

Haleakalā

Haleakalā National Park
National Park Service
U.S. Department of the Interior

ROADSIDE PLANTS ---- Summit District

- Native plants disperse to the Hawaiian Islands by blowing in the wind, hitching a ride with birds or floating on the water. Pioneer species gradually adapt to their new environment and evolve into new species.
- There are both endemic and indigenous plants that are native to Hawai'i. Hawaiian endemic species are only found here, while indigenous species can be found in other places. Introduced species were brought to Hawai'i by humans.
- Without any large native herbivorous (plant eating) mammals, native Hawaiian plants generally evolved into forms lacking thorns, bad tastes or noxious chemicals. The introduction of cattle, goats, pigs, deer, and sheep threatens the survival of native species.

'ĀHINAHINA: Haleakalā Silversword (*Argyroxiphium sandwicense* subsp. *macrocephalum*)
Family: Asteraceae (Sunflower family)

The 'āhinahina is a perennial plant which can develop from seedling to flower in as little as three years, but typically requires more than a decade. The plant remains a compact rosette until the final few months of its life. Then the plant sends up a flowering stalk with one to five hundred purple flower heads, sets seed, and dies. The silver hairs on the leaves protect the plant from the harsh ultra-violet rays of the sun and aid in water conservation.

As with many other Hawaiian species, humans brought the Haleakalā 'āhinahina to the edge of extinction. In ancient times, people used the Haleakalā 'āhinahina for lei-making. In the early 1900s, Haleakalā 'āhinahina were collected for souvenirs and for parade floats. Pigs, goats, and cattle, introduced by Europeans, also had a devastating impact on this plant. By the 1930s, only a few thousand plants remained.

Current conservation methods include maintaining the Park boundary fence to exclude browsing mammals, monitoring and controlling introduced insects (such as the vesper wasp and Argentine ant) that prey on native pollinators, and educating the public regarding the impacts of hiking off-trail. Although currently the Haleakalā 'āhinahina numbers greater than 50,000 in the Park, it is still federally listed as a threatened species.



NA'ENA'E: (*Dubautia menziesii*) Family: Asteraceae (Sunflower family)

The na'ena'e (also known as **kūpaoa**) can produce a hybrid with its cousin, the Haleakalā 'āhinahina. These two plants belong to a group of plants, known as the Silversword alliance, which exhibit adaptive radiation (the emergence of many species from a common ancestor when introduced to a new environment). This group of 28 species apparently evolved from one original immigrant to the islands. Na'ena'e is a hardy green perennial that blooms yearly but can be destroyed by frost. This plant is fragrant and Hawaiians used its roots to perfume their kapa (bark cloth).

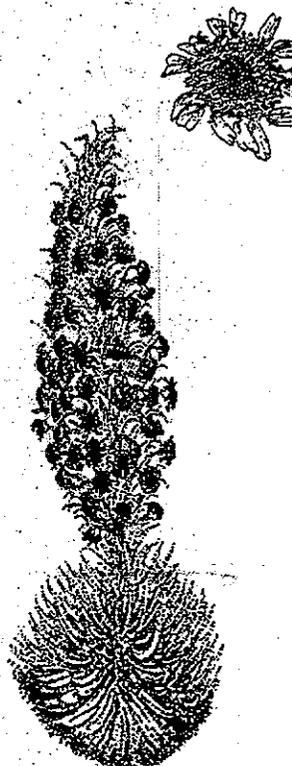
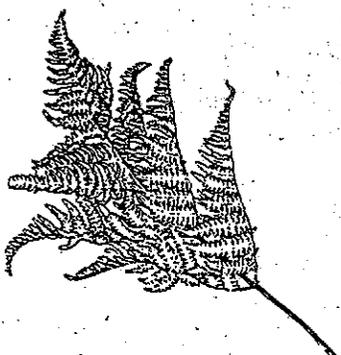
PŪKIAWE: (*Styphelia tameiameia*)
Family: Epacridaceae (Epacris family)

The small white-to-red berries of the pūkiawe are an important food source for nēnē, the native Hawaiian goose, and can be found from sea level to the alpine zone. Hawaiians used the small evergreen-looking leaves and red fruit for lei-making, and the woody bark for making dye. In ancient times, ali'i (chiefs) would burn pūkiawe and use the smoke in ceremony to purify themselves. The ceremony lifted the kapu (taboo) against mingling with maka'ainana (people of the land).



