

DISCOVER

Hawaii's Unique Flora



**WAIMEA
NATURE PARK**

SELF-GUIDING BOOKLET

**Plant Category / Classification
General Information / Plant Uses**

A PROJECT OF



**WAIMEA
OUTDOOR CIRCLE**

**PLEASE DON'T FORGET TO RETURN THIS BOOKLET
SO OTHER VISITORS MAY ENJOY IT. MAHALO!**

He keiki aloha nā mea kanu.

(Beloved children are the plants)

‘Ōlelo No‘eau Hawaiian Proverbs, Mary Kawena Pukui

Sponsored and funded by
County of Hawaii, Department of Research and Development
and
Hawaii Tourism Authority



A PROJECT OF
WAIMEA OUTDOOR CIRCLE

Welcome to Waimea Nature Park Ulu La'au

Ulu La'au is a natural preserve located on 10 acres in the heart of the town of Waimea. The seasonal Waikoloa Stream runs through the park. The purpose is to provide an area for peaceful public recreation as well as a place where residents and visitors can learn about the native plants of Hawai'i. The park is a long-term community project of the Waimea Outdoor Circle.

Ulu La'au, which in Hawaiian means "a garden of trees," was first documented in 1830 as the name for this area. In the intervening years, the land was farmed and used for pasture. The land was acquired by the Waimea Outdoor Circle in early 1999 and volunteers cleared much of the invasive vegetation that covered the area and also cleared the stream bed of debris and are stabilizing its banks. In 2000, the first native Hawaiian species were planted.

The park now has picnic tables, benches, paths and a greenhouse. It also has 11 beds in which 36 species of native Hawaiian groundcover, shrubs and trees are growing. These plants are relatives of the original species that arrived over several millions of years and before human contact. They are classified as *endemic*, meaning they only occur in Hawaii or *indigenous*, meaning they also occur in other geographic areas. Hawai'i's native plant species are especially unique – more than 95% are found only in the Hawaiian Islands.

The plants here include a variety of ferns, flowering shrubs, ground covers and trees that are representative of the dry, mesic and wetter habitats of this part of the island. They vary from *ma'o hau hele*, the beautiful yellow hibiscus that is the State flower, to the majestic *koa* tree, once used by Hawaiians for their canoes, to the adaptable and hardy *'ulei*, known as the Hawaiian rose. All of the plants have distinctive characteristics and many are useful as medicine, food, tools, decorative objects and in construction.

Use the information about each of the native plants on the following pages in this booklet along with the photos of the plant to help you in identifying the plants. A map of the various beds where the plants may be found is also included at the beginning of this section.

Enjoy your learning adventure into Hawai'i's unique flora and enjoy your day at Ulu La'au!

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General Park Information:

