

NATURE

HAWAII

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Healthy coral reefs, like this one in Palmyra, can better withstand storms and sediment, and protect shorelines. © Kydd Pollock/TNC

It's All Connected

Healthy forests protect coral reefs—and humans

When heavy storms dump significant rainfall, erosion rushes soil and debris down steep cliffs, turning streams into dangerous rivers and smothering coral reefs with sediment.

As climate change drives temperatures higher, storm intensity increases. Kaua'i experienced a catastrophic downpour in 2018: nearly 50 inches of rain fell in less than 24 hours, flooding communities and farms and in some cases washing away homes and roads. Yet in our forest preserves, thousands of feet above that destruction, the deluge had almost no impact, save for a small section of fence along a river that washed away.

Healthy native forests provide a buffer to coral reefs as well as houses, roads, and other infrastructure. Their complex plant and moss layers allow rain to drip,

drizzle and puddle instead of pounding the ground. This gradual absorption is how fresh water in our islands is replenished. Native trees and plants absorb rainfall gradually, helping shield man-made and natural structures.



Storm runoff and sediment can smother coral reefs. © B. Rathfon

Our work over 40 years restoring Hawai'i's native forests demonstrates that healthy native plants and forest communities help reduce erosion. When invasive plants and animals are removed, lush vegetation rebounds, nearby streams

run clearer, and the ocean far below is spared some of the burden of land-based sediment and pollution.

Our work in Palmyra actively restoring habitat also demonstrates the link between native forest and ocean health, as seabirds nesting in native trees provide nutrients in their guano that cycles back to the ocean, nourishing marine life. On O'ahu, we work with Kāko'o Ō'iwi to restore wetlands and traditional lo'i kalo (taro fields) in He'eia, providing food for the local community and habitat for rare and endangered native birds, fish and plants, while reducing sediment flow onto reefs in Kāne'ohe Bay.

Over the next 40 years and beyond, we will continue to work mauka to makai (mountain to ocean) to restore natural systems that support us and one another.

Gift leads to life-long passion

A Christmas gift of a TNC membership to Bob and Elaine Collins started their journey, and almost 40 years later, they remain passionate donors, partners, mentors and friends to our work across the globe and in Hawai'i.

"The local bonds TNC forges with people and projects in each place they work is the best way to safeguard lands and waters for future genera-



Elaine and Bob Collins © Collins family

tions," Elaine says. It also reflects the sense of community connection they experienced as a young married couple in the 1950's, with Bob stationed at Pearl Harbor and Elaine finishing her nursing residency on O'ahu.

Many years and visits later, they connected with our Kaua'i forest program and found that place-based, people-centered feeling again. Thanks to their support, we are making connections that will expand partnerships to protect Kaua'i's natural resources.

"With their passion, knowledge and generous support, Bob and Elaine are helping us connect with more people on Kaua'i and inspiring an even more collaborative vision for our future," says Lori Admiral, Director of Philanthropy. "It is people like the Collins who make the fulfillment of our mission possible."



The *Anoctochilus sandvicensis*, or Honohono a Kanaloa, is the showiest of Hawai'i's native orchids. © G. Daida

A home for rare orchids

For many enthusiasts, Hawai'i is the orchid capital of the world. While most species found here are introduced, three are endemic—unique to our islands. They likely arrived as minuscule seeds stuck to migrating birds like the kōlea (golden plover). Small, delicate and hidden in undergrowth, our endemic orchids have subtle flowers and thrive only in the highest misty cloud forests and bogs—the wao akua (realm of the gods).

While invasive plants and animals threaten their survival, two TNC preserves provide them safe haven—Waikamoi Preserve on Maui, and Kamakou Preserve on Moloka'i. Fitting their godly upland realm, the orchids' Hawaiian names refer to two major Hawaiian deities, Kanaloa, and his brother Kāne. *Anoctochilus sandvicensis*, or Honohono a Kanaloa, has bright yellow flowers, and *Liparis hawaiiensis*, or Awapuhi a Kanaloa, has tiny green flowers. Both still thrive in protected places. The rarest, *Platanthera holochila*, or Puahala a Kāne—with fewer than 30 plants left in the wild—has a fighting chance in our preserves and a few other protected areas.

'Āina Pūlama Mau—Islands Forever Treasured

To celebrate our 40th anniversary, we partnered with a local business to design a special edition aloha shirt that features over 30 species of native flora and fauna designed in striking detail by Kahala with guidance from TNC scientists and Hawaiian cultural advisors. A portion of the proceeds will support our work. Learn more at nature.org/hawaii.



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