issues
of Ka 'Elele!**

KEEP SEARCHING

A story of expeditions, rediscovery, and hope.

By Kenneth Hayes,
Samantha Shizuru,
and Norine Yeung

The six biologists sat around the camp that night before their last full day at 'Ua'u Camp, in the Pu'u o 'Umi Natural Area Reserve (NAR; Figure 1) on Hawai'i Island, discussing where they would do their final survey before helicoptering out a day early ahead of the storm that was headed their way. The team had been on Hawai'i Island since Monday looking for native land and freshwater snails, and included three staff from Natural Area Reserve System or NARS (Bret Mossman, Brendan Wang, and Alex Teodorescu), often referred to as NARTians because they spend much of their time in "otherworldly" environments caring for some of Hawai'i's most precious natural resources. Bret and the other NARTians, who usually spent their time checking predator traps, searching for rare plants, and caring for the critical habitat of some of the remaining native bird populations, were joined by Ken Hayes, Sam Shizuru, and Tonatiah Trejo-Cantwell from the Bishop Museum to look for rare and critically endangered Hawaiian non-marine snails.

The team had helicoptered in to look for endemic freshwater snails in the family Lymnaeidae as part of a U.S. Fish and Wildlife Services project. Lymnaeids are snails that have evolved in Hawai'i to live in the vertical wetlands associated with waterfalls and seeps on all the main islands of the archipelago. No native lymnaeids had ever been recorded from the many falls of Pu'u o 'Umi streams, but Hayes had been searching for these and other snails for decades, and knew they had to be there. They were also checking up on the few remaining *Partulina physa*, members of the tree snail family Achatinellidae, whose numbers have been steadily dwindling for decades. Sadly, the first day the team searched the area around a lone hame (*Antidesma platyphyllum*) tree where they were last seen by NARTians, and Dr. Yeung from Bishop Museum and Dr. David Sischo from the Snail Extinction

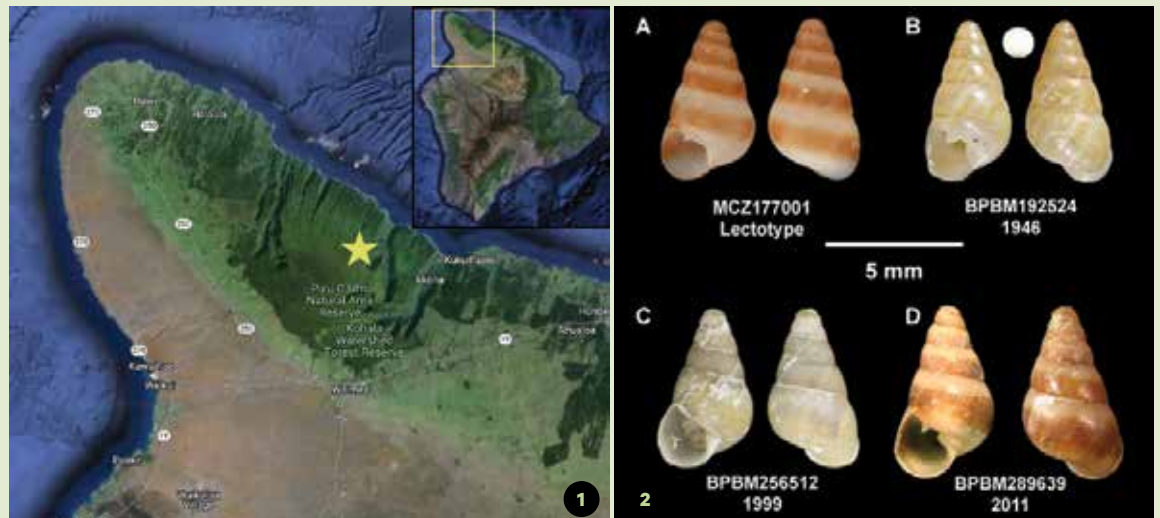
Prevention Program in 2018, but the extensive search failed to find a single *Partulina physa*, indicating they have been extirpated from this location, but are hopefully hanging on in other spots in the Kohala Mountains on Hawai'i Island.

