Invasive Plant Field Guide

Haleakalā National Park

Preventing invasive plants from invading native habitats is vitally important for all Pacific Island national parks. This field guide highlights 25 invasive plants that Haleakalā National Park (HALE) and partners target for early detection and response.

Species cards have been divided into four categories (Grass / Herb, Shrub, Tree, Vine) that are color-coded for easy navigation. The front of each card has color photos and measurements to help with species identification. Also included are photos of possible "look-alike" species to keep in mind. A more complete description is on the back of each card.

National Park Service
U.S. Department of Interior

MISC

HALE

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REPORT YOUR PEST!

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Cover Photo: Miconia (*Miconia calvescens*)

AUSTRALIAN BLACKWOOD
Acacia melanoxylon

Don't confuse with native koa, which has flat seed pods and sickle-shaped "leaves."

All images unless noted Forest & Kim Starr (UH)

TREE

AUSTRALIAN BLACKWOOD
Acacia melanoxylon

FAMILY: Fabaceae

General Description: Australian blackwood is a medium-sized evergreen tree (up to 40') with a straight trunk, narrow crown, and dense foliage. Mature "leaves" are short, "stubby", and crescent moon-shaped (2.5-4.5" long). Young leaf growth consists of small bipinnately compound leaflets. It has small, cream-colored, puff-ball flowers (.3-.5" diameter). Seed pods are reddish brown, broad, and flat, becoming curled when mature. Seeds have a distinctive thick red border and often hang from the pod by a whitish attachment.

Impacts: Australian blackwood can produce root suckers and form large clonal stands. It can thrive in open grasslands and shrublands and can resprout more quickly than Hawaiian native plants after a fire.

Dispersal Mechanism: Australian blackwood trees produce prolific amounts of seeds, which are moved via animals (birds and rats) and human activities. It reproduces in Hawaii primarily from root suckering and regrowth from very small root fragments that are moved in contaminated soils and garden waste.

Origin, Distribution, and Habitat: Native to southeastern Australia, Australian blackwood has been introduced, has naturalized, and is spreading in the pine forests adjacent to Haleakalā National Park and the Waikamoi forest reserve.

Cultivation: Australian blackwood has been planted as a street tree, even though it causes damage to sidewalks and plumbing. 17,000 trees were planted in state forest reserves in Hawaii. The Hawaii Chapter of the American Society of Landscape Architects categorizes Australian blackwood as a "do not plant" species. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

Koa (*Acacia koa*) is a Hawaiian native tree that looks very similar to Australian blackwood, except for its flat brown seed pods and longer and more curved sickle-shaped "leaves." Koa leaves are 2.8-9.8" long. Australian blackwood seed pods are noticeably reddish-brown-colored, while koa seed pods are more brown-colored.

KHAKI WEED
Alternanthera pungens

Don't confuse with the invasive rabbitfoot clover, which has no burs and "leaves of three."

GRASS/
HERB

KHAKI WEED
Alternanthera pungens

FAMILY: Amaranthaceae

General Description: Khaki weed is a long-lived mat-forming plant (4-20" long) that produces distinctive sharp burs that are extremely uncomfortable to walk on barefoot. Its stems are reddish-colored, hairy, and produce roots at every joint. Leaves (.2-1.8" long by .1-.8" wide) grow in pairs along the stem, with one leaf of the pair noticeably larger. The yellow to green flowers are inconspicuous until the petals harden into burs. It forms a deep fleshy tap root that persists after the above ground vegetation dies back.

Impacts: Khaki weed can form dense mats that crowd out all other vegetation. Its sharp, prickly seed pods can penetrate the skin of animals, including ground nesting birds and humans, making it problematic for both the endangered Hawaiian nēnē found in Haleakalā National Park and barefoot, beach-going humans.

Dispersal Mechanism: Khaki weed seeds are contained in the flower husk, which can catch on animal fur, bird feathers, hikers clothing, and car tires. Small stem fragments can grow into new plants.

Origin, Distribution, and Habitat: Native to South America, khaki weed has become a pest throughout the tropics. In Hawaii, it has become established on all islands except Kaho'olawe and Ni'ihau. It thrives in pastures, lawns, roadsides, trails, and any disturbed natural areas. This plant has become widespread in the lower elevation areas of Maui including many beach parks and neighborhood lawns. Haleakalā National Park visitors may accidentally transport seeds to the park, where it can become problematic at all elevations.

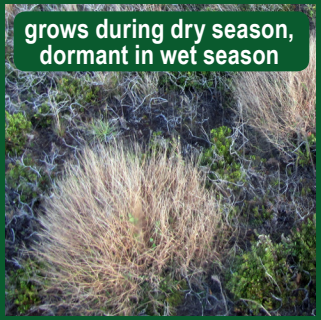
Cultivation: Khaki weed was unintentionally introduced to Hawaii and is not cultivated.

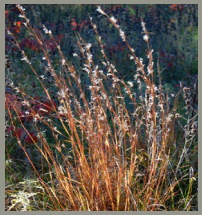
Don't confuse with:

Rabbitfoot clover (*Trifolium arvense*) is a mat-forming weed that is common in Haleakalā National Park. It has fuzzy rosy-white flowers that resemble a rabbit's foot and leaves in groups of three. It does not have sharp burs. THIS PLANT IS ALSO INVASIVE.

! Hawaii State Noxious Weed

BROOMSEDGE
Andropogon virginicus





Don't confuse with tufted beardgrass (left) or little bluestem (right), which do not have stalks shaped like a fan. Tufted beardgrass also has a distinct tab-like ligule (left inset).

GRASS/ HERB

BROOMSEDGE
Andropogon virginicus

FAMILY: Poaceae

Hawaii State Noxious Weed

General Description: Broomsedge is an erect perennial bunch grass that grows in dense tufts up to 40" tall. The upper third of the stalk is freely branching, giving a broom-like appearance. New growth is green, turning purplish to straw-colored when mature. The plant is dormant and brown during the wet season and grows during the dry season. Leaf-sheaths are flattened with silky hairs along the margins.

Impacts: Broomsedge can persist in a wide variety of habitats, from wet boggy areas to dry areas. Infestations in pasture lands reduce the quality of forage. Allelopathic chemical properties found in this grass can inhibit other plant growth leading to monotypic stands. Dry grass materials are a major fire hazard.

Dispersal Mechanism: Seeds of broomsedge are wind dispersed and are adapted to catch on clothing and animal coats. Seeds are moved in contaminated soil and in mud on vehicles.

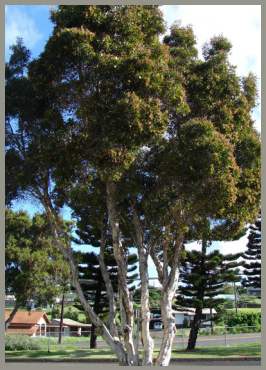
Origin, Distribution, and Habitat: Native to the eastern United States, broomsedge can now be found in California, Australia, French Polynesia, Midway, and on all major islands in Hawaii, where it readily becomes naturalized. Infestations are especially problematic on the islands of Oah'u, Moloka'i, Maui, and the Big Island. This grass is found in Haleakalā National Park in the lower bogs and stream corridors of Kīpahulu Valley and in the upcountry pastures that border the park.