Hours: Daily; daylight hours

Admission: Free

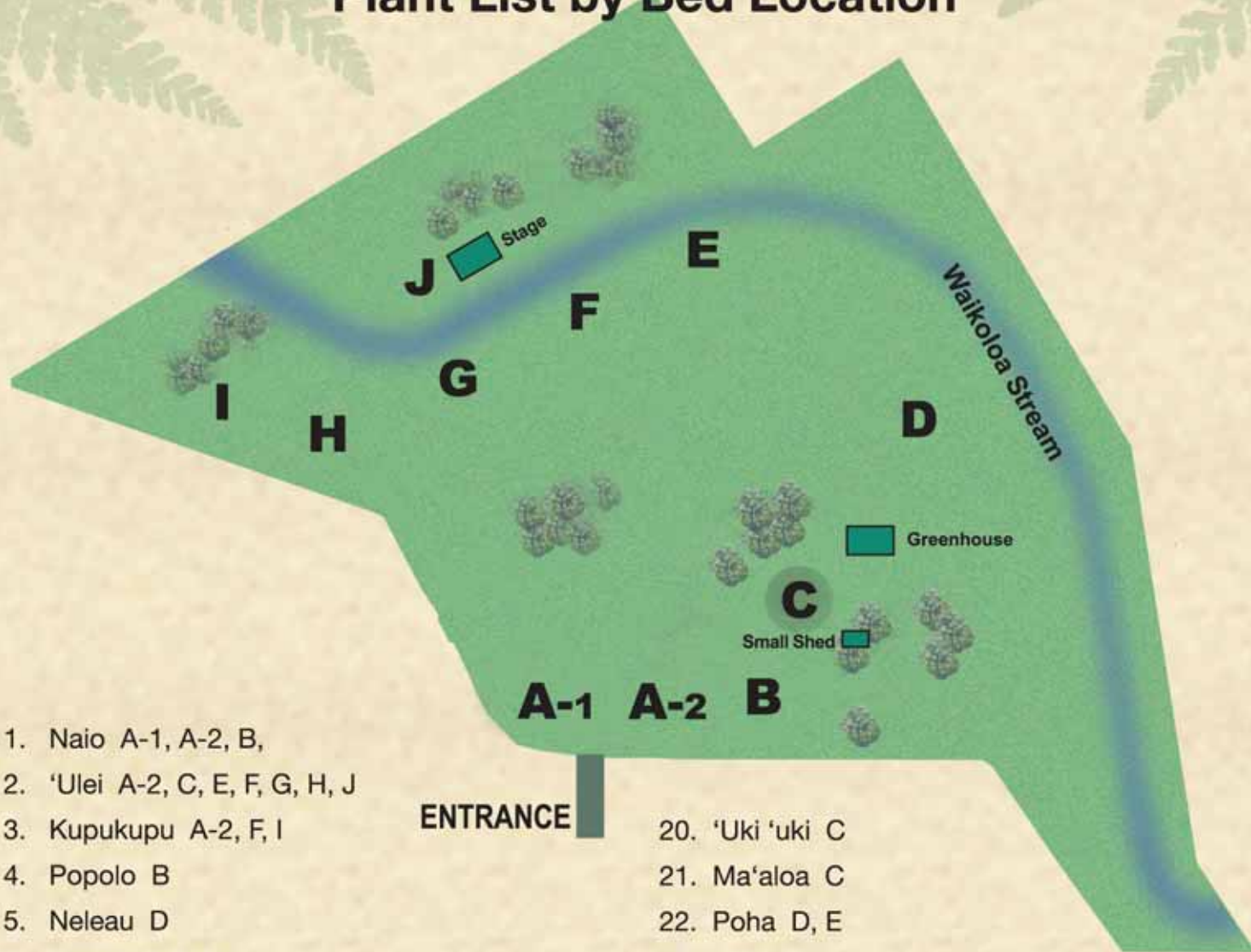
Activities: Picnicking, strolling, dog walking, relaxing, meditating, native plant education

Help out:

- Please pick up and throw away all litter and trash. Use the recycle station for bottles and cans
- Be kind to picnic tables and benches
- No loud music – the park is a quiet area.
- Keep dogs on leash and clean up after them using bags from the Dogi Pot

Waimea Nature Park

Plant List by Bed Location



1. Naio A-1, A-2, B,
2. 'Ulei A-2, C, E, F, G, H, J
3. Kupukupu A-2, F, I
4. Popolo B
5. Neleau D
6. Koa A-2, E, F
7. Koai'a A-1, A-2, D, F, G, H, I
8. Koki'o ula A-2, C, D, H
9. Ma'o hau hele A-1, D, E, F, G, I
10. Hala pepe B, C, I
11. 'A'ali'i B,C, D, F, G, H, I
12. Nehe B, D, I
13. Pua kala B, G, H
14. Ho'awa B, C, E, H
15. Koki'o ke'oke'o A-1, B, C, D, G, H, I
16. Ilie'e C, D, E, G, H
17. Mamaki C, D, I
18. 'Ohi'a B, C, D, E, F, G, H, I
19. Palai C

ENTRANCE

20. 'Uki 'uki C
21. Ma'aloa C
22. Poha D, E
23. 'Aiea D
24. Pili D, E
25. Manele D
26. Alahe'e E, F, G
27. Rush E, I
28. Ama'u F
29. 'Ilima papa G, J
30. 'Iliahi A-2, D, G, I
31. Kolokolo kahakai H
32. 'Akia A-2, B, D, J
33. Catchfly A-2, B, C, D
34. Kulu'i A-2, H, I, J
35. 'Ewa hinahina A-2, B, C, J
36. Nanu A-2, H, I

1. Naio



Common Name – Bastard Sandalwood
Hawaiian Name - Naio
Scientific Name – *Myoporum sandwicense*

Indigenous

Shrub / tree from 3' – 45' tall; coastal to 6,000' elevation.

