



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

Table of Contents

- 4** Message From our Leaders
- 6** Where We Work / By The Numbers
- 8** Conservation Highlights
 - 8** Protecting Lands, Waters and Ocean
 - 10** Tackling Climate Change
 - 12** Exploring Innovative Solutions
- 14** The Power of Partnerships

Protecting Land. Water. Life.

~~~~~  
 To make a gift to TNC, please contact  
 Lori Admiral, Director of Philanthropy,  
 at (808) 587-6249 or lori.admiral@tnc.org

### Board of Trustees

- |                        |                         |                  |
|------------------------|-------------------------|------------------|
| Duke E. Ah Moo         | Matt Emerson            | Janet Montag     |
| Paul D. Alston         | Hon. Judith Epstein     | Alicia Moy       |
| Kris Billeter          | Dr. Alan M. Friedlander | Bradley E. Smith |
| Dr. C. Tana Burkert    | Benjy Garfinkle         | Julie Smolinski  |
| Anne S. Carter (Chair) | Sean A. Hehir           | Vern Yamanaka    |
| Ka'iulani de Silva     | Puni Jackson            | Richard N. Zwern |
| Dave Eadie             | Brett MacNaughton       |                  |

### Ihupani Advisory Council

- |                         |                    |
|-------------------------|--------------------|
| Paul D. Alston          | Duncan MacNaughton |
| Christopher J. Benjamin | Jean E. Rolles     |
| Kenton T. Eldridge      | Crystal K. Rose    |
| Eiichiro Kuwana         | Nathan E. Smith    |

MESSAGE FROM OUR LEADERS

# Hua‘i ka ‘āina, ulu a‘e ke kini

*The land bursts forth, and abundance is generated*

As we emerge from the throes of the pandemic and settle into a new normal, we can reflect on how the changes of the past few years have led us to new and improved ways of living and working. The recent eruption of Mauna Loa on Hawai‘i Island is also a fresh reminder that nature brings regeneration and catalyzes new growth. Some may see the eruption and lava flow as chaos and destruction, but from the Hawai‘i worldview they are a source of life. The ‘ae fern is one of the first lifeforms to sprout from hardened lava, followed by other trees and flowers, soon to flourish into a spectacular landscape unique in the world.

We at The Nature Conservancy, Hawai‘i and Palmyra are going through our own evolution in our efforts to better preserve the gifts of nature that are essential to humans. After more than 40 years, our approach has progressed from land purchases as the primary strategy to collaborative management and again evolving to contributing to urgent shared challenges across broad scales. From mauka to makai (mountain to sea) we are fighting loss of biodiversity and tackling climate change.

In this report, we share brief highlights on some of this work, including: a landmark acquisition to protect native forests, watersheds and reefs in southeast Moloka‘i; building community and reef resilience at Olowalu on Maui; and the trailblazing purchase of reef insurance to restore coral reefs in Hawai‘i after tropical storms and hurricanes.

All this work is thanks to our incredible staff, volunteers, partners and donors. With your continued support, we look forward to further advancing our innovative and courageous efforts to protect the lands, ocean and freshwater on which we all depend.

Mahalo nui loa,  
Ulalia Woodside Lee, Executive Director  
Anne Carter, Chair, Board of Trustees



Left: Ulalia Woodside Lee, Executive Director, TNC Hawai‘i Palmyra  
Right: Anne Carter, Chair, Board of Trustees



Determined ‘Ama‘u fern growing in the volcanic landscape of the Keanakakoi Crater Rim Trail, Hawai‘i  
© Knelson20/Adobe Stock



‘Ae fern  
© National Park Service public domain



Summit Crater, Mauna Loa, Hawai‘i Volcanoes National Park  
© Adriel Heisey

The Hawaiian proverb on the cover, I ka wā ma mua, ka wā ma hope (the future is secured by the past), reflects the importance of learning from what has come before. The Hawaiian Islands are in a continuous state of renewal as lava flows give birth to new beginnings.