Around camp that night, they discussed surveying the upper reaches of Wai'ilikahi stream, checking a couple of the larger waterfalls they had seen from above days before. Hayes, who had been working on land snails in Hawai'i for more than 20 years, suggested that they look for a few of the more elusive species they had been unable to find despite more than a decade of searching, particularly *Auriculella armata* (Figure 2). This species was first described in 1845 by Mighels, who only indicated "Hawaii" as its habitat. Over nearly a century, a few populations of this species were documented from across Hawai'i Island and vouchers placed into the collections at Bishop Museum (Figure 2A). However, the last populations of this species were seen in 1946 (Figure 2B), and then in the closing days of the 20th century a single individual was found along the Steinbeck Highway (Figure 2C). It would be more than a decade before another live individual was seen, this time in Waiākea Forest Reserve (Figure 2D). Extensive searches of these areas in the last 15 years failed to recover any additional individuals.

Early the next morning, they packed up and headed down the steep valley into Wai'ilikahi stream. Along the way, they recorded beautiful *Catinella newcombiana*, succineids that vary in color from light yellow to vibrant red (Figure 3), as well as a few other native species. At the bottom of the valley in the stream they discovered freshwater snails, most of which were non-native species. As they worked their way mauka in the stream toward the back of the valley and a towering waterfall (Figure 4), they spotted other species of

FIGURE 1
Pu'u o 'Umi Natural Area Reserve location on the Big Island of Hawai'i. Star indicates approximate location of 'Ua'u Camp.

FIGURE 2
A. The lectotype of *Auriculella armata* from the Harvard's Museum of Comparative Zoology.
B. A representative specimen and an egg of *Auriculella armata* from the last collection in 1946.
C-D. The only other two live specimens collected in the last 60 years, 1999 and 2011.





native snails and other invertebrates, like these endemic long-jawed or stretch spiders (*Tetragnatha hawaiiensis*; Figure 3) waiting under leaves to ambush their prey.

At the last waterfall of the day (Figure 4) the team spotted a rare native plant, olonā (*Touchardia latifolia*), historically one of the most widely cultivated plants by Hawaiians for cordage. Bret suggested it would be good to sample this olonā for propagation, so a couple of team members scrambled up the steep edge of the waterfall and made their way around the ledge towards the lone plant. Along the way they passed through a patch of invasive ginger. Hayes, upon looking up at the underside of one of these ginger plants that surrounded them noticed a familiar outline and exclaimed something to the effect of “No way!” Brendan could barely hear him over the roar of the waterfall in the background, so he asked, “What?” and Hayes responded with “It is *Auricullela armata*!” (Figure 5). This drew the attention of the rest of the team below, who came up and joined the search. Over the next hour they counted more than three dozen individuals among the ginger. They had finally found a remnant population of a species that once covered numerous locations across the island (Figure 6). To make sure these individuals will not be the last of their kind, the team brought back six individuals for the captive rearing program at Bishop Museum (Figure 7). There they joined the more than two dozen threatened and critically

endangered species being cared for by a team of mostly volunteers dedicated to the survival of Hawai‘i’s forest jewels. Bret and his team will continue to monitor this population and search for additional populations throughout the NARS. The Bishop Museum team will continue to work with, train, and collaborate with our critical partners like NARS throughout the islands. It is only through a vast collaborative network sharing data, resources, and passion that we will be able to meet the challenges of saving Hawai‘i’s biocultural diversity for future generations.



FIGURE 3

(Left and top right) *Catinella newcombiana*, an endemic species in the Kohala Mountains, and (bottom right) a native long-jawed spider, *Tetragnatha hawaiiensis*, are among the numerous invertebrate species recorded this trip.