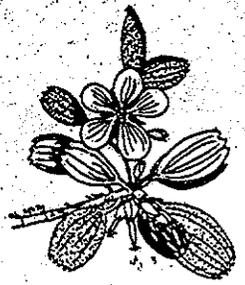
KĪLAU: Bracken fern (*Pteridium decompositum*)
Family: Dennstaedtiaceae (Hay-scented fern family)

The name kilau is used for several different fern species. It is one of the few Hawaiian species to show a distinct seasonality. The single fronds turn brown and die back to the ground in winter. In spring, the new green fiddleheads emerge and unfurl. This fern is primarily responsible for the spring colors along the road and on the slopes inside Haleakalā valley.



NOHOANU: Silver geranium (*Geranium cuneatum* subsp. *tridens*) Family: Geraniaceae (Geranium family)

Nohoanu means cold-dweller. This plant is also known as **hinahina**. Elsewhere in the world geraniums are small, herbaceous plants, but in Hawai'i the six endemic geraniums have evolved as woody shrubs. As with the 'āhinahina, the silver hairs on the small oval leaves protect the plant from the strong ultraviolet sunlight received at high elevation. Dew on the silvery leaves reflects light, making the plant especially visible on the drive up Haleakalā in the moonlight.



MĀMANE: (*Sophora chrysophylla*) Family: Fabaceae (Pea family)

Māmane can grow to be a 40-foot tall tree. It has a strong, heavy wood that is prized for its durability. Hawaiians used māmane wood for their house posts, runners for hōlua (sleds), and 'ō'ō (digging sticks). The yellow flowers of the māmane provide a valuable food resource for the native Hawaiian honeycreepers, such as 'iwi and 'apapane.

'ĀĀLIĪ: (*Dodonaea viscosa*) Family: Sapindaceae (Soapberry family)

This abundant shrub got its name from its reddish-brown papery seed capsules that resemble the helmet of a Hawaiian ali'i (chief). The seed capsules can be used to make a colorful dye and to decorate alters to Laka, the goddess of hula.



'ŌHELO: (*Vaccinium reticulatum*) Family: Ericaceae (Heath family)

'Ōhelo is related to blueberries and cranberries. The red-blue fruits are edible either raw or cooked and the oval leaves can be used to make a medicinal tea. Hawaiians consider 'ōhelo berries to be sacred to Pele, the volcano goddess. 'Ōhelo berries are an important food for nēnē as well.

KŪKAENĒNĒ: (*Coprosma ernodeoides*) Family: Rubiaceae (Coffee)

This low shrub creeps along the ground with large, round black fruits on the stem. The dark fruits produce a deep purple dye. Hawaiians use the bark of this plant to produce a yellow dye. Although the berries are a favorite food of nēnē, kūkaenēnē literally means "goose droppings". The berries are not palatable to humans.

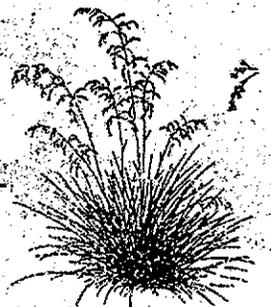


PILO: (*Coprosma montana*) Family: Rubiaceae (Coffee family)

This plant is easily recognizable by its stiff, radiating branches and bright orange berries. The round berries contain seeds that look like coffee beans. In some places, pilo berries are a favored food of forest birds. Some birds will guard pilo and chase away other intruders. Pilo is dioecious, the male and female flowers are formed on different plants. In the past, Hawaiians used pilo branches for designing leis.

BUNCH GRASS: *Deschampsia rubigena* Family: Poaceae (Grass family)

This large grass is often 2 to 3 feet tall. It grows in distinct clumps or bunches made of narrow, erect leaves. *Deschampsia* was probably the dominant ground cover in the grassland and shrubland communities before the advent of commercial cattle grazing and the introduction of alien range grasses.



EVENING PRIMROSE: (*Oenothera stricta*)
Family: Onagraceae (Primrose family)

The evening primrose, an introduced plant from South America, has large yellow four-petal flowers. Now that most browsing animals have been removed from the Park, humans are the primary vehicle for alien introductions. The evening primrose was probably brought to Haleakalā National Park as a roadfill used during construction. Today, the primrose is visible along the road as well as in the wilderness area.

