

Maui Nui Botanical Garden

THE BEAUTY OF THE DUNES

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OPPOSITE TOP: Formerly a county zoo with a small section dedicated to native Hawaiian plants, today the Maui Nui Botanical Garden in Kihei has one of the finest collections of rare and endangered dry forest and coastal plants in Hawai'i.

OPPOSITE BOTTOM: As the only botanical garden in Hawai'i to focus on coastal and dry forest native plants, MNBG preserves the flora of Hawai'i's ever-diminishing dune systems, most of which have been turned into sub-divisions or golf courses.

EVEN IN HAWAII, A GARDEN IS NOT ALWAYS ABOUT FLOWERS. "I wish I had a nickel for every tourist that came in and said, 'Don't you have anything with flowers?' We are coastal and dry forest garden. That's our thing." So says the director of Maui Nui Botanical Garden, Hawai'i's first such facility dedicated to native plants.

While this particular garden may not overflow with big, colorful blossoms, it does overflow with the Aloha State's distinctive geography, climate, history, and vegetation. These and many other elements are intertwined in a five-acre county park in central Kahului that is both a delightful place to visit, and an important contributor to maintaining the Islands' culture.

The stated mission of the Gardens is "to foster an appreciation and understanding of the living Hawaiian islands of today, emphasizing the plants of Maui Nui (Maui, Moloka'i, Lāna'i and Kaho'olawe), and providing a center for environmental education, Hawaiian cultural expression, conservation, biological study, and recreation."

Some of the vegetation on display here boasts an impressively ancient pedigree. Long before the arrival of the first Polynesian settlers, seeds and spores floated across the ocean, traveled in updrafts, and were carried great distances by seafaring birds to the world's most remote archipelago. Some 1.2 million years ago, a landmass larger than today's Big Island called Maui Nui (literally "Big Maui") afforded those early botanical pioneers a broad range of distinct environments where they evolved in isolation. As sea levels rose and Maui Nui subsided beneath its own weight, the saddles between Maui Nui's seven volcanoes filled with seawater, resulting in four distinct islands—Moloka'i, Lāna'i, Kaho'olawe and Maui.

Today, plants native to Maui Nui and Polynesian introductions are collected, protected and displayed at Maui Nui Botanical Garden (MNBG). The facility is also the state's only garden located in a coastal dune system, making it ideal for conserving endangered coastal and dry forest plants.

The forerunner of MNBG began in 1976 when noted Hawaiian plant collector Rene Sylva began gathering native plants in a corner of the county zoo. After the zoo closed more than two decades later, MNBG formed as a non-profit organization and expanded the garden. "We started with nothing, nothing," notes MNBG director Lisa Schattenburg-Raymond. "Not a hose, not a trash can, not a rake, nothing." Today the garden receives funding from Maui County, operating as a free community park.

Many plants found in this unusual garden have woven their way into Hawai'i's native culture. For example, *pōhinahina* (*Vitex rotundifolia*) is a native coastal dune plant whose scented foliage can be steamed to treat asthma and made into leis. Others, like

TOP: Besides their collection of the plants of Maui Nui, MNBG has many examples of Polynesian introductions like the ubiquitous coconut palm (*Cocos nucifera*).

LEFT: Paths lead guests past various endemic and indigenous plants of Hawai'i.



ABOVE: MNBG's hale provides a shady respite from the hot Hawaiian sun. The open thatched-roof structure was built by Maui Community College's indigenous architecture class
LEFT: Despite being frequently mislabeled as a tree, bananas (of



the *makaloa* (*Cyperus laevigatus*), an indigenous sedge woven into very fine mats reserved only for the *ali'i*, grow in nearby Kanahā Pond Wildlife Sanctuary.

Examining a glossy green-leafed woody vine called *ʻānapanapa* (*Colubrina asiatica*), Schattenburg-Raymond explains that it occurs naturally in Hawai'i but is also found around the Asian-Pacific rim where its soft, thin leaves are used as soap. She tears off half a dozen leaves, rubbing them together vigorously to work up a foamy green chlorophyll-scented lather.

While *ʻānapanapa* is potentially invasive, most of Hawai'i's remaining 1,100 native plants are considered species of concern, rare or critically endangered. Ninety percent grow nowhere but Hawai'i. Unlike the average county park, conservation is paramount at MNBG. The garden serves as a seed bank for East Maui and has one of the state's few permits to collect endangered species.

Besides managing and maintaining rare native plants, some of which are outplanted, MNBG works closely with conservation groups like the Maui Coastal Land Trust and community outreach programs, schools and Maui Community College. The need for such efforts, says Schattenburg-Raymond, is clear and compelling. "Most of the dune systems today are either sub-divisions or

the genus *Musa*) are considered giant herbs, first introduced to Hawai'i by Polynesians less than 2,000 years ago. Centuries worth of selectively bred varieties are grown, protected and studied at the Maui Nui Botanical Garden.