FIGURE 4

(Left) Waterfall seen from above the valley leading down to Wai‘ilikahi stream. (Right) A closer look at the same falls, and the last falls of the day.

FIGURE 5

(Top) *Auricullela armata* cruising on the underside of a ginger leaf. (Bottom) Close up of this rare, beautiful snail, found nowhere else in the world. (Right) A view from beneath the ginger where more than 30 of these snails were found. Photos by Brendan Wang.



FIGURE 6

A wet, but euphoric field crew after rediscovering *Auricullela armata* and collecting a sample of olonā for propagation. Left-right: Bret Mossman, Tonatiuh Trejo-Cantwell, Sam Shizuru, Alex Teodorescu, Brendan Wang, and Ken Hayes (front center)

FIGURE 7

Two of the six *A. armata* brought to the captive rearing center at Bishop Museum to help build up populations for future release. The white sphere between them is a freshly laid egg – giving hope that babies will soon arrive.



CORPORATE PARTNER FEATURE

OUTRIGGER Resorts & Hotels

ABOVE

Bishop Museum exhibit designer, Michael Wilson, walking guests through the grand opening of “Love & Aloha: Surfing in Waikiki” at the OUTRIGGER Waikiki Beach Resort.

In collaboration with Bishop Museum, OUTRIGGER properties have been modified to serve as vessels to promote the heritage of Hawai'i. In 2021, the OUTRIGGER Waikiki Beach Resort unveiled “Love & Aloha: Surfing in Waikiki,” an art experience by Bishop Museum designer, Michael Wilson. Located in the heart of Waikiki, and the original home of Outrigger Canoe Club, the OUTRIGGER Waikiki Beach Resort strived to make the immersive display a tribute to Duke Kahanamoku's legacy and an embodiment of the rich history of Waikiki's surfing. By featuring traditional stories, iconic figures within the surfing community, and the evolution of the surfboard, the exhibit strategically bridges the gap between old and new, spanning surf's history for guests to explore.

BELOW

OUTRIGGER's cultural director, Luana Maitland leading a lei making activity with guests in the A'o Cultural Center.

In 2022, the A'o Cultural Center was opened at the OUTRIGGER Reef Waikiki Beach Resort, to serve as the central place to explore the property's newest artistic features and original works created by a list of cultural practitioners on the leading edge of contemporary Hawaiian art and design. The A'o Cultural Center exhibits bring Polynesian wayfinding to life

for visitors, and the Center is also a hub for guests to engage in a spectrum of Hawaiian cultural activities, led by cultural director Luana Maitland. The renovation of OUTRIGGER Reef's Herb Kāne Lounge also took place alongside the A'o Cultural Center, featuring a unique work by fiber artist and Bishop Museum's Cultural Advisor and Curator, Marques Hanalei Marzan. The intricate woven sculpture of the Hawaiian Islands called *Eia Hawai'i, He Moku, He Kanaka* (Here is Hawai'i, an island, a people), stretches across the lounge and speaks to the interconnectivity of communities across Hawai'i, while also recognizing the ancestral ties and enduring relationships to Oceania.

As a koa level corporate partner of Bishop Museum in 2024, OUTRIGGER Resorts & Hotels continues their commitment to Hawai'i's host culture stewarding their guest experience. Bishop Museum's Hotel Key Card Program allows guests of the OUTRIGGER Waikiki Beach Resort, OUTRIGGER Reef Waikiki Beach Resort, Waikiki Beachcomber, Embassy Suites by OUTRIGGER Waikiki Beachwalk, and OHANA Waikiki East by OUTRIGGER, the opportunity to present their hotel room key/card at the Museum to redeem one-day complimentary admission for up to two adults and two children in a group. This partnership will continue to strengthen the relationship between Bishop Museum and OUTRIGGER Resorts & Hotels, as we continue to perpetuate Hawai'i's culture to our shared kama'āina and malihini visitors.

