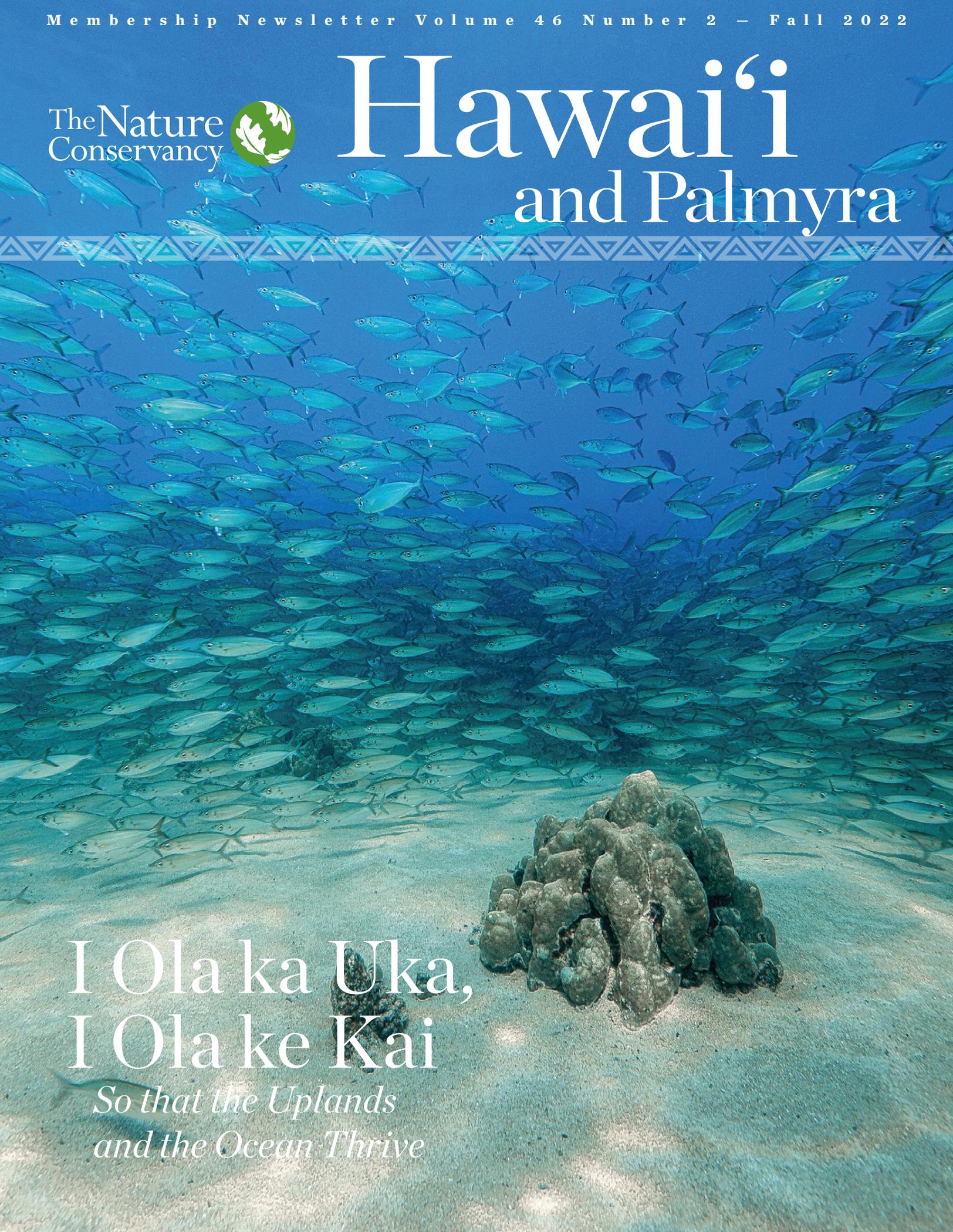


The Nature
Conservancy 

Hawai‘i and Palmyra



I Ola ka Uka,
I Ola ke Kai

*So that the Uplands
and the Ocean Thrive*



Sand Island, Palmyra Atoll © Graeme Gale

Aloha kākou,

We are all witnessing the effects of a changing climate: coral bleaching, reduced freshwater supplies, record-breaking heat, intense storms, coastal flooding and erosion, droughts and rising sea levels. Climate change and biodiversity loss are the challenges of our lives, and we have years—not decades—to address them.