Cultivation: Broomsedge was first collected on the Big Island in 1924. It was most likely an unintentional introduction. It is a Hawaii state noxious weed and is illegal to plant or transport across the state. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

Tufted beardgrass (*Schizachyrium condensatum*) and little bluestem (*S. scoparium*) are bunch grasses that have tufted seed heads shaped like a small broom. These grasses do not have the fan-shaped stalk base that characterizes broomsedge. Tufted beardgrass also has a distinct tab-like ligule at the junction of the leaf and leaf stalk. THESE PLANTS ARE ALSO INVASIVE.

COAST BANKSIA
Banksia integrifolia



Don't confuse with paperbark (left), which has white flowers and papery bark or button mangrove (above), with button-like fruit.

All images Forest & Kim Starr (UH)

TREE

COAST BANKSIA
Banksia integrifolia

FAMILY: Proteaceae

General Description: Coast banksia is an evergreen tall shrub / short tree in the Protea family that can grow 20-52' tall. Plants have rough grey bark and dark green leaves that are white and woolly underneath and grow in a whorled arrangement. Its leaves are long and narrow (2-8" long by .4-1" wide). Its flowers are pale yellow and grow in a dense spike (4-5" long) nested within the leaves. Older flowers fall away to reveal a "cone" that starts green and fuzzy and fades into grey with age. Each cavity in the cone contains 1 or 2 winged seeds.

Impacts: Coast banksia does well in coastal areas and in poor soil environments, making it a potential invader in coastal strand communities and lava fields.

Dispersal Mechanism: Coast banksia reproduces via winged seeds that are carried by the wind and can travel well beyond the parent plant.

Origin, Distribution, and Habitat: Coast banksia is native to eastern Australia. It has started to naturalize and become weedy in western Australia and New Zealand. In Hawaii, it can be found on Kaua'i, Maui, and the Big Island. This tree is spreading in upcountry areas of Maui that border Haleakalā National Park. As the common name implies, this tree can live in coastal areas, where it is resistant to salt and wind exposure.

Cultivation: Coast banksia has been planted in botanical gardens in Hawaii. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

Paperbark (*Melaleuca quinquenervia*) can be distinguished by its white bottle-brush-like flowers and paper-like peeling bark. THIS PLANT IS ALSO INVASIVE.

Button mangrove (*Conocarpus erectus*) also grows in coastal areas and has a similar leaf shape. Look for button-like fruits to make a distinction. THIS PLANT IS ALSO INVASIVE.

! Hawaii State Noxious Weed

BOCCONIA
Bocconia frutescens

All images Forest & Kim Starr (UH)

SHRUB

BOCCONIA
Bocconia frutescens

FAMILY: Papaveraceae

Hawaii State Noxious Weed

General Description: Bocconia (tree poppy) is the largest member of the poppy family growing to the stature of a small tree (20'). It has large lobed leaves (4-23.5" long by 1.5-8" wide) that are clustered at the branch tips. It produces branched clusters of small beige-yellow flowers that develop into fleshy red fruits (~.2") enclosed in a grey capsule.

Impacts: Bocconia is an aggressive invader of dry forests that can crowd out native plants. One mature plant can produce more than 300,000 seeds per annual fruiting season. It can colonize pastures, degrading grazing quality, and open lava flows, displacing native species. On the Big Island, one cultivated planting in Ka'ū infested 3,500 acres of abandoned agricultural fields.

Dispersal Mechanism: Bocconia plants produce thousands of seeds, which are attractive to birds that can spread them long distances. It is difficult to manage and can resprout after chemical treatments from its prolific seed bank or small root fragments.

Origin, Distribution, and Habitat: Bocconia is native to Central and South America. In Hawaii, it has been introduced on O'ahu, Maui and the Big Island and is a serious pest on Maui and the Big Island. It thrives in leeward dry areas on 'a'ā lava, but is also spreading in the wetter areas of upcountry Maui. Bocconia is widespread in areas of Kula and Kāhikinui that border Haleakalā National Park. It grows in diverse habitats, including dry forest and cloud forest.

Cultivation: Bocconia is grown in gardens. It was first recorded on Maui in 1920. It is a Hawaii state noxious weed and is illegal to plant or transport across the state. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment.

! Hawaii State Noxious Weed

FOUNTAIN GRASS
Cenchrus setaceus

Don't confuse with cane grass (left), which is taller (7-15'+) or feathertop (right), which has short fluffy seed heads (2").

GRASS/ HERB

FOUNTAIN GRASS
Cenchrus setaceus

FAMILY: Poaceae

Hawaii State Noxious Weed

General Description: Fountain grass is an erect perennial bunch grass that grows up to 3' high. The leaves are greenish-grey and have a slender, cylindrical, rolled shape. The small flowers are grouped together in an upright purple to rose-colored inflorescence that turns white as it seeds. Each inflorescence is 6-15" long.

Impacts: Originally introduced as an ornamental, fountain grass has become an aggressive, habitat-altering weed. It can degrade the quality of pasture lands, particularly in drier areas. Fountain grass is fire adapted and its dry leaves can increase the risk, intensity and longevity of fires. After a fire, it may resprout faster than native plants.

Dispersal Mechanism: Fountain grass is dispersed through the horticultural trade as an ornamental grass. Seeds are also transported via wind, water, and by hitchhiking on vehicles, livestock, and humans.

Origin, Distribution, and Habitat: Native to Africa, fountain grass has invaded many types of natural areas in Hawaii, including bare lava flows, grasslands, and range lands. On the Big Island, fountain grass covers at least 200,000 acres. On Maui it has been found growing in Wailuku, Kahului, Kīhei, Kahakuloa, Wai'ehu, Kula, Kanaio, and Mākena. All known populations on Maui have been controlled by the Maui Invasive Species Committee.

Cultivation: Fountain grass is cultivated for its ornamental attributes. It is a Hawaii state noxious weed and is illegal to plant or transport across the state. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment.

Don't confuse with:

Cane grass (*Cenchrus purpureus*) is common throughout Hawaii. It can be differentiated by its taller height (6-8'). It is NOT fountain-shaped and does not grow in defined clumps. Cane grass flower heads are cream-colored. THIS PLANT IS ALSO INVASIVE.

Feathertop (*Cenchrus villosum*) is another perennial bunch grass with a growth structure and leaves similar to fountain grass. Feathertop produces distinctive feathery seed heads that can grow up to 2" in length. Feathertop is also considered a weed in Hawaii and should not be planted. THIS PLANT IS ALSO INVASIVE.

BULL THISTLE
Cirsium vulgare

Don't confuse with the native Hawaiian poppy, pua kala. This plant has white flowers and white-tinted foliage.