OUTRIGGER Resorts & Hotels was born with a passion for discovery, following the spirit of ancient voyagers and Polynesian navigators who were driven by an unlimited desire to explore beyond the horizon. Since the 1940s, OUTRIGGER Resorts & Hotels has provided guests with their signature *Ke 'Ano Wa'a* (The OUTRIGGER Way) hospitality. Their values-based process is deeply interconnected with an understanding and appreciation of Hawai'i's host culture, a distinct hospitality style that is recognized across the globe.



Message from the Board Chair



Aloha kākou,

Mahalo for your dedicated support of Bishop Museum! As the newly elected chairwoman of the Museum's board of directors, I am excited about the year ahead.

We have added new members to our board who deepen our knowledge of community and culture, bring additional expertise in education, and provide an enthusiasm for fundraising.

Thanks to continued and generous funding from the state of Hawai'i, private donors, and grantors, we will continue to build important partnerships, open up our collections to a global audience, conduct world-class research, and mount thought-provoking exhibits.

As with many of you, I grew up visiting the Museum. It wasn't until I began serving on the board that I truly understood the many opportunities we have to experience and what our campus has to offer. I encourage you to visit Museum After Dark events or bring your keiki and mo'opuna to enjoy our weekend offerings. You will leave feeling the spirit of history and culture that makes our Museum a treasure.

See you at the Museum!

Ann Botticelli

Bishop Museum, Board Chair



Be part of the momentum of 2024 and support Bishop Museum's Spring Annual Fund Campaign

By Justine Espiritu

BELOW LEFT

Stewardship Circle level members joined Marques Marzan, cultural advisor and the Wayne Pitluck and Judith Pyle curator for cultural resilience for a presentation in the Ethnology collection and to view Pacific model canoes during the annual *A Night Behind the Scenes* event. This experience helped members contextualize Bishop Museum's role in preserving and perpetuating Pacific stories and practices for future generations.

BELOW RIGHT

Members at the Explorer level of membership and above are invited to the annual Chairman's Reception where they can browse the latest research and collection highlights and hear updates from Bishop Museum's Executive Leadership and Board of Directors.

Unrestricted gifts to Bishop Museum designated to the "Area of Greatest Need" provide a foundation of support that can be applied across all areas of our work: from the care of collections to the maintenance of our campus, the development of original exhibitions and signature programs, and the growth of the capacity of our Museum staff. Every contribution made during the Spring campaign joins Bishop Museum in a wider goal of bringing the richness of Hawaiian and Pacific history, culture, and natural environment to a global audience through a wide variety of channels and points of access and immersion.

How can you make an unrestricted gift to Bishop Museum? The channels below apply your support towards the Area of Greatest Need, allowing your impact to span across multiple projects and programs within the Museum.

1. Make a one-time gift to the Annual Fund.

Mail a check in the envelope provided between these pages and add "2024 Spring Annual Fund - Area of Greatest Need" in your note. To give online, visit bishopmuseum.org/annualfund and click the "Donate" button. Add "2024 Spring Annual Fund" in your note. 100% of your gift is tax deductible.

2. Make a pledge of support to the Annual Fund through monthly or quarterly gifts.

You can donate to Bishop Museum's Annual Fund year round by setting up automated monthly or quarterly payments by credit card. No regular gift is too small, and you can select to receive a single annual acknowledgement letter for tax purposes at end of the year. 100% of your gift is tax deductible.

3. Become a Bishop Museum Member or upgrade your membership.

Membership dues are directed to the Area of Greatest Need and offer a wide variety of access and benefits to individuals and families. Museum members enjoy free admission to the Museum during normal business hours of 9 a.m. to 5 p.m., free admission or discounts on most programs and events, and exclusive see-it-first invitations. See the full list of membership levels and benefits at bishopmuseum.org/membership.

Already a member? Upgrade your current status to unlock greater access and more opportunities to share your benefits with friends and family, and to participate in some of the behind-the-scenes annual events to which we invite our most committed supporters.