Cover: Kamakou Preserve on Moloka‘i © P.F. Bentley

# By the Numbers

**FOUR**

Hawaiian forest birds at risk of imminent extinction, the 'akikiki and 'akeke'e on Kaua'i, and the kiwikuu and 'akohekohe on Maui.



**344**

A record number of chicks banded among 3,000 active nests at TNC's Mo'omomi Preserve on Moloka'i in 2022.



**715**

Combined years of our staff working at TNC to preserve nature in Hawai'i and Palmyra. That's impactful!



**500,000**

Acres of lands with high potential for restoration in Hawai'i according to an external study.



- Community Network Members
- Research and Monitoring Sites
- TNC Forest Preserves
- Watershed Partnerships

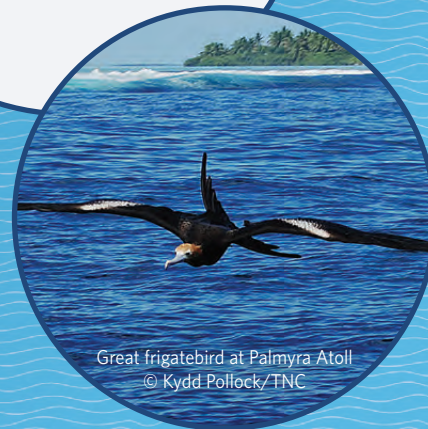
**95**

Fish, seabirds and marine mammals tagged at Palmyra Atoll to better understand Bluewater Marine Protected Areas efficacy in support of TNC's 2030 ocean goals.



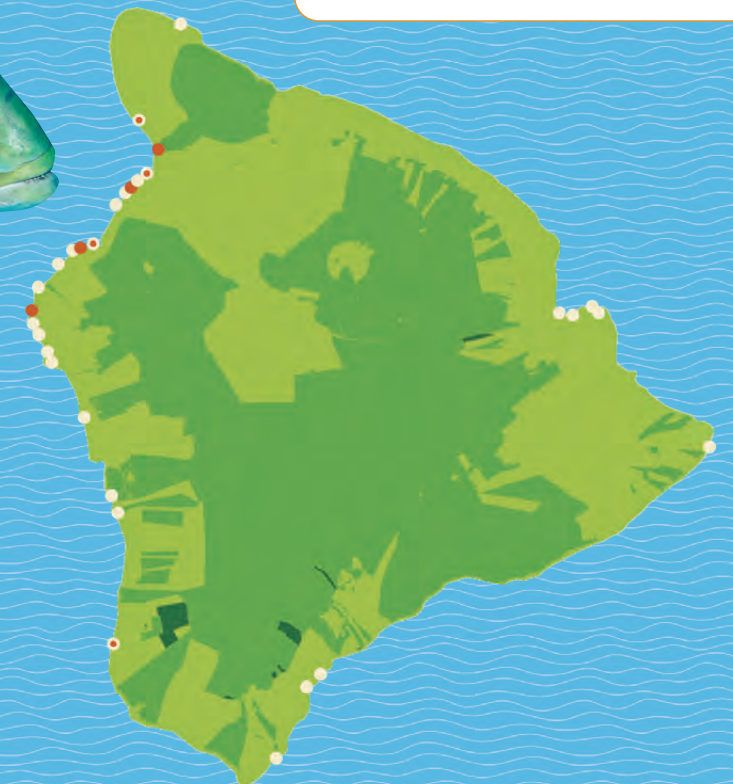
**5,006**

Kilometers of 11-day round-trip flight of great frigatebird tagged at Palmyra, far beyond the protected waters surrounding the atoll.



**612%**

Increase in prime spawner biomass inside the Ka'ūpūlehu Marine Reserve. These fertile fish produce the most offspring and are key to replenishing fisheries.



*Palmyra Atoll*

1,000 MILES SOUTH



# Protecting Lands, Ocean and Freshwater

More and more, we are realizing what our ancestors knew intimately—that the health and well-being of people depend on that of our lands and waters. Our work bolsters the innate resilience of our native forests, coasts and communities by protecting watersheds and reefs and restoring native species.