GRASS/
HERB

BULL THISTLE
Cirsium vulgare

FAMILY: Asteraceae

General Description: Bull thistle (spear thistle) is a spiny plant that grows to 7' tall. Dark green leaves (3-12") are rough like sandpaper and covered in bumps. The lower surface of the leaves are covered in white woolly hair. Its stout 2" wide purple flower heads are surrounded by leaf-like spines. Dandelion-like seeds have feathery "parachutes" that carry in the wind. Plants flower from June to September.

Impacts: Bull thistle is not eaten by grazers and can degrade the productivity of pasture lands. Plants can reduce available nesting and forage areas for ground nesting birds, such as nēnē (*Branta sandvicensis*). Prickly plants can impede the movements of hikers.

Dispersal Mechanism: Bull thistle seeds are dispersed long distances in the wind and can persist in the soil for several years.

Origin, Distribution, and Habitat: Native to Europe, western Asia, and North Africa, bull thistle has been introduced to all of the main Hawaiian Islands. It was most likely an unintentional introduction to Hawaii as a contaminant of seed or hay. Bull thistle can flourish in both disturbed and natural areas, including all districts of Haleakalā National Park.

Cultivation: Bull thistle has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

Pua kala (*Argemone glauca*) is the native Hawaiian poppy. Hawaiians gave the nonnative bull thistle the same Hawaiian name because of its similar prickly appearance.

! Hawaii State Noxious Weed

PAMPAS GRASS
Cortaderia spp.

Don't confuse with sugarcane (left) or native Hawaiian sedges (right). Both lack curled leaves at the base and the sugarcane plume is less dense.

leaves curled

GRASS/ HERB

PAMPAS GRASS
Cortaderia spp.

FAMILY: Poaceae

Hawaii State Noxious Weed

General Description: Pampas grass is an erect giant bunch grass with long, slender, bright green, saw-toothed leaves. At its base are dried, corkscrew-shaped leaves. It has large showy flower plumes that extend 2-3' beyond the foliage. Two species of pampas grass are found in Hawaii, *Cortaderia selloana* and *C. jubata*. Both reach heights of 9-10' and have loosely clumped pinkish-white seed heads. They flower from July through November. Spent flower stalks are sometimes persistent for several years.

Impacts: Pampas grass grows rapidly, produces thousands of seeds per flower plume, and can accumulate large amounts of fire prone biomass. Seeds are viable for 4-6 months, but field evidence from Hawaii suggests viability could be greater. It can crowd out native species, impede access, degrade grazing lands, and create fire hazards.

Dispersal Mechanism: Pampas grass seeds are spread by wind and have been documented traveling up to twenty miles away from the parent plant. Humans also disperse seeds on contaminated gear. Flower plumes are sold for dried flower arrangements.

Origin, Distribution, and Habitat: Native to South America, pampas grass was introduced to Hawaii as an ornamental. On Maui, this plant has escaped cultivation and spread into pristine, upland native forests within and around Haleakalā Crater. It is found in pastures, gulches, yards, along road cuts, and in remote West Maui locations.

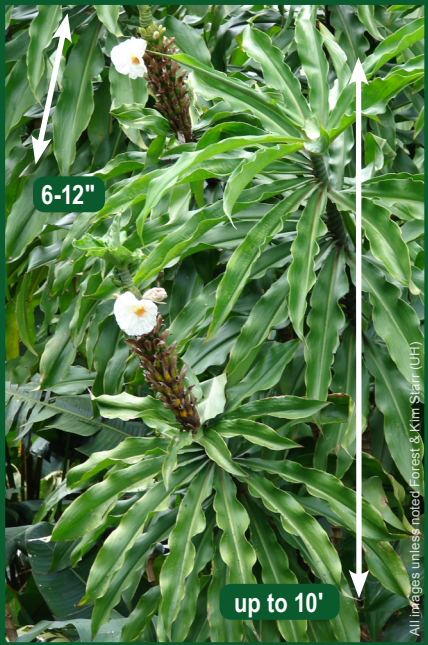
Cultivation: Pampas grass is used as an ornamental plant for landscapes and its flower plumes are used for decorations. Pampas is a Hawaii state noxious weed and is illegal to plant or transport across the state. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment.

Don't confuse with:

Sugarcane (*Saccharum officinarum*) is a Polynesian introduced plant that has a similar seed plume as pampas but the plume is not as dense and sugarcane does not have corkscrew leaves.

Native Hawaiian sedges (Cyperaceae) can be confused with young pampas grass. They do not produce corkscrew leaves, tall flowering stalks, or large showy seed plumes. Most Hawaiian sedge leaves are not as sharp.

CREPE GINGER
Costus speciosus



All images unless noted Forest & Kim Starr (UH)

Don't confuse with invasive gingers such as Himalayan ginger (left) or white ginger (right).

GRASS/ HERB

CREPE GINGER
Costus speciosus

FAMILY: Costaceae

General Description: Crepe ginger is a showy plant with white petaled flowers that resemble crepe paper. Its flowers grow out of dark red cone-shaped bracts that persist after the flowers have wilted away. Its dark green 6-12" long leaves grow in a spiral along a unique spiral-shaped stalk. A form with variegated, white streaks on its leaves is planted in gardens. Its fleshy rhizome roots look like edible ginger. It can grow 10' tall.

Impacts: Crepe ginger can grow in thick masses and create a solid mat of rhizome roots that crowd out all other vegetation. Invasive gingers are particularly problematic in midrange to high elevation wet forests on Haleakalā, where they can replace the native understory.

Dispersal Mechanism: Crepe ginger primarily reproduces through rhizomes, which are underground stems that put out shoots and roots at intervals. A single rhizome can expand into a 3' diameter plant in less than 2 years.

Origin, Distribution, and Habitat: Native to Southeast Asia, crepe ginger has been introduced throughout the tropics. In Hawaii, it is naturalized on Kaua'i, O'ahu, Lāna'i, and Maui, including infestations in the forests above Hāna and along the trails at 'Ohe'o in Haleakalā National Park. It can withstand freezing temperatures and thrives in high elevation climates.

Cultivation: Crepe ginger is a popular garden plant throughout the tropics. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

Other gingers (Zingiberaceae). Nonnative gingers, such as Himalayan ginger and white ginger, can be found in cultivation and naturalizing throughout Maui. No other ginger has leaves that grow in a spiral along a spiral stalk. THESE PLANTS ARE ALSO INVASIVE.

COTONEASTER
Cotoneaster spp.

All images Forest & Kim Starr (UH)

Don't confuse with firethorn, which has similar flowers and fruits but is covered in thorns.

SHRUB

COTONEASTER
Cotoneaster spp.

FAMILY: Rosaceae

General Description: Cotoneaster is a shrub, up to 15' tall, with arching branches. Its small leaves (.5-1") grow in an alternating arrangement along the stem and are hairy-white underneath. Plants can appear silver-white from a distance due to these hairs. Their rose-like flowers are .5" wide and white or pink. Fruits are .2" long with a dull red or orange color. Shrubs have a fountain shape.