Member Spotlight: Marylea Conrad (Kapolei, Hawai‘i)

Why did you decide to become a member of Bishop Museum?

I became a member because I love to learn more about Hawai‘i’s history and nature that many don’t know about. And hopefully share more of what’s not known to others from the Museum!

What has been a memorable Bishop Museum visit, exhibit, or event for you and your family?

Definitely the inaugural July 31st, “Lā Ho‘iho‘i Ea,” because it was such an impactful event with guest speakers, Hawaiian mele from recognized performers like Paula Fuga (photo top left) — it

was so focused on educating and powerfully sharing Hawai‘i’s history.

What is your favorite benefit associated with your Bishop Museum membership?

The more the merrier! I love and so appreciate being able to include another member with my membership. The more others can learn too, the more that can be shared with others!

How does our mission resonate with you as a resident or visitor to Hawai‘i?

Bishop Museum’s mission truly resonates with

me as a resident, because I am very much about embracing community — what can we do together to learn, grow, and share with others [about] Hawai‘i and the Pacific’s history, culture, and natural environment!

What are you looking forward to on your next visit to Bishop Museum?

Learning more about the Honeycreeper birds, Hawai‘i’s endangered species and the historical fashions and materials worn in the past!

▲ Upgrade to the **Patron level**

- Allows for FREE general admission for two additional guests per visit

▲ Upgrade to the **Benefactor level**

- Includes two One Day Passes for use during general admission hours (does not require guest to be accompanied by the member) (\$50 value)
- Enjoy 10% off facility rental at the Museum (up to a \$400 value)

▲ Upgrade to the **Visionary level**

- Includes four One Day Passes for use during general admission hours (does not require guest to be accompanied by the member) (\$100 value)
- Enjoy 10% off facility rental at the Museum (up to a \$400 value)
- Invitation for two to attend *A Night Behind the Scenes*, an annual event highlighting a selection of Bishop Museum collections

▲ Upgrade to the **Explorer Circle**

- Includes six One Day Passes for use during general admission hours (\$150 value)
- Invitation for two to attend *A Night Behind the Scenes*, an annual event highlighting a selection

of Bishop Museum collections, and the annual *Chairman’s Reception*

▲ Upgrade to the **Preservation Circle**

- Includes eight One Day Passes for use during general admission hours (\$200 value)
- Invitation for two to attend *A Night Behind the Scenes*, an annual event highlighting a selection of Bishop Museum collections, the annual *Chairman’s Reception*, and *An Evening with DeSoto Brown*, an annual gathering to discuss treasures from Bishop Museum Library & Archives.

▲ Upgrade to the **Charles Reed Bishop Circle**

All Preservation Circle benefits, plus:

- One complimentary Patron level membership to gift (\$160 value)
- Opportunity to schedule a private docent-guided tour of one gallery of your choice for up to eight guests

▲ Upgrade to the **Pauahi Circle**

All Charles Reed Bishop Circle benefits, plus:

- Opportunity to schedule a private Museum expert-guided collections tour for up to eight guests



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DATED MATERIAL



Ka 'Ula Wena: Oceanic Red

This original Bishop Museum exhibition explores manifestations of red in the landscapes, memory, and created expressions of Oceania. *Ka 'Ula Wena* originates in Hawai'i, but reaches out to embrace our cousins across the vast Moananuiākea.

On View

May 25, 2024–January 19, 2025

Bishop Museum inspires our community and visitors through the exploration, celebration, and perpetuation of the extraordinary history, culture, and environment of Hawai'i and the Pacific.

Development	808.847.8281
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If you have questions about this issue of *Ka 'Elele*, please contact the Bishop Museum Institutional Advancement Division at 808.847.8281.

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Ola nā iwi.

The bones live.

Said of a respected oldster who is well cared for by his family.

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'ŌLELO NO'EAU: HAWAIIAN PROVERBS & POETICAL SAYINGS,
BISHOP MUSEUM PRESS, 1983.**