TNC is combatting the interconnected climate and biodiversity crises through our ambitious 2030 Goals, a commitment to conserving 30% of lands, waters, and ocean by 2030 for the benefit of people and nature. These goals complement the state’s Sustainable Hawai’i Initiative to protect and restore 30% of our native forests and nearshore waters by 2030. To these efforts, we bring a collaborative, science-based approach and deep cultural knowledge to help effect lasting change through policy and nature-based solutions. Our aim is to ensure a healthy environment and economy for Hawai’i’s people.

Drawing from TNC’s vast network, we are developing innovative methods and strategies to achieve these goals. In Hawai’i, we are learning new coral restoration techniques to restore reef ecosystems and enhance resilience. To protect our forests, we are advocating for a green use fee to partially fund critical landscape-scale restoration efforts to help Hawai’i reach carbon neutrality by 2045.

We are also making great strides at Palmyra. A new 10-year study of Palmyra shows that reefs outside the reach of local human impacts can recover from bleaching, a testament to the resilience of reefs in the context of climate change. What we learn from projects like this can help inform work in places far beyond Palmyra.

What we do between now and 2030 will determine whether we can slow warming enough to avoid the worst impacts of climate change. It is true, the odds are stacked against us, and time is running out. But we are determined optimists at heart.

In this issue, we share how we are blending traditional practices with the latest science to replenish the fish population at Ka’ūpūlehu Marine Reserve on Hawai’i Island, introduce our mauka to makai work at Olowalu on Maui, welcome our new trustees, and celebrate the life of a passionate conservationist and supporter, Mary Cooke.

Achieving TNC’s 2030 goals and the state’s Sustainable Hawai’i Initiative is vital to the future of all life in Hawai’i and beyond. These goals are bold and unprecedented in scale, but they are also achievable through strategic and collaborative efforts. We can overcome the barriers to achieving climate and biodiversity solutions and create a world where people and nature thrive. It is a monumental challenge, but we know that together, we can find a way.

I continue to be inspired by our supporters. Without you, none of this is possible. Thank you for helping us reach our local and global 2030 goals to ensure prosperity for people and the planet, now and into the future.

Mālama a mahalo a nui loa.
Take care and thank you very much.

Ulalia Woodside Lee



Ulalia Woodside Lee
© Elyse Butler

The Nature Conservancy



Protecting nature. Preserving life.

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The Nature Conservancy Hawai’i and Palmyra newsletter is the publication of The Nature Conservancy Hawai’i and Palmyra 923 Nu’uanu Avenue Honolulu, Hawai’i 96817 Tel: (808) 537-4508 Fax: (808) 545-2019 Web: www.nature.org/HawaiiPalmyra

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The Nature Conservancy Hawai’i and Palmyra chapter is the local affiliate of The Nature Conservancy, an international, non-profit organization based in Arlington, VA.

The mission of The Nature Conservancy is to conserve the lands and waters on which all life depends.

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Cover: Ka’ūpūlehu Marine Reserve on Hawai’i Island © Kaikea Nakachi

IN BRIEF



Planting coral fragments in Florida © Eric Conklin/TNC

ADVANCING CORAL RESTORATION IN HAWAII’I

Coral restoration has been helping to regenerate reefs in other parts of the world for over two decades. Because of Hawai’i’s relatively high live coral cover, we have not needed to introduce large-scale coral restoration to the islands—until now. After multiple bleaching events between 2015 and 2020 that resulted in a 30% decline in live coral cover statewide, it is clear that restoration must be part of our toolkit.

To ensure these efforts benefit from global lessons and expertise, TNC scientists visited coral restoration projects in Florida and the Caribbean to gain a deeper understanding of effective coral gardening and restoration techniques. We are working with colleagues and partners, applying what we learned to develop a gold-standard for science-based, adaptive and community-centric restoration for Hawai’i.

Initial efforts will employ two techniques: replanting coral fragments after a damaging event, such as hurricane or ship grounding, when large pieces of coral can be quickly collected and reattached to facilitate regrowth; and growing coral from fragments in land- and water-based nurseries, then planting them to fuse and form new, large, healthy coral colonies.

Working with Hawai’i’s Congressional delegation in 2022, TNC helped to secure \$750,000 in federal funding to establish a coral nursery.



Vibrant coral reef at Palmyra Atoll © Kydd Pollock/TNC

PALMYRA DEMONSTRATES HOPE FOR CORAL REEFS

At Palmyra Atoll, analysis of a decade-long photo series of coral reefs is demonstrating how a spectacularly intact and remote coral ecosystem can recover quickly from the effects of climate change. When ocean temperatures increased during El Niño years in 2009 and 2015, coral reefs bleached at Palmyra and in many other locations around the globe. But they recovered quicker at Palmyra, while some reefs elsewhere did not recover

at all. Research conducted by Scripps Oceanography doctoral student and TNC intern Adi Khen assesses how coral reef communities respond to bleaching over an extended time period. She found evidence of long-term stability, recovery and resilience, despite two bleaching events within the last decade. Research like this from Palmyra identifies the conditions that help corals thrive, and lessons learned from Palmyra can help better protect and restore coral reef health in places that aren’t as resilient.

