

# RARE PLANT PROGRAM 2025



## ISLAND HIGHLIGHTS



State of Hawai'i  
Department of  
Land & Natural Resources  
Division of  
Forestry & Wildlife



## *Gardenia remyi*



## Native Soil Research

## MOLOKA'I

Nā'ū (*Gardenia remyi*) is one of three species of native gardenia in Hawai'i—with fragrant white flowers found in the lush, wet forests of Kaua'i, Moloka'i, Maui, and Hawai'i Island. It is so rare, no seedlings have ever been seen growing naturally in the wild. Researchers at the University of Hawai'i are uncovering new information about how nā'ū survives, focusing on its partnership with soil microbes, especially mycorrhizal fungi. By understanding these hidden relationships, we're learning how to return nā'ū to its forest home. In a groundbreaking effort, soil from beneath wild trees on Moloka'i was collected and used to nurture young nā'ū plants. These seedlings, now thriving, have been replanted on the island. Scientists will watch closely, measuring how early exposure to native soil helps these trees grow strong—and teaching us how to care for the next generation of this precious species. Every step brings us closer to ensuring nā'ū remain part of Hawai'i's forests for generations to come.





*Brighamia rockii*

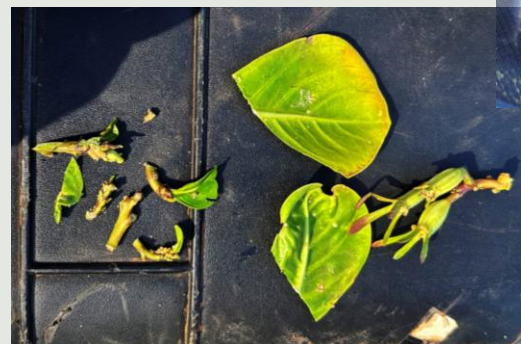


## Waiehu Collections

The greatest threat to Hawai‘i’s native plants is invasive species. In places where massive cliffs create natural barriers, goats, rats, and other pests cannot reach pockets of native forest. These hidden refugia shelter priceless members of Hawai‘i’s natural heritage—plants like pua‘ala (*Brighamia rockii*) and koki‘o ke‘oke‘o (*Hibiscus arnottianus* subsp. *immaculatus*). Today, new drone technology is giving botanists from the National Tropical Botanical Garden (NTBG), Plant Extinction Prevention Program (PEPP), and Division of Forestry and Wildlife (DOFAW), the ability to safely reach into these rugged sanctuaries. Samples collected from the areas are grown and replanted in protected areas, ensuring these species have a future. In the past year, botanists secured collections of pua‘ala and koki‘o ke‘oke‘o from individuals never before documented. With fewer than fifty plants left in the wild, every single collection matters—and these were spectacular!



## MOLOKA‘I





## *New native plant species*



## Age of Discovery

## KAUA‘I



The age of discovery is not over! Careful observations by field botanists from Plant Extinction Prevention Program and National Tropical Botanical Garden during surveys in Kaua‘i’s most remote and rugged landscapes have revealed something extraordinary—several new native plant species found nowhere else on Earth. Among these treasures are *Cyrtandra obliquifolia*, *Geniostoma imadae*, *Lysimachia barcae*, *Myrsine cirrhosa*, and *Schiedea waiahuluensis*. Each discovery begins with long, challenging days in the field, followed by equally meticulous work in the herbarium—like at NTBG and Bishop Museum—where botanists study and confirm the species identification. Every new plant described adds to our understanding of Hawai‘i’s incredible biodiversity and reminds us why protecting native habitats is so vital. When we safeguard these places, we protect not only what we know, but also the wonders we have yet to find.