Impacts: Cotoneaster readily escape cultivation and can spread into natural areas where they form dense stands that can crowd out all other vegetation. Some cotoneaster have fruits that are poisonous to humans and act as hosts for agricultural disease. Cotoneaster plants are considered weeds in Australia, New Zealand, California, Oregon, northwestern Europe, southern Africa, and several Pacific Islands.

Dispersal Mechanism: Cotoneaster fruits are highly desirable to birds, pigs, and rodents who spread the seeds long distances.

Origin, Distribution, and Habitat: Native to Eurasia, cotoneaster has been introduced to temperate regions around the world. It thrives in cooler climates and poses a threat to mid to high elevation areas of Haleakalā, especially in the subalpine shrublands, mesic forests, and alpine aeolian zones.

Cultivation: The Hawaii Department of Land and Natural Resources considers cotoneaster one of Hawaii's most invasive horticultural plants. The Hawaii Chapter of the American Society of Landscape Architects categorizes cotoneaster as a "do not plant" species. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

Firethorn (*Pyracantha angustifolia*) is a nonnative shrub found on Haleakalā that is in the same family as cotoneaster and has similar flowers and fruits, but is covered in thorns. THIS PLANT IS ALSO INVASIVE.

TAGASASTE
Cytisus palmensis

SHRUB

Senna, a weed found in east Maui forests, has yellow flowers, bigger leaves, and longer seed pods.

TAGASASTE
Cytisus palmensis

FAMILY: Fabaceae

General Description: Tagasaste (broom, tree alfalfa) is a tall shrub (up to 15') with drooping hairy branches that grows up to 18' tall. The plants grey-green leaves are made of 3 smaller leaflets (.4-2" long) with soft hairs underneath. Its showy pea-like flowers (.5-.8" across) are cream to white-colored and grow in dense clusters. It has seed pods (2-2.4") that look like hairy snow peas, maturing from green to brown.

Impacts: As a nitrogen-fixing species, tagasaste can alter the structure and composition of native ecosystems, potentially facilitating further invasion by other invasive species. Its seeds can persist for long periods in the soil.

Dispersal Mechanism: Tagasaste seeds are dispersed long distances by birds and animals, as well as when the seed pods "pop" and expel seeds a distance from the parent plant. Plants can also be unintentionally moved around in contaminated soil or garden waste.

Origin, Distribution, and Habitat: Native to the dry volcanic slopes of the Canary Islands, tagasaste was introduced to the Kula area on Maui as a potential cattle fodder in 1927. This shrub is tolerant of dry to mesic conditions and high elevations, making it a threat to native ecosystems in Haleakalā National Park.

Cultivation: Tagasaste is grown for sheep fodder and occasionally as an ornamental.

Don't confuse with:

Senna (*Senna septemtrionalis*) is a related nonnative shrub/small tree that is invading east Maui forests. It has yellow flowers (6-10 leaflets), which are larger than tagasaste (2.4-4"+ long), and longer seed pods (5.5"). Look for small cone-like structures on the stem between the lower leaflet pairs. THIS PLANT IS ALSO INVASIVE.

CAPE IVY
Delairea odorata

Don't confuse with English ivy (left), another invasive vine that lacks the ear-shaped appendages at the base of the leaf stalk or native 'anunu (right), which has leaves with toothed edges.

VINE

CAPE IVY
Delairea odorata

FAMILY: Asteraceae

General Description: Cape ivy (German ivy) is a fast-growing vine with distinctive waxy, angular, 5-6 pointed leaves (1-4" long). Many leaves have small ear-shaped appendages (or stipules) at the base of the leaf stalk. It produces small, daisy-like, yellow flowers that have no obvious petals. Seeds are small and dandelion-like. All parts of the plant have a characteristic odor.

Impacts: Cape ivy can climb and smother trees, shrubs, and understory plants. It may reduce plant diversity and associated insects and animals in areas of dense growth. Its shallow root system can lead to erosion and it contains alkaloids that are toxic to humans, mammals, and aquatic organisms. Once established, this vine can be very hard to eliminate, requiring numerous treatments over many years.

Dispersal Mechanism: Cape ivy reproduces vegetatively via stolons. Very small pieces of the stem can grow into a new infestation. Plants are moved long distances in contaminated garden waste and soil.

Origin, Distribution, and Habitat: Native to South Africa, cape ivy has been introduced to Hawaii on the Big Island and Maui. It is found in upcountry Maui, but could spread to higher elevation native dry forests and shrublands.

Cultivation: The Hawaii Department of Land and Natural Resources considers cape ivy one of Hawaii's most invasive horticultural plants. The Hawaii Chapter of the American Society of Landscape Architects categorizes cape ivy as a "do not plant" species. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

English ivy (*Hedera helix*) is a nonnative vine that has similar leaves. It does not have the ear-shaped appendages (or stipules) at the base of the leaf stalk. THIS PLANT IS ALSO INVASIVE.

'Anunu (*Sicyos cucumerinus*) is a rare native vine in the cucumber family with similar leaves to cape ivy. 'Anunu is found on Maui in Kīpahulu valley, and Waikamoi and Makawao forest reserves. 'Anunu vines are covered in black dots and leaves have toothed edges.

GREVILLEA TREES
Grevillea spp.

Don't confuse with the native 'ōhi'a lehua, which has thick round leaves.

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TREE

GREVILLEA TREES
Grevillea spp.

FAMILY: Proteaceae

General Description: Silk oak (*Grevillea robusta*) and kāhili flower (*Grevillea banksii*) are two common invasive trees in the Grevillea genus. Silk oak grows up to 70' and kāhili flower up to 25'. Grevillea trees have deeply lobed wispy leaves (5-12" long) and showy red (*G. banksii*) or yellow (*G. robusta*) flowers.

Impacts: Fast-growing and prolific reproducers, many grevillea trees can invade pastures and forests, creating single species stands that can crowd out all other plants. Grevillea trees form shallow proteoid, or cluster roots, that can chemically alter the soil environment, potentially impeding the growth of native Hawaiian plants and enabling further weed invasions. Some species are poisonous to horses and can cause hay fever and allergic contact dermatitis in people.

Dispersal Mechanism: Grevillea trees are prolific seed producers. Seeds can be moved in contaminated soils, muddy vehicles/equipment, and improperly disposed garden waste.

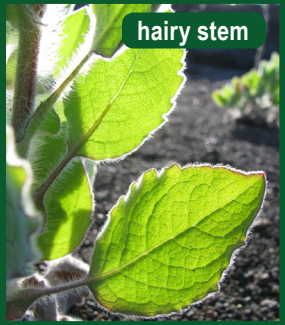
Origin, Distribution, and Habitat: Grevillea trees are native to Australia, New Guinea, New Caledonia, and Sulawesi. Silk oak and kāhili flower were introduced to Hawaii in the late 1800s to early 1900s and are now established on all of the main Hawaiian Islands. Grevillea trees threaten both the mid to high elevation wet and mesic forests (kāhili flower) and the dry forest (silk oak).