Hawaiians used the hard, yellowish wood for house frames. It was unsuccessfully substituted for sandalwood by greedy merchants during the waning days of the sandalwood trade.

2. 'Ulei



Common Name – Hawaiian Hawthorn /
Hawaiian rose
Hawaiian Name - 'Ulei

Scientific Name - *Osteomeles anthyllidifolia*

Indigenous

Groundcover, shrub, tree; 2' – 12' tall; coastal to 4000' elevation. Very drought-tolerant. Sprawling stems reach up to 12' in length.

The whip-like stems of the plant are used for making fishnets. The wood is used for digging sticks, weapons, and musical instruments.

3. Kupukupu



Common Name – Swordfern
Hawaiian Name - Kupukupu
Scientific Name - *Nephrolepis cordifolia*

Endemic

Protected coastal to 4000'

This well-known fern can be used in *leipo'o* (head lei) and *kupe'e* (ankle and wrist adornments) during hula or ceremonies.

4. Popolo



Common Name – Glossy Nightshade
Hawaiian Name - Popolo ku mai
Scientific Name – *Solanum incompletum*

Endemic & Endangered

Small sprawling or upright shrub, - 3' - 12' tall; coastal to sub-alpine

5. Neleau



Common Name – Hawaiian Sumac
Hawaiian Name - Neleau
Scientific Name – *Rhus sandwicensis*
Endemic

Small shrub to tree with many root suckers; 15-25' tall.

Its range is unknown, but it is currently growing in ravines on the Hamakua Coast of the Big Island.

6. Koa

Efforts are under way to conserve existing koa trees and plant new seedlings.



Common Name - None
Hawaiian Name - Koa
Scientific Name – *Acacia koa*
Endemic

Range from 200' - 6000' elevation

Koa is the king of Hawaiian forest trees and once grew to very large size – 100 feet or more - in upland wet forests on all of the major islands here.

Because of its large size, koa logs were used by Hawaiians for making their outrigger canoes. The wood is a beautiful dark brown and is used for making household objects like chairs, tables, and other furniture as well as ukuleles. It is also the host tree for the native and rare Blackburn butterfly.

7. Koai'a



Common Name – None
Hawaiian Name - Koai'a
Scientific Name – *Acacia koaia*
Endemic & Vulnerable

Small shade tree; 20 – 25' tall; range: 200'- 6000' elevation. Koai'a are the offspring of the koa. They are smaller, with harder wood, and are well-adapted to the drying wind and heat of leeward coastal areas.

Medicinal uses for skin ailments; also used for wooden implements.

8. Koki'o ula



Common Name – Hawaiian red hibiscus
Hawaiian Name – Koki'o ula
Scientific Name – *Hibiscus kokio*
Endemic.

4'-8' tall.

Range: dry to wet, 200'- 3000' elevation

Small and slender shrub with deep, narrow-petaled, red flowers.

The flower petals are used as a dye for *kapa* cloth. Also used as a mild laxative for children.

9. Ma'o hau hele



Hawaii's
Official State
flower.

Common Name – Hawaiian hibiscus
Hawaiian Name – Ma'o hau hele
Scientific Name – *Hibiscus brackenridgei*
Endemic & Endangered
5' - 6' tall; dry areas from 200' - 3000' elevation
Short-lived, full, round shrub; prolific lemon-yellow blooms.

Threatened with extinction.

10. Hala pepe



Common Name – Hawaiian Dracena
Hawaiian Name – Hala pepe
Scientific Name - *Pleomele hawaiiensis*
Endemic & Endangered
Slender, single-trunked trees 15' – 30' tall; dry areas from
500' - 2400' elevation

Various medicinal uses.