TNCHP helped purchase five parcels of land in Mākolēlāu, Molokaʻi, closing a gap and protecting an entire region of watersheds and reefs. The parcels link to other conservation lands, providing continuous corridors for endangered forest and seabirds, native plants, fish and invertebrates.

The Palmyra Atoll Rainforest and Reef Resilience Project (PARP) restores native rainforest trees to benefit corals. In 2022, two TNC Hawaiʻi terrestrial staff developed new invasive species removal techniques at Palmyra, providing valuable information while increasing efficiency. PARP management implications are relevant to over 270 other Pacific islands.

We tested several ways of reducing erosion in the Pelekane watershed and worked with partners to implement the most promising techniques, including reducing cattle paddock size and removing feral goats from 6,800 acres to minimize erosion from overgrazing. To help vegetation recover, the ranchers agreed to temporarily remove cattle.

Our work is evolving to protect more sites from mauka to makai (mountains to sea), as reflected in this view at Mākolēlāu, Molokaʻi. © Michael Conner/TNC

## Celebrating The Legacy Club

Mahalo to our Legacy Club members who have made a lasting commitment to protecting Hawaiʻi's lands and waters for generations to come. This year we welcomed 25 new members who have named TNC as a beneficiary in their will, trust, retirement plan or life insurance—or have established a Charitable Gift Annuity that pays income for life.

We also bid fond aloha to Legacy Club members whose estate gifts helped advance our conservation priorities across the state. Thanks to a generous bequest donor whose legacy gift was for land acquisition, we were able to purchase and protect five parcels of land in Mākolēlāu on Molokaʻi in partnership with DLNR Division of Forestry and U.S. Fish and Wildlife Service.

We are grateful for the vision of our Legacy Club members, whose collective impact is transforming native landscapes across the islands from mauka to makai.



TNC Science Volunteer Victoria Fox examines a native *Pisonia grandis* seedling on Sand Island, Palmyra Atoll. © C. Wiggins/TNC



TNC and partners monitor restoration trials in the Pelekane watershed on Hawaiʻi Island. © Lauren Kurpita/TNC

# Tackling Climate Change

Coral reefs and forests provide some of the best natural protections against the impacts of climate change, among them sea level rise and drought. Our work focuses on restoring these systems in a way that ensures their health for generations to come.

- ✦ TNC purchased a coral reef insurance policy to fund the rapid repair and restoration of reefs damaged by a hurricane or tropical storm in Hawai'i. This pilot policy is the first to insure nature in the U.S. and will provide vital funding to repair reefs when it is urgently needed.
- ✦ Congress passed the Inflation Reduction Act, which included \$366 billion in clean energy and climate investments, Congress's most significant climate action ever. We supported an advocacy campaign, including public polling and encouraging the public to contact Congressmembers, to ensure our delegation understood Hawai'i's need and support for climate action.



Autumn at the U.S. Capitol  
© Adobe Stock/qingwa

✦ We assessed all existing research on sediments in the Olowalu-Ukumehame watersheds and engaged government and community partners to develop potential solutions for reducing sedimentation onto one of the largest coral reefs in the Main Hawaiian Islands. Informed by these efforts, we will work together to refine and apply high priority solutions.

## Donors Make an Impact on Climate

With the launch of our Climate Solutions Fund in the summer of 2021, we have exceeded our original goal of \$500,000, raising \$1 million dollars for nature-based solutions.

Donors Nancy and Rick Griffith visited the Kona Hema Preserve on Hawai'i Island to learn about TNC's work to protect watersheds, and immediately understood the importance of acting quickly to address climate impacts. They were the first to donate to the fund.

Supporting natural climate solutions can: increase carbon storage and reduce the impact of emissions through effective forest management; build resilience of natural habitats through revegetation; demonstrate the value of green infrastructure that protects coastal areas from flooding; advance climate science through research; and establish innovative funding streams such as reef insurance.

We are thankful for the Griffiths and many other donors who take action to build resilience and sustainability in nature by contributing to this fund. Together we can make a positive impact on climate issues.