Cultivation: Kāhili flower is a Hawaii state noxious weed and is illegal to plant or transport across the state. The Hawaii Department of Land and Natural Resources considers silk oak one of Hawaii's most invasive horticultural plants. The Hawaii Chapter of the American Society of Landscape Architects categorizes silk oak and kāhili flower as a "do not plant" species. Silk oak has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

'Ōhi'a lehua (*Metrosideros polymorpha*) is a native tree with showy red staminate. 'Ōhi'a trees have thick, round leaves.

TELEGRAPH WEED
Heterotheca grandiflora



Don't confuse with common mullein, which does not smell like sage.

GRASS/
HERB

TELEGRAPH WEED
Heterotheca grandiflora

FAMILY: Asteraceae

General Description: Telegraph weed is a fuzzy member of the sunflower family. Young growth is rosette-shaped. After it has bolted the inflorescence reaches 3-4' in height. The stems and leaves are covered in dense white woolly hairs that give the plant an overall grey-green appearance. Yellow flowers form in clusters and mature into dandelion-like seed clusters. When crushed, the leaves, stems, and flowers smell strongly of sage.

Impacts: Telegraph weed produces prolific amounts of seed several times a year and can form dense stands that crowd out other plants. It can colonize lava flows, displacing native colonizers.

Dispersal Mechanism: Telegraph weed seeds have small tufts of hair and are easily carried long distances in the wind.

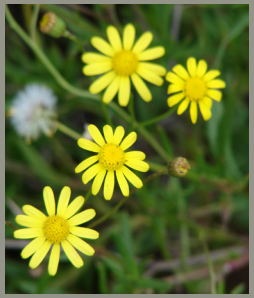
Origin, Distribution, and Habitat: Telegraph weed is native from California to Arizona and Baja, Mexico. In Hawaii, it typically grows in disturbed open areas and on lava flows from 30-7,500' in elevation. However, it has been found on Maui from sea level to limited areas of the crater district of Haleakalā National Park.

Cultivation: Telegraph weed was unintentionally introduced to Hawaii and is not cultivated.

Don't confuse with:

Common mullein (*Verbascum thapsus*) also has light grey-green fuzzy leaves and is widespread on the Big Island but is not known to occur on Maui. Mullein also forms a rosette when young, but its leaves are considerably larger (4-12" long) and have a rounded tip. It has small yellow flowers that grow along a tall (up to 10') spike. It does not smell of sage when crushed. THIS PLANT IS ALSO INVASIVE.

CANARY ISLANDS ST. JOHN'S WORT
Hypericum canariense



Don't confuse with invasive fireweed (left), which has a 13-petaled flower or invasive St. John's wort (above), which has petals with black glands.

GRASS/ HERB

CANARY ISLANDS ST. JOHN'S WORT
Hypericum canariense

FAMILY: Hypericaceae

General Description: Canary Islands St. John's wort is a multi-stemmed shrubby plant that grows 3-12' tall. Its lance-shaped leaves (2-2.7" long) grow in an opposite arrangement along the stem with 2-3 leaves at each node. It produces yellow flowers with 5 petals and many yellow whiskery stamens in the center. The fruits are leathery capsules that open and release seeds.

Impacts: Canary Islands St. John's wort readily escapes cultivation and can form dense thickets that crowd out other vegetation. In California, this plant outcompetes both native plants and nonnative weeds, such as pampas grass (*Cortaderia* sp.), resulting in nearly 100% single species stands. In favorable conditions, infestations can spread 150-300' a year. It may be poisonous to livestock, like other related hypericum plants.

Dispersal Mechanism: Canary Islands St. John's wort seeds are wind dispersed and can readily propagate.

Origin, Distribution, and Habitat: Canary Islands St. John's wort is native to the volcanic Canary Islands and Madeira. In Hawaii, it is known from one site on Maui, in Kula (175 acres), where it naturalized and spread from the initial infestation. It can grow in mid-range to high elevation grasslands, shrublands, and mesic to dry forests.

Cultivation: Canary Islands St. John's wort is grown as an ornamental in private gardens as well as in arboreta. The Hawaii Chapter of the American Society of Landscape Architects categorizes Canary Islands St. John's wort as a "do not plant" species. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated. It should not be confused with the St. John's wort that is used for medicinal purposes.

Don't confuse with:

Fireweed (*Senecio madagascariensis*) is a common weed in the upcountry area of Maui. It has 13-petaled flowers. Fireweed is not established in Haleakalā National Park. THIS PLANT IS ALSO INVASIVE.

St. John's wort (*Hypericum perferatum*) is a closely related weed which has black glands along the edge of its flower petals. THIS PLANT IS ALSO INVASIVE.

! Hawaii State Noxious Weed

MICONIA
Miconia calvescens

Don't confuse with invasive clerodendrum, which lacks the 3 prominent veins.

Don't confuse with invasive Koster's curse, a shrub with small 2-6" long leaves.

All images unless noted Forest & Kim Starr (UH)

TREE

MICONIA
Miconia calvescens

FAMILY: Melastomataceae

Hawaii State Noxious Weed

General Description: Miconia is a fast-growing weedy tree that reaches 13-50'. Its large leaves average 3' long by 1' wide and have a distinctive "leaf within a leaf" vein pattern. The leaves are dark green and felt-like above and purple underneath. Plants produce dark purple fruits that are .3" in diameter and contain hundreds of seeds.

Impacts: Miconia trees can grow quickly and close together, shading out nearly all other forest plants with their large dark leaves. Miconia has a shallow root system and can cause increased erosion and landslides. It quickly matures, producing fruit after three to four years and flowers and fruits several times a year. Plants produce ten to twenty million seeds a year, which can remain viable for twelve years and possibly longer.

Dispersal Mechanism: Birds and animals (such as rats) spread miconia seeds long distances. Seeds, about the size of a sand grain, are unintentionally spread by humans and hitchhike on clothes, boots, gear, pets, and contaminated vehicles, equipment, and soil. Hitchhiking seeds have been moved on hāpu'u fern (*Cibotium* spp.) harvested from infested areas.

Origin, Distribution, and Habitat: Miconia is native to South and Central America and was introduced to Hawaii as a garden plant in 1961. It has become widespread on Maui in the forests above Hāna to Nāhiku.

Cultivation: Miconia was primarily grown as an ornamental plant for arboreta. It is a Hawaii state noxious weed and is illegal to plant or transport across the state.

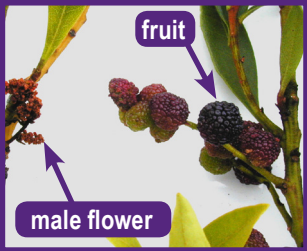
Don't confuse with:

Clerodendrum (*Clerodendrum quadriloculare*) is a common ornamental plant that has leaves with purple undersides. It does not have the "leaf within a leaf" vein pattern. THESE PLANTS ARE ALSO INVASIVE.