11. 'A'ali'i



Common Name - None
Hawaiian Name – 'A'ali'i
Scientific Name – *Dodonaea viscosa*
Indigenous
Shrub to trees 3'-30' tall; coastal – 8000' elevation

Hawaiians used the wood for house posts and spears. Its leaves and flowers were used for medicine. The colorful clusters of seed pods are prized for use in lei and wreaths. Boiled seeds used for dye on *kapa*.

12. Nehe



Common Name – None
Hawaiian Name – Nehe
Scientific Name - *Melanthera integrifolia*
Endemic
Prostrate, spreading groundcover; prolific yellow blooms;
1' - 2' tall; coastal to 2500' elevation

This plant is a member of the sunflower family.

13. Pua kala



Common Name – Prickly poppy, Hawaiian poppy
Hawaiian Name – Pua kala

Scientific Name – *Argemone glauca*

Endemic

To 3' tall; coastal dry forest to subalpine forests
A perennial herb with prickly leaves and delicate, white flowers.
Self-seeds easily.

Seeds and sap of the stalk were used as a narcotic for toothaches; sap was also used to treat warts.

14. Ho'awa



Common Name – None

Hawaiian Name - Ho'awa

Scientific Name - *Pittosporum hosmeri*

Endemic

10' - 30' tall; mesic to wet forest
Shrub to tree with round, full canopy. Ripe fruit attractive to birds.

Medicinal; wood used for fuel.

15. Koki'o ke'oke'o



This rare flower
is one of seven
species of native
white hibiscus.

Common Name- White Hibiscus
Hawaiian Name- Koki'o ke'oke'o
Scientific Name- *Hibiscus arnottianus subsp. immaculatus*

Endemic & Rare

Up to 15' tall; protected coastal to 4000'

One of seven native white hibiscus varieties found in Hawaii. It is referred to in many of the ancient Hawaiian chants and stories. Various medicinal uses.

16. Ilie'e



Common Name – Native Plumbago

Hawaiian Name - Ilie'e

Scientific Name - *Plumbago zeylanica*

Indigenous

To 3' tall; coastal, dry forest understory
A mounding groundcover with prolific white flowers. Seeds have a sticky coat that allows for "hitchhiking" dispersal.

Medicinal uses; mixed with other plants to fix sprains. Also used to enhance and darken tattoos after they have been applied to the skin.

17. Mamaki



Common Name - None
Hawaiian Name - Mamaki
Scientific Name - *Pipturus albidus*

Endemic

A shrub / small tree growing up to 20'; mesic to wet forests

Used to make a soft, flexible *tapa* (*kapa*) cloth, which was worn as capes, bed loincloths and skirts; used also as bedcovers. The leaves are used as a tea infusion and are also the primary food source for the endemic Kamehameha butterfly.

19. Palai



An important plant in hula that is sacred to Laka, goddess of the hula.

Common Name - Hay Scented Fern
Hawaiian Name - Palai, palapalai
Scientific Name - *Microlepia strigosa*

Indigenous

Up to 2'; sea level - 4000' elevation

In Hawaiian, *palai* means to "turn ones face away in bashfulness or humility." *Palai* is important in hula: it is used to adorn hula altars, hula dancers weave it into adornments and it is also one of the plants sacred to *Laka*, goddess of the hula. It is commonly used today, either alone or woven into *lei*.

18. 'Ohi'a



Common Name - None
Hawaiian Name - 'Ohi'a
Scientific Name - *Metrosideros polymorpha*

Endemic

Known as the "pioneer tree," as it is the first species to populate cooled lava flows. It is found from sea level to 7,000 feet, including dry and wet forests and bogs. Grows up to 90' and typically has red flowers, but yellows, gold, oranges and rarer white varieties are also found.

The red flowers, called *lehua* are sacred to both the Hawaiian goddesses Pele and Hi'iaka. A traditional saying is: as you leave the forest, and you pick the red blossom and throw it to the ground, Pele's anger will cause it to rain. The reddish wood is extremely hard and was used for many kinds of tools and weapons

20. 'Uki 'uki



Common Name - Hawaiian Lily
Hawaiian Name - 'Uki 'uki
Scientific Name - *Dianella sandwicensis*

Indigenous

2' - 3' tall; moist habitats 300' - 6000' elevation.

A clumping lily with slender leaves and producing dark blue fruit.