Immersing in and supporting nature is important to the Griffith family.  
Image courtesy of the Griffiths

Reefs protect coastline and property from the power of the sea by diminishing wave energy up to 97 percent. © C. Wiggins

# Exploring Innovative Solutions

To keep pace with the threats impacting nature, we must constantly innovate. This past year, we have continued working with partners to push the boundaries and test new technology to create lasting impact for nature and people.

- Reefs in Palmyra's lagoon are beginning to recover 75 years after massive degradation from military operations. Through high-resolution aerial imagery, machine learning, and the first coral reef digital twin on Earth, we are studying this extraordinary resilience at an unprecedented scale and level of detail to inform conservation action at Palmyra and in Hawai'i.
- TNC and multiple partners are developing an innovative tool to try to prevent the extinction of four critically endangered Hawaiian forest birds, whose populations are crashing due to climate change-caused avian malaria. The tool uses a naturally occurring bacteria to suppress invasive mosquitoes in core native bird habitat.

- To improve its relevance and efficiency for Hawaiian fisheries, we integrated traditional and contemporary fisheries management approaches into FishPath—a collaborative, science-based process TNC introduced for developing fisheries management plans—then guided Hui Aloha Kiholo through the new and improved process to create a sustainable fisheries management plan for Kiholo.
- Through new partnerships with AI (Artificial Intelligence) vendors, we made headway with learning to identify invasive weeds found under dense canopy in native forest. Using drone video, we can identify weeds using a real-time active machine learning platform, one of the first successful cases of this being done.



The critically endangered 'akihi is one of four endemic forest birds we are hoping to save with the help of a new tool. © TNC



Detecting Himalayan ginger under dense native forest canopy is a tough challenge that artificial intelligence is helping us tackle. © Ryan Perroy

# The Power of Partnerships

Partnerships are the core of our work. We build, convene, support and facilitate diverse collaborations with community, state, federal and nonprofit entities that lead to win-win-win solutions.

👉 Celebrating 20 years of work on the island of Kaua'i, we worked across 145,000 acres of public and private lands as coordinator of the Kaua'i Watershed Alliance and secured two new long-term management agreements with key members.

👉 Hui O Ka Wai Ola released a report summarizing six years of coastal water quality data. The report identified excessive levels of turbidity and nitrates on leeward Maui reefs and included potential actions to reduce the pollutants and improve water quality.



Hui O Ka Wai Ola volunteer tests water quality. © Bruce Forrester

👉 Seven community groups convened to undertake collaborative makai management in East Maui. With support from NGOs and government agencies, the Maui Hikina Hui Initiative is engaging the larger community to protect areas spanning four moku (districts)—Ko'olau, Hana, Kīpahulu and Kaupō.

Expanded watershed protection work on Kaua'i provides new perspectives, including a unique view of the Alaka'i Plateau from the Lumaha'i Valley floor. © Lucas Behnke/TNC

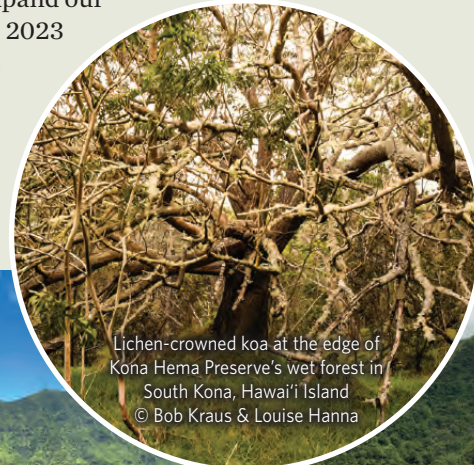
👉 On O'ahu, we helped the He'eia National Estuarine Research Reserve establish restoration and monitoring protocols, synthesize data collected, and understand how restoration impacts wildlife in the wetland and on nearby coral reefs.