Koster's curse (*Clidemia hirta*) is a widespread pest in Maui County and a Hawaii state noxious weed. Also a Melastome species, it can be differentiated by its shrubby growth and small leaves covered in coarse hairs.

! Hawaii State Noxious Weed

FIRE TREE
Morella faya



Don't confuse with the native a'a'li'i shrub, which has similar leaves but dry papery seed capsules.

All images Forest & Kim Starr (UH)

TREE

FIRE TREE
Morella faya

FAMILY: Myricaceae

Hawaii State Noxious Weed

General Description: Fire tree is a fast-growing small shrub or tree that grows up to 26-50' tall. Its stems and branches are covered with reddish hairs. Its dark green leaves are 1.5-4.3" long, smooth, and grow in an alternate arrangement along the stem. The leaves are aromatic. Flowers are unisexual and generally born on separate trees. Flowers form on branched spikes among leaves of the current year's growth. Male flowers have four stamens and occur in small hanging clusters near the branch tip. Female flowers occur in groups of three small hanging clusters further from the branch tip. Its fruit is red to purple when ripe, slightly fleshy, has a bumpy appearance, and is found year-round peaking in November.

Impacts: Fire tree can invade both disturbed and intact native ecosystems, where it forms dense stands devoid of other plants. Its leaf litter can inhibit the growth of other plants. As a nitrogen-fixing species, it can alter the structure and composition of native ecosystems, potentially facilitating further invasion by other invasive species.

Dispersal Mechanism: Birds and animals (such as pigs) are attracted to fire tree fruits and can spread the seeds long distances. A mature female tree can produce up to 40,000 fruits per year with each fruit containing 1 to 5 seeds.

Origin, Distribution, and Habitat: Fire tree is native to the Azores, Madeira, and the Canary Islands. It was brought to Hawaii in the 1890s as a forestry plant. It is established and spreading in the Haleakalā front country. It can grow in a variety of habitats, including dry scrub land, montane forests, pastures, and open lava.

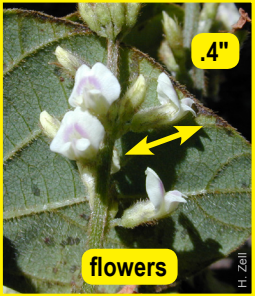
Cultivation: Fire tree is a Hawaii state noxious weed and is illegal to plant or transport across the state. The Hawaii Chapter of the American Society of Landscape Architects categorizes fire tree as a "do not plant" species. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment.

Don't confuse with:

A'a'li'i (*Dodonaea viscosa*) is a native shrub with similar leaves and is found in the same habitat. A'a'li'i has reddish-tinted, dry seed capsules that rattle when shaken.

GLYCINE
Neonotonia wightii

Don't confuse with native 'āwikiwiki vine, which grows in dry areas and on lava flows.



VINE

GLYCINE
Neonotonia wightii

FAMILY: Fabaceae

General Description: Glycine (tinaroo, perennial soybean) is a vigorous climbing vine with a woody base that is a relative of soybean. It has "leaves of three" that are oval and often hairy. Its pea-like flowers are white and small (.4" long). The distinctive hairy seed pods are 1.5" long by .2" wide and grow upright from the stem.

Impacts: Glycine can smother low-lying vegetation, shrubs, and small trees, eventually killing them. This vine can also grow over man-made structures and archaeological sites. Its twining growth can cause entanglement dangers for animals. It can invade both disturbed and intact native ecosystems.

Dispersal Mechanism: Glycine reproduces prolifically from seeds. Pieces of stem can take root. Seeds are moved long distances by birds and animals. Plants are moved unintentionally in contaminated garden waste and agricultural fodder, and intentionally for livestock feed.

Origin, Distribution, and Habitat: Glycine is native to tropical America. It has been introduced throughout the tropics as a cattle fodder. It was introduced by the Soil Conservation Service to the Ulupalakua area of Maui. It has naturalized along roadsides, pasture edges, over open lava flows, and in dry to mesic forests.

Cultivation: The Hawaii Chapter of the American Society of Landscape Architects categorizes glycine as a "do not plant" species. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

'Āwikiwiki (*Canavalia pubescens*) is an endangered native Hawaiian vine that is in the bean family (Fabaceae), has similar leaves, and grows in some of the same areas as glycine. 'Āwikiwiki has large flowers that range from dark reddish-purple to pink. Its leaves have wavy margins and it has seeds that are twice as large as glycine seeds.

MICKEY MOUSE PLANT
Ochna thomasiana

Camellia shrubs have similar leaves. Look for non-yellow flowers with rose-like petals.

All images Forest & Kim Starr (UH)

SHRUB

MICKEY MOUSE PLANT
Ochna thomasiana

FAMILY: Ochnaceae

General Description: Mickey Mouse plant is a shrub that can grow to 15' tall. Its stems are covered with many white wart-like lenticels (pores). Its glossy serrate-edged leaves (1.2-5" long) have several bristles at the base and are arranged in an alternating growth pattern along the stem. It has bright yellow flowers with five petals (each petal .7-1" long). Flower sepals turn red and fleshy and glossy fruits (.2-.4" long) develop, which turn from green to black. The fruits are supported on a red waxy base.

Impacts: Mickey Mouse plant readily spreads in windward forests in Hawaii, where it can dominate the understory vegetation. It forms a tap root that is easily broken when pulled, which makes control difficult.

Dispersal Mechanism: Birds and animals are attracted to the fleshy fruits of Mickey Mouse plant and spread the seeds long distances. It can be propagated via cuttings.

Origin, Distribution, and Habitat: Mickey Mouse plant is native to southeastern Africa. It has become naturalized on O'ahu and Maui, where it is widespread in lower elevation windward forests. It has been found in the Ka'apahu area of Haleakalā growing alongside lama (*Diospyros sandwicensis*) and alahe'e (*Psydrax odorata*).

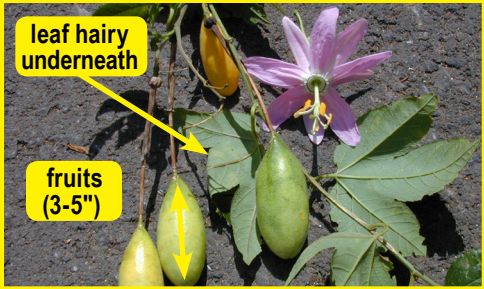
Cultivation: Mickey Mouse plant is a popular ornamental specimen plant in the tropics. The Hawaii Department of Land and Natural Resources considers Mickey Mouse plant one of Hawaii's most invasive horticultural plants. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

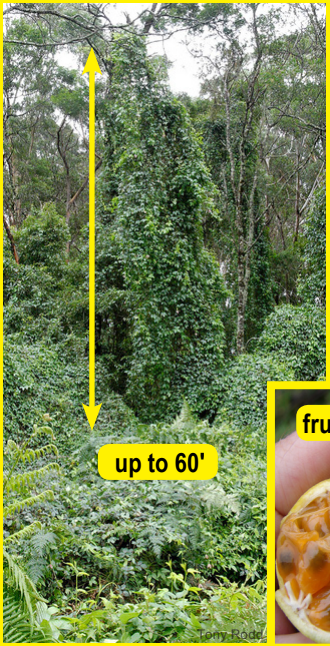
Camellia (*Camellia* spp.) are nonnative ornamental shrubs that have similar leaves to Mickey Mouse plant. There are many camellia cultivars grown in Hawaii with variable flowers. Look for non-yellow flowers with rose-like petals.