RESTORE HAWAII’I

Protecting existing forests can play a major role in helping Hawai’i deal with climate change, according to a recent pro bono study by consulting firm Bain and Company with TNC.

One of the major findings of the analysis is that Hawai’i faces a significant gap in reaching carbon neutrality by 2045, even after taking actions to reduce carbon emissions. But ambitious landscape scale restoration, including strategies such as preserving native forest, managing invasive species, active planting on farms and pasturelands, and commercial forestry incentives, could help close that gap—with the right funding in place.

A green use fee, for which The Nature Conservancy has been advocating, could partially fund these restoration efforts. The fee, combined with federal funds, philanthropic gifts and carbon offset investments, has the potential to generate the resources needed to get and keep trees in the ground.

However, raising funds requires generating public support by demonstrating the many benefits of healthy forests. In addition to curbing climate change, forests provide clean air and water, protect biodiversity, support cultural practices and produce natural resources.

Native forest canopy at TNC’s Ka’ū Preserve on Hawai’i Island © TNC



Getting to 30x30

Community-led conservation grounded in traditional knowledge and practices is giving fish a chance to recover at Ka'ūpūlehu Marine Reserve. © Kaikea Nakachi

A Hawaiian green sea turtle plies the reef at Olowalu. © Drew Sulock

Olowalu, one of Maui's largest fringing reefs © Drew Sulock

Honoapi'ilani Highway—the only major road connecting West Maui with the rest of the island—experiences regular flooding. © Michelle Griffoul

Black Tip reef shark in shallows © Kydd Pollock/TNC

We all know that drastic action is needed to curb the devastating impacts of Earth's changing climate. Sometimes it can get overwhelming. But there are bright spots. We at TNC Hawai'i and Palmyra are working with many partners to develop and implement science-based approaches that meet local needs and help achieve effective management of 30% of terrestrial and marine habitat by the year 2030 (known in conservation circles as "30x30").

Since 2009, TNC scientists have been conducting coral reef and fish surveys to help ensure the KMLAC's management plan integrated the best conventional science with traditional science, knowledge and customary practices. In 2016, with widespread community support, the State established a 10-year rest period on harvest along a 3.6-mile stretch of the Ka'ūpūlehu coastline to give fish populations a chance to replenish and provide for sustainable harvest in the future.

slow-growing fish will require more time. In 2021, a TNC study revealed spillover enhancing fish stocks up to a half-mile outside the reserve boundary.

Sustainable Harvest Plan

In 2018, the KMLAC convened more than three dozen stakeholders to begin making plans to guide harvest when the rest period sunsets in 2026. TNC led the group through FishPath—a participatory, science-based process for developing customized, culturally appropriate fisheries management plans. The goal of their plan is to retain much of the gains achieved over the 10-year rest period while allowing for sustainable, long-term harvest. The KMLAC found the process so successful that it inspired State partners and the neighboring community of Kiholo to use FishPath in developing fisheries management plans, and Kiholo community members are helping TNC further customize the process for Hawai'i fisheries to make it easier for others to use across the state.

Increase in Key Fish Species

Four years later (in 2020), TNC surveys revealed that the biomass (combined weight of all fish) of highly prized food fish increased by a remarkable 256% inside the rest area and 91% outside. The biomass of prime spawners—large, sexually mature fish that produce the most offspring—increased by an astounding 612% inside the rest area and 172% outside. The pace of growth aligns with our expectations, with populations of fast-growing fish species replenishing more quickly, while populations of larger,

STRENGTHENING FISHERIES MANAGEMENT AT KA'ŪPŪLEHU

At Ka'ūpūlehu in West Hawai'i, our focus is on restoring the area's once-renowned fishing grounds for the benefit of the community and future generations. These efforts were initiated by the Ka'ūpūlehu Marine Life Advisory Committee (KMLAC) in the mid-1990s when they noticed a decline in important food fish stocks. Guided by Hawaiian tradition and a keen understanding of their ancestral home, they began to develop a plan to restore these resources.

the community, in concert with the Hawai'i Department of Transportation highway realignment project, to identify appropriate nature-based solutions to restore and regain the protective benefits of the area's wetlands, coastal vegetation, and other natural features. Restoring this natural infrastructure is a cost-effective alternative to building seawalls and other structures, which often exacerbate the degradation of natural systems and processes.