Juice from the berries is used as a dye for *kapa* cloth and the berries are used in seed leis. The leaves can be used for thatching houses and the leaves and roots for cordage.

21. Ma'aloa



Common Name – None
Hawaiian Name – Ma'aloa
Scientific Name – *Neraudia ovata*
Endemic & Endangered
2'-15' tall; upper dry mesic forests
Sprawling shrub to upright tree; prefers the understory.

The bark can be used to make coarse but durable *kapa*.

22. Poha



Common Name - Cape Gooseberry
Hawaiian Name - Poha
Scientific Name - *Physalis peruviana*

Introduced

2' - 3' feet tall; 2,000' - 4,000' elevation
A small plant or bush whose date of introduction to Hawaii is uncertain.

The small, edible cherry tomato-like fruits are eaten fresh and used in jams and jellies.

23. 'Aiea



Common Name – None
Hawaiian Name – 'Aiea
Scientific Name - *Northoecstrum breviflorum*
Endemic and Endangered
Dry to mesic forest
A small tree growing to 30'. Tiny green flowers are very fragrant.

Medicinal uses; flowers and seeds used in leis; wood used in boat gunwales.

24. Pili



Hawaiian hale or houses were made from pili.

Common Name - Tanglehead
Hawaiian Name - Pili
Scientific Name – *Heteropogon spp.*

Indigenous

A type of long, clumping grass.

Pili means to "stick together" in Hawaiian, and got its name from the way it sticks to its neighbors as it grows. It was used primarily as thatch for Hawaiian *hale* or houses. It was also used for a black dye.

25. Manele



Common Name – Hawaiian soapberry

Hawaiian Name – Manele

Scientific Name - *Sapindus saponaria*

Indigenous.

Medium to large dry forest tree growing to 80'; 1,000' – 4,000' elevation

The seeds and flowers can be used in leis and in seed jewelry. In other parts of the world, the wood is used in carpentry, the leaves and roots are used medicinally and the fruits as a substitute for soap.

26. Alahe'e



Common Name - None

Hawaiian Name - Alahe'e

Scientific Name - *Psydrax odoratum*

Indigenous

18' – 40'; protected coastal to 2,500' elevation

Small hardwood tree with waxy, dark green leaves. Two or three times each year they are covered with tiny, highly fragrant, white blossoms that look like snowfall; in Hawaiian, *ala* means "slippery," *he'e* means "octopus" – combined the words refer to the wafting fragrance of the flowers.

Wood from this plant was made into digging sticks ('o'o), fishhooks and spears.

27. 'Aka'aka'i



Common Name – Softstem bulrush

Hawaiian Name – 'Aka'aka'i

Scientific Name – *Schoenoplectus tabernaemontani*

Indigenous.

2' – 10' tall; low to mid elevations.

This reed-like plant grows on marshy or wet ground.

A member of the lily family that includes onion, garlic and leeks, the bulb of this plant is used as a medicine to treat colds, tuberculosis and venereal disease. Also used for paint and dye.

28. 'Ama'u



Common Name – Rasp Fern

Hawaiian Name - 'Ama'u

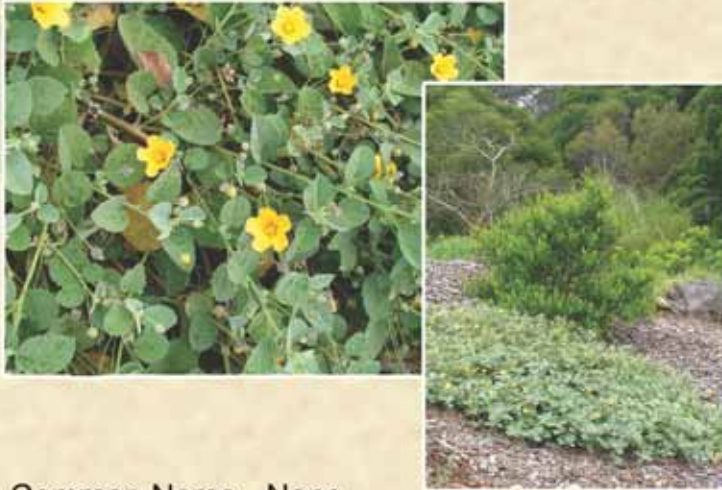
Scientific Name - *Sadleria cyatheoides*

Endemic

Up to 6' tall; open, mid-elevation shrublands to rain forest.