! Hawaii State Noxious Weed

BANANA POKA
Passiflora tarminiana



Many nonnative passion fruit species are found in Hawaii. None have the tubular pink flower and oblong yellow fruit like banana poka.



VINE

BANANA POKA
Passiflora tarminiana

FAMILY: Passifloraceae

Hawaii State Noxious Weed

General Description: Banana poka is an aggressive woody vine in the passion fruit family that can grow up to 60' high. It has conspicuous tubular pink flowers (2.4-4.5" across) that hang down from the vine and oblong yellow fruits (3-5" long) filled with an orange pulp and black seeds. Leaves of this vine have 3 deep lobes and are hairy underneath and hairless on top.

Impacts: Banana poka vine can grow into the forest canopy where it may smother vegetation and prevent sunlight from reaching the forest floor, potentially affecting natural regeneration and native diversity. It can also grow over man-made structures and archaeological sites. Its seeds have high rates of germination (up to 220,000 seedlings per acre), both in sunny, open areas and shady, forested areas. Feral pigs may cause damage beneath plants while foraging for banana poka fruits.

Dispersal Mechanism: The fruits of banana poka are eaten by feral animals, such as pigs, and many types of birds that can carry the seeds long distances.

Origin, Distribution, and Habitat: Banana poka is native to the Andes Mountains and has been spread throughout the tropics as a garden plant. It was introduced to Hawaii in 1926 and is naturalized in the wild on the islands of Maui, Kaua'i and the Big Island. It can grow in a wide variety of climates and to over 7,000' elevation in its home range, putting it well into the native subalpine shrubland of Haleakalā.

Cultivation: Banana poka is a Hawaii state noxious weed and is illegal to plant or transport across the state. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment.

Don't confuse with:

Many nonnative passion fruit (*Passiflora* spp.) species are found in Hawaii, some of which are considered invasive. Banana poka can be distinguished by its tubular pink flowers and oblong yellow fruit. SOME SPECIES ARE ALSO INVASIVE.

PINE TREES
Pinus spp.

Don't confuse with native young pūkiawe plants, which have smaller sharp leaves.

TREE

PINE TREES
Pinus spp.

FAMILY: Pinaceae

General Description: Pines are evergreen trees with characteristic needle leaves and cone fruits. Most pine bark is thick, scaly, and resin-producing. They can reach heights exceeding 100'.

Impacts: Three species - Monterey pine (*Pinus radiata*), Mexican weeping pine (*Pinus patula*) and maritime pine (*Pinus pinaster*) - are particularly invasive. Pines can grow up to 1' a year and can reproduce in 6-8 years. Trees produce large amounts of seeds that can remain viable for many years. Pine needles decay slowly, resulting in the accumulation of litter, which can suppress the growth of other plants and may ultimately result in reduced diversity.

Dispersal Mechanism: Pine seeds are dispersed in the wind.

Origin, Distribution, and Habitat: Pines were introduced in the early 1900s to Maui for forestry purposes. Hosmer's Grove, one of the earliest forestry plantings in the state, and surrounding areas contain Monterey, Mexican, and maritime pine. Pines pose a particular threat to the subalpine shrubland and crater areas of Haleakalā where they readily establish from neighboring populations. Thousands of seedlings are removed every year. No pines are native to Hawaii.

Cultivation: Pine trees were introduced to Hawaii for forestry and ornamental purposes. The Hawaii Department of Land and Natural Resources considers Mexican weeping pine one of Hawaii's most invasive horticultural plants. The Hawaii Chapter of the American Society of Landscape Architects categorizes Monterey pine as a "do not plant" species. Several pine trees have been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

Pūkiawe (*Leptecophylla tameiameiae*) is a native shrub that grows on Haleakalā from shore to summit, though predominantly at higher elevations. Young seedlings can resemble a pine tree. Pūkiawe leaves are shorter and have sharp tips.

PEACH, PLUM
Prunus spp.

Don't confuse with nonnative apple trees, which have longer leaf stems (.7-2").

All images Forest & Kim Starr (UH)

TREE

PEACH, PLUM
Prunus spp.

FAMILY: Rosaceae

General Description: Peach (*Prunus persica*), Chinese plum (*Prunus salicina*), and Methley or cherry plum (*Prunus cerasifera* x *salicina*) have been found growing in the natural areas of Haleakalā. These trees grow to a medium height (up to 33'). Their leaves are arranged in an alternating pattern along the stem and have serrated edges. Young leaves often have a red tinge. Leaf stems are .1-.4" long. Flowers have 5 white-pink petals, 5 green sepals (outermost parts of a flower that cover and the flower when it is in bud), and numerous wispy stamens.

Impacts: *Prunus* fruits are highly desirable to birds and animals, increasing the probability of this tree spreading and naturalizing in wilderness areas. Once established, trees can be hard to control due to persistent seeds and a tendency to root sprout.

Dispersal Mechanism: *Prunus* seeds are spread by animals and humans. Plums can reproduce by root suckering. Hikers and park visitors that improperly dispose of fruit pits can introduce trees to wilderness areas.

Origin, Distribution, and Habitat: *Prunus* trees are native to Europe and Asia. Peach trees have been found growing near Hōlua cabin, in the subalpine shrublands, and on the west slope of Haleakalā up to 8400'. Plum trees were planted near Palikū cabin and in Kaupō gap in the 1950s. Peaches and plums are introduced to many areas of Haleakalā National Park by hikers and visitors discarding fruit pits.

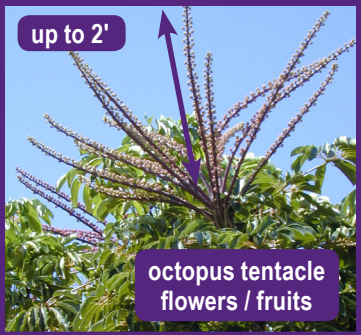
Cultivation: *Prunus* species trees are grown as an ornamental and for their fruit. Cherry plum has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

Apple (*Malus pumila*) is a nonnative tree that is in the same family as peaches and plums. Apples can be distinguished by their fruit, leaves with white hairs on the underside, and longer leaf stems (.7-2"). Apples can be introduced to natural areas by improperly disposed fruit cores.