ADVANCING SCIENCE AT PALMYRA ATOLL

One thousand miles south of Honolulu at Palmyra Atoll, we are working with partners to conduct cutting-edge research to guide the development of large blue water marine protected areas (BWMPAs). In June 2022, our team deployed 95 tags across

10 species, including seabirds, sharks, rays, tunas, marlins, dolphins and whales to study the movements and interactions among these animals within and outside the 13-million-acre Pacific Remote Islands Marine National Monument. We are tracking how the animals use these habitats to better inform managers on how best to design BWMPAs.

ADVANCING LOCAL AND GLOBAL GOALS

While research at Palmyra can help advance global conservation science and improve the management of commercial fisheries worldwide, efforts in Hawai'i can be adapted and applied to support conservation priorities across the state. These local efforts build coral reef and coastal resilience, which helps mitigate impacts of climate change. As such, they can attract substantial new federal funding available through the Infrastructure Investment and Jobs Act and the Inflation Reduction Act. With continued support from our dedicated staff, partners and donors, we are showing the world that together, we can find a way.

Learn more about these and other efforts at nature.org/HawaiiPalmyra.

Older, larger fish like this ulua, or giant trevally, produce the most offspring © Kaikea Nakachi

"I want Ka'ūpūlehu to feed my children and grandchildren, just as it fed the generations that came before us."

Hannah Kihalani Springer,
Kama'āina of Ka'ūpūlehu

And one of the founding members of KMLAC.

Hannah Springer
© John De Mello

The Nature Conservancy, Hawai'i and Palmyra

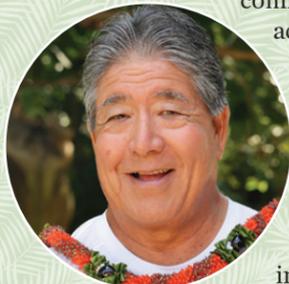
Sally lightfoot crab at Palmyra Atoll
© Victoria Fox

nature.org/HawaiiPalmyra

Palmyra Atoll offers unique and exceptional opportunities for research on climate resilience, large protected areas, and commercial fisheries. © Graeme Gale

Welcome New Trustees and Ihupani Council Members!

Vern Yamanaka is President of Yamanaka Enterprises Inc., a real estate brokerage firm that specializes in commercial and large parcel



© Toni Parras/TNC

acquisitions, management and consultation. He is passionate about preserving Hawai'i's natural landscapes, cultural sites and the community connections with place. Vern has been involved in conservation for over 50 years on Hawai'i Island, and has worked with TNC on dry land forest and marine conservation initiatives including the Try Wait campaign to protect the nearshore fishery at Ka'ūpūlehu.

Puni Jackson is a Native Hawaiian cultural practitioner and accomplished kanaka maoli artist who has led Hawaiian health and 'āina-based educational programming for over 20 years. As part of Kōkua Kalihi Valley's leadership, she helped to establish Ho'oulu 'Āina, a 100-acre nature preserve in Kalihi, supporting youth, families and individuals, including Native Hawaiian and Pacific Islander healers and cultural practitioners.



© Kōkua Kalihi Valley

Aloha 'āina informs Puni's commitment to protecting the generative abundance of our 'āina and kai.



Image courtesy Paul Alston



© Sean Marrs/TNC

Paul Alston and **Nate Smith** will join our Ihupani Advisory Council, a select group of emeritus trustees who have made significant contributions to TNC and continue to share their guidance and support.



'I'iwi pōlena (juvenile honeycreeper) feeds on 'ōpelu flower nectar. © Mike Neal

The Legacy Pollinator Fund

What if you could put your Legacy gift to work for nature today? Just as the health of the Hawaiian forest depends on native birds for pollination and seed dispersal, TNC's ability to take on conservation challenges at a large scale has been made possible by Legacy gifts.

With this in mind, TNC's Ihupani Council, a special group of emeritus trustees, created the Legacy Pollinator Fund. For each new Legacy gift made between July 1, 2022 and June 30, 2023, they will contribute \$2,000 for our Hawai'i conservation priorities today (up to \$40,000 total).

Here's how to make a difference for nature now and in the future:

1. Include TNC in your will, trust, retirement plan, life insurance OR contribute a gift that pays you income.
2. Tell us about your Legacy gift.
3. Initiate a \$2,000 donation to TNC in Hawai'i!

"We are grateful to our Ihupani Council leaders for their vision and generosity to inspire new Legacy gifts to ensure our lands and waters will be protected into the future," says Paul Alston, TNC Hawai'i and Palmyra Board and Ihupani Council member.