Native plants are the heart of Hawai‘i’s ecosystems—they shape our forests, protect our watersheds, and sustain the unique web of life found nowhere else on Earth. When these plants disappear, entire ecosystems unravel. That’s why restoration is so critical: every native plant we save helps preserve the cultural and natural legacy of our islands. Fencing is one of the most powerful tools we have to protect Hawai‘i’s forests. By keeping out invasive animals, we give native plants and wildlife the chance to recover and thrive. After years of hard work across rugged terrain, a new predator-proof fence now safeguards upper Honopū—a sanctuary for life found nowhere else on Earth. With the area now free of invasive animals, restoration has begun. Among the first outplantings is *Kadua st-johnii*, a critically rare shrub known only from Nā Pali. For decades, its last remaining plants clung to sheer cliffs, fighting for survival. Now, with Honopū protected, these plants can return home.

## Honopū Fencing



## KAUA‘I

*Kadua st-johnii*



*Clermontia pyrularia,*  
*Ranunculus hawaiiensis*



## Watch Where You Step!

## Moku o Keawe

In the last year, botanists have made incredible discoveries on Hawai‘i Island: previously unknown plants of two critically rare native species—makou (*Ranunculus hawaiiensis*) and ‘oha wai (*Clermontia pyrularia*). These finds are more than exciting—they are lifesaving. They give conservation teams the chance to recover these species and prevent extinction. Before these discoveries, this species of ‘oha wai had only one known wild plant, and makou, a native buttercup, had no known wild plants. Their decline is due to the impacts of invasive species, especially pigs that trample and dig up plants and rats that eat their stems and seeds. Makou was numerous places on Mauna Kea, Mauna Loa, and Hualālai, but by 2014 only 14 plants were known to remain in the wild. Finding new individuals means hope—hope these plants will reestablish in protected forests and continue their story.



## *Pritchardia maideniana*



Under CRB Attack



Moku o Keawe



Loulu, Hawai'i's native palms, are under attack by the Coconut Rhinoceros Beetle (CRB). Trees of all five species on O'ahu are being eaten and CRB has been found within loulu in remote areas of Kaua'i. On Hawai'i Island, the loulu most vulnerable is *Pritchardia maideniana*, endemic to the west and southern coasts of the island, right where CRB has been detected. This species, valued for its use in weaving, construction, and as food, has a long history in cultivation, and is included in the oldest maps of Kona. Although difficult to estimate because it was moved and planted so regularly, there are thought to be fewer than twenty ancient trees remaining alive today. Building on previous success in restoring the species, a partnership is now working to collect seeds from all the remaining loulu and urgently plant them where they can be protected from CRB. This is more than a fight for loulu. It's a fight for heritage, for biodiversity, and for the future of Hawai'i's forests.





O‘ahu is home to an incredible diversity of *ha‘ivale* (*Cyrtandra*)—at least 24 different species, more than any other island. But one of them, *Cyrtandra waiolani*, a shrub with green-white flowers densely covered in brown hairs from the Ko‘olau Mountains, had not been seen since 1943. For decades, local botanists looked, but it was considered lost. That changed when a team from the Plant Extinction Prevention Program working deep in the mountains spotted a plant they suspected might be this long-lost species—or a close relative. The mystery wasn’t solved until the collected plants bloomed in the nursery this year, confirming the identification. Now, the team is working to secure and duplicate this collection and search nearby areas for more individuals.

## Blooming Discovery



# O‘AHU

*Cyrtandra  
waiolani*



## *Living Collections*

Hawai‘i’s native plants evolved in a world far different from the one they live in today. Over centuries, changes in climate, land use, and the introduction of thousands of non-native species have transformed their environment. In some places, only the old kūpuna trees remain—while new keiki seedlings have not survived long enough to reproduce. This decades-long decline means without intervention, entire species could vanish. For these plants, simply building fences or pulling weeds isn’t enough. They need to be rescued. Over the past year, the Plant Extinction Prevention Program team on O‘ahu has secured several critically rare species in specialized nurseries, where they can be protected and carefully cloned. These living collections will create new keiki to replace the generations lost to invasive species and restore balance to our forests. Every rescued plant is a lifeline—a chance to keep Hawai‘i’s unique heritage alive.