OCTOPUS TREE
Schefflera actinophylla

Don't confuse with native 'ōlapa (top) or dwarf umbrella tree (bottom). Neither have "octopus tentacle" flowers/fruits.



TREE

OCTOPUS TREE
Schefflera actinophylla

FAMILY: Araliaceae

General Description: Octopus tree (umbrella tree) is an evergreen tree (20-40') that can grow epiphytically (on another tree). It has large leaves of 7-12 leaflets (up to 12" long) arranged in a drooping circle at the end of a leaf stalk, much like an umbrella. Its flowers are showy red and grow in clusters along stalks (up to 2' long) above the foliage. The radiating stalks resemble the tentacles of an octopus. The flowers produce bright red fruits that turn dark purple or black with age.

Impacts: Octopus tree can strangle host trees when growing epiphytically. Roots can lift sidewalks and building foundations. Plants can grow prolifically in wet areas, creating single species stands that can crowd out all other vegetation. Leaves can cause an allergic rash or inflammation of the skin to sensitive individuals.

Dispersal Mechanism: Birds and animals are attracted to octopus tree fruits and spread seeds long distances. Improperly disposed octopus tree fruit leis can spread the seed. It can also reproduce from cuttings.

Origin, Distribution, and Habitat: Octopus tree is native to Australia and New Guinea and has been introduced as an ornamental plant throughout the tropics and subtropics. In Hawaii, it has become widespread in low to middle elevation moist and wet forests on Kaua'i, O'ahu, Maui, and the Big Island.

Cultivation: Octopus tree is widely cultivated throughout the world as an ornamental plant. It is occasionally used for lei-making or kept as an indoor potted plant or bonsai. The Hawaii Department of Land and Natural Resources considers octopus tree one of Hawaii's most invasive horticultural plants. The Hawaii Chapter of the American Society of Landscape Architects categorizes octopus tree as a "do not plant" species. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

'Ōlapa (*Cheirodendron trigynum*) is a native Hawaiian tree with leaves that contain clusters of 3-5 leaflets that could be confused with octopus tree from a distance. 'Ōlapa does not produce the octopus-like flower "tentacles."

Dwarf umbrella tree (*Schefflera arboricola*) is a related shrub/tree with smaller leaves (4-6" long) and a smaller stature. It does not produce the octopus-like flower "tentacles."

! Hawaii State Noxious Weed

FIREWEED
Senecio madagascariensis

Don't confuse with spanish needle (left) or wedelia (above).

GRASS/ HERB

FIREWEED
Senecio madagascariensis

FAMILY: Asteraceae

Hawaii State Noxious Weed

General Description: Fireweed is a daisy-like herb that grows up to 2' high. The stem is upright and slender with bright green leaves. The leaves are smooth, very narrow (only .2-.3" wide), have serrated edges, and they reach about 5" long. The small yellow flowers have 13 petals and are about the size of a nickel. The mature flowers turn into white dandelion-like puff-balls.

Impacts: Fireweed can invade pastures, disturbed areas, and roadsides. It is very toxic to cattle, horses and other livestock. When ingested, it can cause illness, slow overall growth, liver-malfunction and even death in severe cases. In Australia, fireweed costs over $2 million per year in losses and control.

Dispersal Mechanism: Each fireweed plant can produce up to 30,000 seeds per year that are easily spread by wind, hiking boots, vehicles, and animals. Fireweed is also spread unintentionally as a contaminant seed in hydro-mulch and on equipment.

Origin, Distribution, and Habitat: Fireweed is native to Madagascar and South Africa. In Hawaii, it was first discovered on the Big Island in the 1900s where it is now too widespread for control. This pest can also be found on Maui and Lāna'i. It thrives in disturbed grasslands, abandoned pastures, and roadsides. Fireweed grows on a wide range of moist to wet soils.

Cultivation: Fireweed is a Hawaii state noxious weed and is illegal to plant or transport across the state. The Hawaii Chapter of the American Society of Landscape Architects categorizes fireweed as a "do not plant" species. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment.

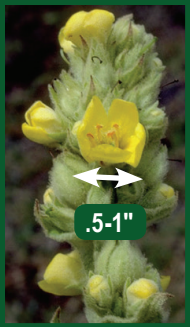
Don't confuse with:

Spanish needle (*Bidens pilosa*) is a widespread invasive herb on Maui. It has tiny yellow flower clusters unlike fireweeds daisy-like flowers. Spanish needle also grows much taller (up to 6'). THIS PLANT IS ALSO INVASIVE.

Wedelia (*Sphagneticola trilobata*) is a widespread invasive on Maui commonly planted as an ornamental ground cover. It can be distinguished from fireweed by its larger yellow flowers. It also has a variable amount of petals unlike fireweeds constant 13. THIS PLANT IS ALSO INVASIVE.

! Hawaii State Noxious Weed

COMMON MULLEIN
Verbascum thapsus



Don't confuse with telegraph weed, which has dandelion-like flowers, smaller, thinner leaves with pointed tips, and smells strongly of sage.

GRASS/ HERB

COMMON MULLEIN
Verbascum thapsus

FAMILY: Scrophulariaceae

Hawaii State Noxious Weed

General Description: Common mullein is a herbaceous biennial that reaches up to 10' tall by its second year. Leaves range from 3-20" long by 1-5.5" wide and are covered with a dense layer of yellowish or whitish woolly hairs. Initially, the leaves grow in a rosette pattern. After it has bolted the leaves get progressively smaller toward the top. Small yellow flower clusters (.3-.6" long) grow in a random fashion along the center stalk.

Impacts: Common mullein can quickly colonize disturbed areas. Plants produce numerous seeds that may remain dormant for over 100 years. On the Big Island, it currently infests high elevation disturbed areas, such as roadsides and new lava flows, with dense stands that can outcompete native vegetation.

Dispersal Mechanism: Common mullein plants are spread in the horticulture trade and by birds. In Hawaii, there is speculation that seeds are dispersed along roadways by cars and along trails by hikers. Common mullein has been accidentally transported from the Big Island to Maui on infested equipment.

Origin, Distribution, and Habitat: Native to Europe, common mullein is cultivated and naturalized in temperate areas of the world, including North America, Hawaii, La Reunion, Australia, and New Zealand. In Hawaii, it can be found on the Big Island along Mauna Kea Summit Access Road from sea level up to 12,460'. It is not known to occur on Maui.

Cultivation: Common mullein has been cultivated for medicinal purposes, dyes, fish poison, and as an ornamental. It is a Hawaii state noxious weed and is illegal to plant or transport across the state. The Hawaii Department of Land and Natural Resources considers common mullein one of Hawaii's most invasive horticultural plants. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment.

Don't confuse with:

Telegraph weed (*Heterotheca grandiflora*) is another invasive plant growing in high altitudes. It can be distinguished from mullein by its dandelion-like flower. Its leaves are smaller with pointed tips and have a strong sage smell when crushed. THIS PLANT IS ALSO INVASIVE.