To learn more, please contact Lara Siu, Hawai'i Legacy Club Manager, at (808) 587-6235 or lsiu@tnc.org.

Celebrating Legacy Club Members

Mahalo to our new Legacy Club members for their long-term support of Hawai'i's lands and waters. In honor of their commitment, we planted and dedicated rare native loulou palms (*Pritchardia schattaueri*) in Kona Hema Preserve on Hawai'i Island. If you would like to make a legacy gift or have already named us in your will, trust, retirement plan or other estate plans, please let us know. Contact Lara Siu at (808) 587-6235 or lsiu@tnc.org.

- Anonymous
- Robert K. Chong
- Patricia I. Crandall & Jack D. Brenton
- Benton Elliott
- William & Grace Gintling
- Lani Loring Howell & Lloyd Howell
- Martha & Austin Nobunaga
- Helen L. Scully
- Daniel & Janice Smith
- In memory of Renate Freytag
- In memory of Diane Kelley
- In memory of Grace Kosanek Laird
- In memory of William G. Mielke
- In memory of Diana Shadday
- In memory of Walter Soban
- In memory of Robert K. Torrey



Kris Billeter diving on the James Bond wreck in the Bahamas. Image courtesy Stuart Cove.

Answering the Call of the Ocean

The ocean is what inspires Board of Trustee and Legacy Club Member Kris Billeter. Her love of the marine world started blossoming during family vacations to the beach while growing up in the San Francisco Bay area. Kris didn't fully feel the pull of the sea until her career afforded her the opportunity to take a sabbatical.

In Thailand, she got certified as a dive instructor, and had an opportunity to visit the reefs in neighboring Myanmar. The trip opened her eyes to the beauty of healthy reefs but also to their potential destruction. While diving the pristine reefs of Myanmar, Kris often found herself angry; here, detonating dynamite was an acceptable way to fish. Every blast reinforced the realization that if we don't protect the reefs now, there will be nothing left for the future.

After the sabbatical and a subsequent vacation to Maui, Kris knew she wanted to combine her business acumen with conservation. In 2005, Kris met with TNC's fledgling marine program staff to do just that—she offered her business insight, providing feedback for the team and launching a long-term alliance with TNC.

Today, as a management consultant in strategy and organizational growth and development, and a Maui resident, Kris sees the ability of TNC to provide both management and infrastructure solutions. Kris explains, "Many smaller organizations don't have the capacity to tackle large-scale issues, but TNC can provide additional solutions and support while the communities lead."

Climate change is a key issue for Kris. 2020 and 2021 polling in Hawai'i shows that a majority of residents are very concerned about the impacts of climate change and feel it should be addressed as a national priority. "Hawai'i is at the epicenter of climate change in so many ways," says Kris. "We need to be proactive and not wait until a crisis to act—that will be too late. If we look at creative and innovative solutions, we have the opportunity to become a great model for community-based climate work."

Kris points out that while there were many devastating repercussions to people,



Kris Billeter © Khali Shiraishi, Lei Mali'o Photography

the pandemic also created an interesting vantage point in Hawai'i. "It was incredible to see how the reefs and nature rebounded during the closure," she says.

This gives her hope. "If we do the right thing, nature will heal," she affirms. "At the end of the day, everyone has

a part to play." Director of Philanthropy Lori Admirel agrees. "It is inspiring to see how much Kris gives back to conservation in Hawai'i through her trustee commitment, specific project support and as a Legacy Club member. For Kris, joining the Legacy Club is a way to ensure support for conservation moving forward."

"As climate impacts increase, I feel good about my legacy helping future generations create solutions, so they too can benefit from a healthy native forest and witness the beauty and bounty of a thriving reef," says Kris.

—Melissa Fisher



Mary Cooke © John Hook/NMG Network

Tribute to a Shining Star **Mary Cooke**

Growing up in rural Kaua'i surrounded by nature, it's not surprising that Mary Cooke developed a passion for the environment. With her husband Sam Cooke, Mary helped TNC's Hawai'i chapter tremendously in our early years by identifying and recruiting community and business leaders and introducing prospective donors. She was known for making philanthropy meetings fun and cheerfully joking about not getting her hair done before hikes (especially when it rained). She was dedicated, disciplined, prepared, generous and gracious. In addition to her contributions to TNC, she promoted native plant restoration and cultural preservation, and she founded Malama Mānoa and the Mānoa Heritage Center. We offer condolences to the Cooke 'ohana and mahalo piha to Mary Cooke for her meaningful leadership and profound contribution to conservation in Hawai'i over her lifetime. Aloha Mary Cooke! We at The Nature Conservancy Hawai'i and Palmyra will always remember you.