RIGHT: *Morinda citrifolia* or noni, a glossy green-leafed member of the coffee family (Rubiaceae), is prized for its bark, leaves and especially its oddly shaped fruits which are used medicinally in Hawai'i and around the world.



LEFT: Bread fruit, or 'ulu as it is known in Hawai'i, has been a staple crop for peoples of the Pacific for thousands of years. The handsome shady tree with distinctive leaves can also be used to make canoes, cloth bark, medicine, sand paper, surf boards, and to repel mosquitoes.

golf courses," she points out. "Statewide, there's just not a whole lot left."

MNBG board president Janet Allan explains that a volunteer Weed & Pot Club meets each Wednesday at the Garden for weeding, repotting and general care.

The garden also hosts events like a biannual plant sale and an Arbor Day tree giveaway when 1,000 native trees are handed out. This April 19th, MNBG will host an annual festival that intertwines culture with the environment. The free, family-oriented event includes hands-on demonstrations like *kapa* (cloth bark) and cordage making, nose flutes, *lei* stringing, and *'ulumaiika* (Hawaiian stone bowling).

An accomplished cordage maker, Schattenburg-Raymond holds workshops on using native plants for dyes and cordage. MNBG also hosts public lectures on plants and their cultural uses featuring speakers like famed author and naturalist Angela Kepler.

With some 40 varieties of sugar cane, 25 types of banana, 15 kinds of 'uala (sweet potato), six out of 14 known varieties of 'awa (kava kava) and 50 of the 60 documented varieties of *kalo* (taro) MNBG has one of the finest collections of Polynesian plants in the Pacific.

But even these plants, although more common than most natives, face an uncertain future. The combination of urban development, climate change (such as a recent severe drought), disease and predatory animals like *pua'a* (wild pigs) all threaten the survival of many rare cultivars and hybrids.

"It's frustrating because a lot of these Polynesian introductions, unlike endangered species, have no



legal status even though they occur no place else in the world," Schattenburg-Raymond laments.

MNBG's goal is to establish two complete collections of these plants on each Hawaiian island to ensure thousands of years of selective breeding aren't lost overnight. MNBG's staff sees the importance of getting rare plants back into the community so they can be perpetuated for the future.

Today the garden provides sugar cane, 'awa strainers, 'ulu (breadfruit), 'olenā (turmeric) and wauke (for cloth bark) and coconuts for cultural activities like the Makahiki ceremony and the 2007 launching of the Hokule'a, a 20th century working reproduction of an early Polynesian sailing vessel.

Noni trees (*Morinda citrifolia*), prized for their medicinal fruits, provide color, shade, and an important cultural product to the local community. MNBG has one noni tree just outside the garden whose fruit is free to be collected by individual users. "Every Pacific Islander here knows where we are," says Schattenburg-Raymond. "We probably give away over 400 pounds of noni a year."

MNBG also has rare plant varieties selectively bred for a particular quality like bulging kō hāpai (literally "pregnant sugar cane"), a'ea'e or variegated banana and kalo 'apuwai ("water cup") taro which was valued for the pure water that collected in the cupped leaf.

As we stroll past a traditional Hawaiian hale, Schattenburg-Raymond slows to introduce uncommon bananas like the mai'a hāpai ("pregnant banana"), the short, round pōpō'ulu and the colorfully named 'eke'ula ("red package") banana.

Nursery manager Stephanie Seidman says, "We need these plants growing in other places because if something happens here, we could lose them forever. We have to share." 🌱



Each of these plants, including both native species and those introduced or cultivated by Hawaiians, occupy a unique niche in the plant world and, like essential parts of a multi-million piece puzzle, they complete that picture known as biodiversity, the key to a healthy planet.



TOP: The a'ea'e or variegated banana (*Musa acuminata X M. balbisiana*) with its fanciful green and pale yellow striped pattern is one of the rare Hawaiian varieties grown at the Maui Nui Botanical Garden.

LEFT: Maui Nui Botanical Garden has rare forms of Polynesian introduced plants like this colorful bulging kōhāpai (*Saccharum officinarum*), literally "pregnant sugar cane."

TOP: MNBG maintains some 50 varieties of kalo (*Calocasia esculenta*), also known as taro. This starchy staple crop that is used to produce poi, transcends daily household use. Kalo is invoked in Hawaiian creation chants and is the source of 'ohana, the Hawaiian word for 'family.'



RIGHT: *Brighamia insignis* or ālula is endemic to Kaua'i and may be extinct in the wild. Through conservation efforts, the ālula can be found in botanical gardens like MNBG where it serves as a living link to Hawai'i's past.