The fronds of the 'ama'u are used for thatching the roofs of houses, for lei, medicine and for food. It was believed that when the 'ama'u fern grows straight up, a flood is coming soon.

29. 'Ilima papa



Common Name - None
Hawaiian Name - 'Ilima papa
Scientific Name - *Sida fallax*

Indigenous

1 - 2' tall; beach strand to 2,500' elevation.

A low, woody spreading groundcover with profuse yellow flowers.

Queen Emma's favorite flower. There are also a variety of medicinal uses, including as a laxative for children and also used to cure asthma, thrush, constipation, and birth pain. Widely used today as a mass planted, drought-tolerant groundcover.

30. 'Iliahi



Common Name - Sandalwood
Hawaiian Name - 'Iliahi
Scientific Name - *Santalum ellipticum*

Endemic

A large shrub to medium tree growing up to 45'; the entire species has a wide habitat range from dry to wet, coastal to uplands.

The wood of this tree is call *la'au 'ala* and is very fragrant. From about 1790 - 1840, the tree was harvested in large numbers, especially the extensive forests on Hawai'i Island, and exported to China for carved objects, chests and incense.

31. Kolokolo kahakai



Common Name - Beach vitex
Hawaiian Name - Kolokolo kahakai, Pohinahina
Scientific Name - *Vitex rotundifolia*

Indigenous.

2' - 3' tall; beach strands to 2,500' elevation.

A sprawling, drought-tolerant groundcover with tendrils up to 12' long. Blue-purple spikes. Leaves have a pleasantly spicy aroma.

Variety of medicinal uses. Flowers and foliage used for lei.

32. 'Akia



Common Name - Moloka'i Osmanthus
Hawaiian Name - 'Akia
Scientific Name - *Wikstroemia phillyreifolia*

Endemic.

1,500' - 4,000' elevation. In lower elevations, a sister species is a mounding groundcover up to 3' tall and 3' wide. In the uplands, this is a small, upright shrub. Both have clusters of tiny yellow flowers and round seeds that turn bright red when ripe.

Used as a laxative, for asthma, for cordage and in lei.

33. Catchfly



Common Name – Lance-leaf Catchfly.
Hawaiian Name – None
Scientific Name - *Silene lanceolata*.
Endemic and Endangered.
Up to 5' tall. Grows in a wide range of habitats.

Flowers have a sticky base.

35. 'Ewa Hinahina



Common Name- None
Hawaiian Name- 'Ewa hinahina
Scientific Name- *Achyranthes splendens*
Endemic & Rare
Up to 4' tall; 200' to 3000'elevation.
Attractive silvery foliage with seasonal wheat-colored seed spikes that blow gracefully in the wind. Highly drought and wind-tolerant with compact appearance.

34. Kulu'i



Common Name- None
Hawaiian Name- Kulu'i
Scientific Name- *Nototrichium humile*
Endemic & Endangered
Up to 6' tall; 200' to 3000' elevation.
A small dryland shrub tolerant to drought and wind.
New growth has a reddish tint; stems thin and strong.

36. Nanu



Common Name- Hawaiian Gardenia
Hawaiian Name- Nanu
Scientific Name- *Gardenia brighamii*
Endemic & Endangered
Up to 8' tall; protected coastal to 2500' elevation.
Prefers drier locations and full sun. Highly fragrant, pure white flowers bloom on and off all year. Wood can be used for anvils.

The mashed fleshy outer pulp of the fruit produces a dye.

Native Plants

BOOKS, WEBSITES AND OTHER INFORMATION

Books

Plants in Hawaiian Culture. Beatrice Krauss

Plants in Hawaiian Medicine. Beatrice Krauss

Growing Native Hawaiian Plants. Heidi Bornhorst.

La'au Hawai'i – Traditional Uses of Hawaiian Plants. Isabella Aiona Abbott

Hawaiian Heritage Plants. Angela Kay Kepler.