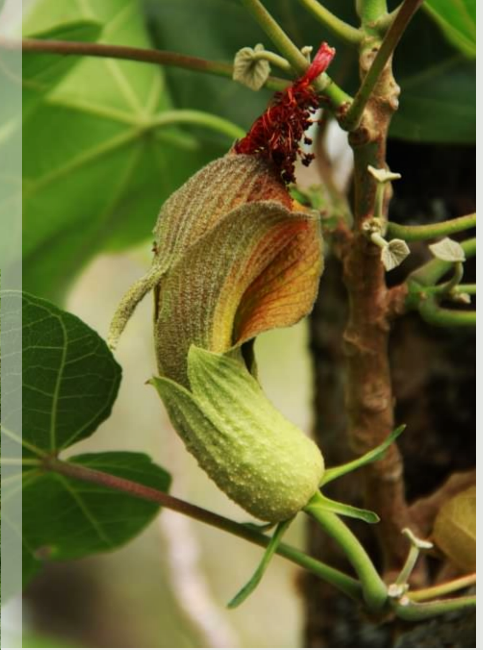
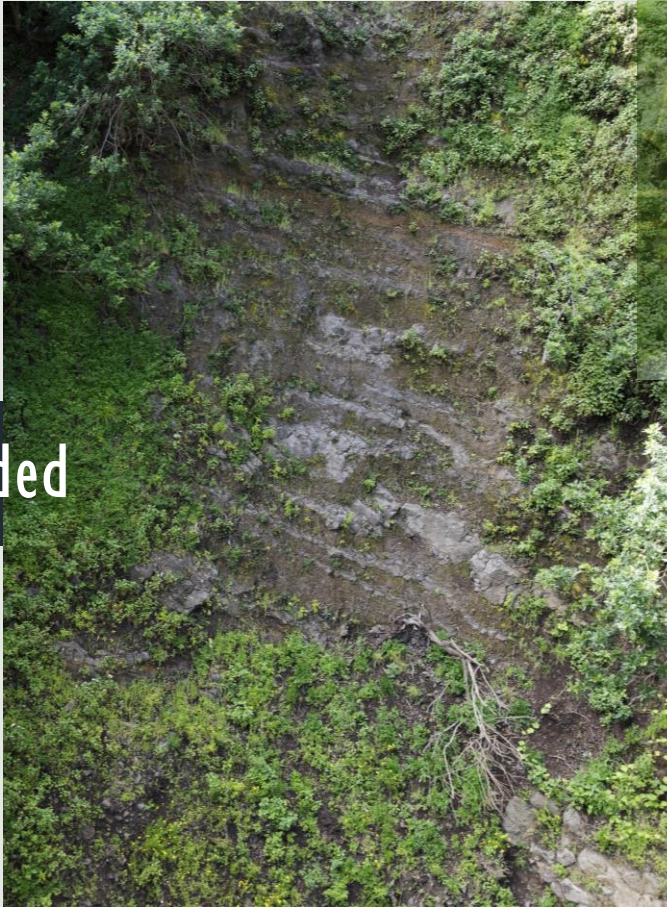
## Rescuing Lifelines



## O‘AHU



## *Hibiscadelphus stellatus*



## Urgent Action Needed

Hawai‘i’s forests are full of wonders—but also warnings. In 2012, while exploring the steep slopes of Mauna Kahālāwai on Maui, botanists from Plant Extinction Prevention Program made an astonishing discovery: 99 plants of a species never seen before—*Hibiscadelphus stellatus*. This incredible find was the only known location of the species, a rare jewel clinging to rugged cliffs. Named for its star-shaped hairs, this plant has stunning purple-yellow flowers and joins only two surviving *Hibiscadelphus* species—five of its relatives are already extinct in the wild. Like with those relatives, the area is unprotected from deer, goats, and pigs, leaving the slopes eroded and prone to landslides. Recent surveys—using drones and ropes to reach the site—confirmed a heartbreaking reality: only six plants now remain. Although the species has been collected and secured in off-site nurseries and seed banks, the speed of its decline is shocking. It’s a stark reminder that without urgent action, Hawai‘i’s forests—and the unique life they hold—could be lost forever. In the next year, botanists will return to the site to collect what they can from the remaining plants and continue to plant them into nearby protected areas, just in time.