Common moorhen nest in the wetlands at He'eia © Melissa Mau/Kāko'o 'Ōiwi

👉 Working with Hawai'i Green Growth, the Sustainability Business Forum and other partners, we built a knowledge base for forest carbon potential in Hawai'i and the capacity and expertise of a local forestry company that conducted the first forest carbon inventory in Hawai'i specifically designed to meet the standards of the carbon market.

👉 With satellite location data provided by the U.S. commercial fishing fleet, our staff intercepted several drifting Fish Aggregating Devices before they damaged reefs at Palmyra Atoll in 2022. This partnership will expand our monitoring area in 2023 to improve Marine Protected Area management.



Lichen-crowned koa at the edge of Kona Hema Preserve's wet forest in South Kona, Hawai'i Island © Bob Kraus & Louise Hanna

## At TNC, donors are central to the impacts made every day in conservation in Hawai'i and Palmyra.



TNC's Makolelau land acquisition closes a land-sea gap and enables broader landscape protection, which also benefits adjacent reefs. © Michael Connor/TNC

In the face of climate change and biodiversity loss, protecting land and native forested areas is a priority. Protection involves myriad actions working together, from purchasing land and fencing out destructive animals to removing invasive plants and restoring native vegetation.

“Hawaiian forests play a significant role in capturing rains and mists that provide drinking water for our communities,” shares Alison Cohan, Hawai'i's Terrestrial Director. “At the tops of the mountains, water is absorbed by leaves, mosses, lichens and soils, which is why protection of these native forests is paramount to our work.”

TNC is the coordinator for the East Moloka'i Watershed Partnership, a group of public and private landowners working together to strategize on management actions for the protection of Moloka'i's water supply across property boundaries.

In 2021, several parcels adjacent to partnership lands—long viewed as the missing piece of the puzzle—came on the market. These 1,000 acres extend from the

high mountains at 3,000 feet all the way down to the coastline. Securing this land into the partnership helps demonstrate the benefits of connecting mauka to makai (land to sea) for overall conservation of the landscape.

Fortunately for nature, several donors were enthusiastic about helping protect land.

“We are lucky to have had a donor include land protection in their estate plan through a bequest,” shares Jana Light, Senior Associate Director of Philanthropy. “And when other donors also expressed interest in land protection, I knew this was the perfect opportunity for them to help TNC make a difference on Moloka'i.”

Jana reflects that visiting the property with the donors helped them fully understand how the land fit into the landscape and the importance of this acquisition to the health of the watershed and reefs.

This purchase is a shining example of the variety of ways our donors help protect nature for future generations.





In Hawai'i,  
the environment *is* the economy.



The Kānepu'u Preserve on Lāna'i protects remnants of a rare dryland native forest. © Richard Cooke III

**That's why these leading companies invest in The Nature Conservancy.** They understand that our environment and economy are intrinsically linked: Native forests collect fresh water, coral reefs protect our coastline, and native species are fundamental to a living Hawaiian culture.

We want to thank and recognize the members of the Corporate Council for the Environment for their commitment and generosity. To learn how your company can join the Corporate Council, please contact Lori Admiral at [lori.admiral@tnc.org](mailto:lori.admiral@tnc.org) or (808) 587-6249.

### Corporate Council for the Environment

**Kuleana Member \$25,000+**

ALOHA Collection  
Macy's  
Mauna Kea Beach Hotel  
Zipline Franchising, LLC

**Ho'omau Member: \$15,000+**

Skyline Eco-Adventures, LLC  
Shidler Family Foundation

**Mālama Member: \$10,000+**

Alexander & Baldwin, Inc.  
First Insurance Company of Hawaii  
Charitable Foundation  
Merriman's

**Laulima Member: \$5,000+**

Alaska Airlines  
Bank of Hawai'i  
Decision Research Corporation  
Kosasa Foundation  
William Yeoward Crystal

**Kōkua Member: \$2,500+**

BQF Hawai'i  
The Cades Foundation  
Dentons  
Goodfellow Bros  
Hunt Companies  
Kualoa Ranch Hawai'i, Inc.  
Par Hawai'i Refining  
Ulupono Initiative