Growing Hawai'i's Native Plants. Kerin E. Lilleeng-Rosenberger

Na Lei Makamae, The Treasured Lei. Marie A. McDonald & Paul R. Weissich

A Native Hawaiian Garden. John L. Culliney & Bruce P. Koebele

Websites

<http://kms.kapalama.ksbe.edu/projects/2003/plants/>

<http://pdcs.ctahr.hawaii.edu:591/hawnprop/commlist.htm>

<http://www.bishopmuseum.org/exhibits/greenwell/greenwell.html>

<http://www.hawaii.edu/sciref/hawaiigrdns.html>

<http://www2.bishopmuseum.org/ethnobotanydb/references.asp>

Big Island Native Plant sites

- **Amy B.H. Greenwell Ethnobotanical Garden.**

Located in Captain Cook, 12 miles south of Kailua-Kona on Highway 11. A part of Bishop Museum, the Amy Greenwell Ethnobotanical Garden focuses on the traditional native Hawaiian uses of plants and land. This 15-acre garden contains over 225 species of native plants including more than 30 that are Federally listed as endangered.

- **Manuka State Wayside Park**

Located on Route 11 (Mamalahoa Highway) approximately 41 miles south of Kona. Surrounded by the South Kona Forest Reserve, this park includes a 13 acre arboretum that was planted in the mid-19th century, and a two-mile loop trail into intact native forest. The arboretum includes both native and introduced plants.

- **Hawaii Volcanoes National Park**

In addition to being a showcase of volcanism, this superlative national park is home to a vast array of unique, high elevation, native species. An excellent place to learn about the native flora of Hawai'i.

- **Kalopa State Park**

Located about four miles south of Honoka'a on the Hamakua Coast, this State Park is located in a native *ohia* forest, and has several trails, through a mixed native/exotic forest.

Project production Hawaii Pacific Productions

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Photos courtesy High Wave Graphics, Barrie Moss, Frani Okamoto

The Waimea Outdoor Circle and Ulu La'au

The Waimea Outdoor Circle is a non-profit, volunteer community organization based in Waimea. It is part of the Statewide Outdoor Circle, which has been a strong voice for the beautification of Hawaii for the past 100 years

The WOC has numerous ongoing community projects. They include:

- Organizing litter cleanup and recycling efforts.
- Involvement in planning streets, highways, parks, playgrounds and other public use areas
- Planting trees and flowers at various sites in Waimea
- Preserving trees
- Holding annual plant sales
- Propagating and encouraging the planting of native species
- Involvement in environmental conservation efforts
- Community education efforts about environment and nature

The **Ulu La'au Nature Park** is one of the WOC's most ambitious projects to date. Our mission is to provide a peaceful, accessible native park with an education center which cultivates life-long stewardship of the 'aina, the earth, for the enrichment of the Kohala community and all who visit. Though it now seems quiet and serene, this project has been an enormous undertaking. It was developed entirely using donations of time and money from the community along with thousands of hours of work by volunteers. Currently on site there is a greenhouse, which the WOC uses to propagate native plants for planting and for education purposes; a small temporary operations/storage building; and a number of memorial trees dedicated to extraordinary individuals who have been involved with the Waimea Outdoor Circle. The WOC is continuing to introduce more native plants into the park's beds as well as working with the Natural Resource Conservation Service to use native plants to stabilize the banks of the Waikoloa stream. The wood chips that are used for mulching are all from the park.

The WOC's future plans for Ulu La'au include construction of an education center and restrooms, the addition of more picnic benches and tables, and improved parking.

Visit our website at <http://www.waimeaoutdoorcircle.org>

Volunteers Welcome

Help is needed! Your assistance will leave a legacy that will be enjoyed and appreciated by future generations! Work days are held at the park every other Saturday from 9 a.m. – noon. If you wish to receive email updates about our volunteer days, please email us your address.

Donations

Call or send donations to Waimea Nature Park, P.O. Box 437395, Kamuela, HI 96743

Contact us: (808) 443-4482

Email: wocahawaii@gmail.com

Call for information and to arrange group tours.



A PROJECT OF
WAIMEA OUTDOOR CIRCLE



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