MAUI





Haleakalā National Park is world-famous for the striking ‘āhinahina, or silversword—but its slopes hold many other rare wonders found nowhere else. Rising over 10,000 feet above sea level, Haleakalā is a landscape of extremes: a massive volcanic crater carved by time, with sheer cliffs, jagged ridges, and sweeping views that feel like another planet. Its rugged terrain shelters species that have adapted to thrive in this harsh, high-elevation environment. One of these hidden gems is *Schiedea haleakalensis*, a delicate shrub with tiny, graceful flowers that cling to the steep crater walls. Years ago, NPS staff secured collections of this species and have cared for them in the Park’s nursery, ensuring its survival. Over the past year, the PEPP and NPS team returned to the wild population, made new collections, and confirmed this rare plant still lives high on the dramatic cliff faces of Haleakalā. Thanks to years of invasive species control and protection rare species still survive in the extraordinary, rugged wilderness of Haleakalā National Park!

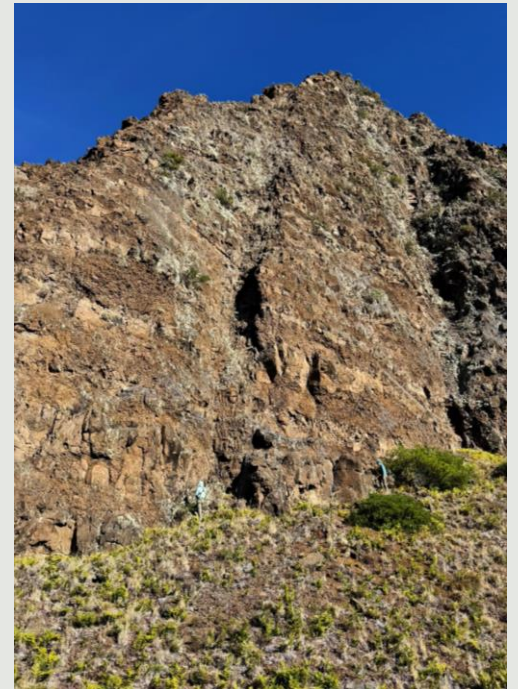
## High on Cliff Walls



*Schiedea haleakalae*

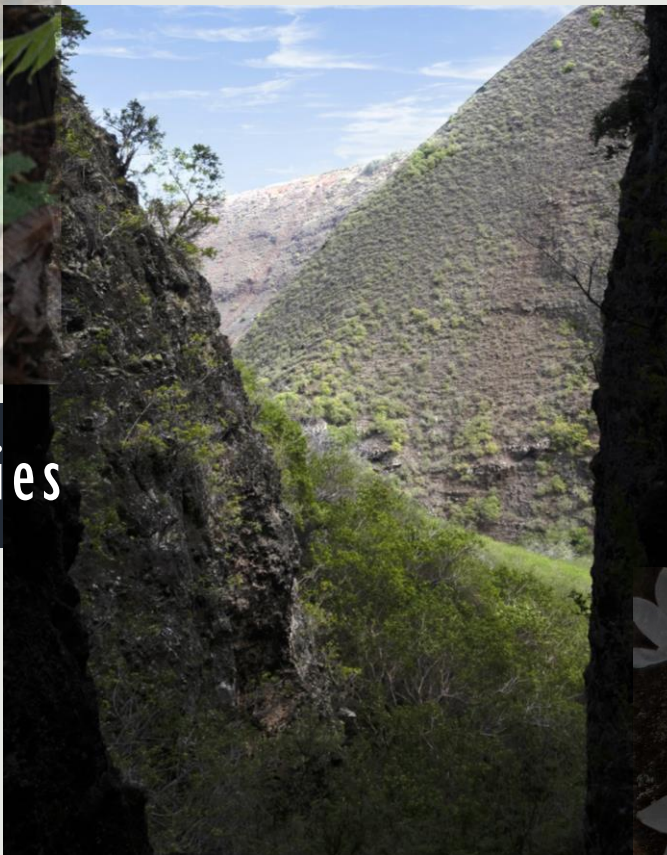


# MAUI





*New native  
plant species*



## Recent Discoveries

Five alive!!!! Over the years, botanists recorded nearly 380 native plant species on Lāna‘i—but many had not been seen in decades and were feared lost. Then came a breakthrough: new surveys by PEPP and biologists from Pūlama Lāna‘i revealed at least five of the suspected lost species are still alive! The rediscovered native species are: *Cyperus pheloides*, *Plumbago zeylanica*, *Peperomia tetraphylla*, *Embelia pacifica*, and *Schiedea menziesii*. How were they found? With persistence—and technology. After years of hiking off trail across steep terrain and not finding any remaining populations, botanists used drones to scan the remaining sheer cliffs, places where people, deer, and sheep cannot reach. These discoveries give fresh hope that more hidden plants may still survive nearby. Every rediscovery is a reminder: Hawai‘i’s native species are resilient, but they need our help. Protecting habitats ensures these rare plants—and the ecosystems they support, can thrive. Now, these remaining plants can be collected and used to support the ongoing ecological restoration happening on Lāna‘i!

LĀNA‘I





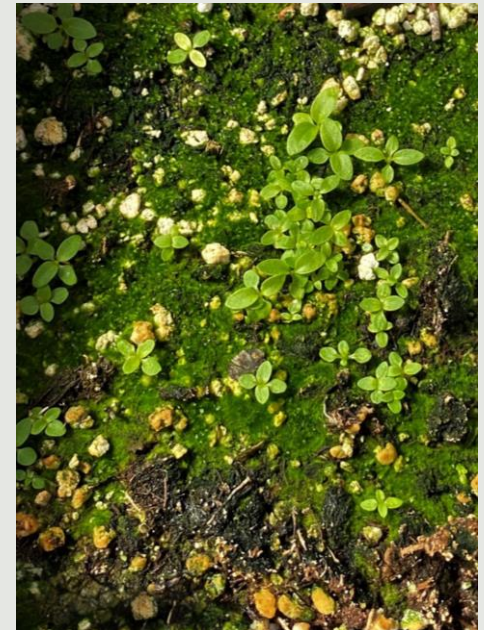
*Kadua coriacea* var. *remyi*



## Future Recovery

Kio‘ele (*Kadua coriacea* var. *remyi*) is a small shrub with cream-colored flowers found only on Lāna‘i—a plant so rare, its last wild population disappeared years ago. Before extinction claimed the last plants, botanists from the Plant Extinction Prevention Program collected and stored seeds at the Lyon Arboretum and National Tropical Botanical Garden, preserving hope for the future. That hope became reality in 2022, when seeds from those collections were germinated and grown into living plants. Once these plants began to flower, they were placed on open-air benches at the nursery, allowing pollinators to do their work. The result? Over the past year, more than 2,000 seeds were collected and secured safely in storage, refreshing the seed bank and ensuring this species has a chance to return to its island home. This is more than a success story—it’s a testament to the power of foresight and persistence. By saving seeds before the last plants vanished and by nurturing them into healthy plants, conservationists have given Kio‘ele a second chance. Every seed collected is a promise: extinction is not inevitable when we act boldly and care for the rare treasures of Hawai‘i.

LĀNA‘I



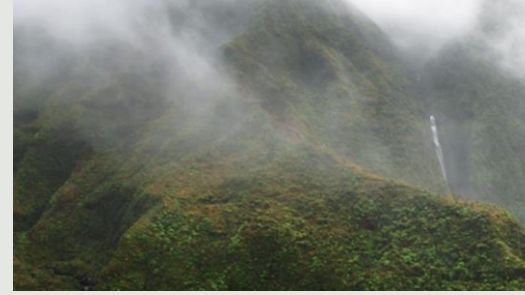
# MAHALO



to all our conservation partners

*a hui hou!*





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## *Schiedea haleakalensis*

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## Recent discoveries

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## *Kadua coriacea* var. *remyi*

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