

Invasive Plant Field Guide

National Park of American Samoa

Preventing invasive plants from invading native habitats is vitally important for all Pacific Island national parks. This field guide highlights 15 invasive plants that National Park of American Samoa (NPSA) 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



NPSA



PACN I&M



REPORT YOUR PEST!



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Cover Photo: Malapa (*Samanea saman*)

Inches



TAMALIGI ULIULI

Albizia chinensis



flowers (.4-.7")

Forest & Kim Starr (UH)



seed pods (5-6") mature to reddish-brown

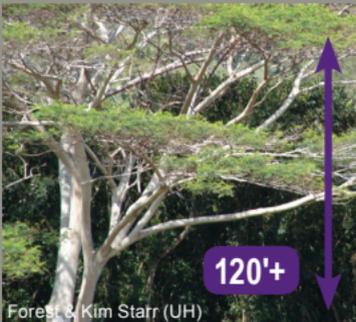
Posa Shelton (SPREP)



leaves and flowers

1.2"

Scamperiale



120'+

Forest & Kim Starr (UH)



100'+

Posa Shelton (SPREP)

TREE

Don't confuse with invasive tamaligi, which has smaller flowers and lighter colored bark.

TAMALIGI ULIULI

Albizia chinensis

FAMILY: Fabaceae

General Description: Tamaligi uliuli (silktree) is a large tree (100'+ tall) with dark grey smooth bark. It has leaves that are bipinnately compound. Each small leaflet pair has a nectar-producing organ at its base. The tree has small yellowish flowers produced in clusters. The flowers (1.2" across) have numerous long stamens that give it the appearance of a powder puff. The seed pods are reddish to yellowish brown, long, and flat (5-6").

Impacts: Tamaligi uliuli can form single species stands that shade out all competition. As a nitrogen-fixing species, it can alter the structure and composition of native ecosystems, potentially facilitating further invasion by other invasive species. It is fast-growing and can displace vegetation preferred by threatened native birds, such as the purple-capped fruit dove (*Ptilinopus porphyraceus*) and the Pacific imperial pigeon (*Ducula pacifica*). Young leaves contain saponin and may be toxic to animals.

Dispersal Mechanism: Tamaligi uliuli seed pods are lightweight and can be carried in the wind, but generally fall close to the tree. Seeds are often moved long distances for horticultural plantings and also moved by cattle, and in contaminated gear, vehicles and soil. Seeds remain viable for up to 5 years.

Origin, Distribution, and Habitat: Native to tropical southeastern Asia, tamaligi uliuli has not been found in American Samoa. It can invade both disturbed areas and natural forests.

Cultivation: Tamaligi uliuli is grown for ornamental purposes and for firewood. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

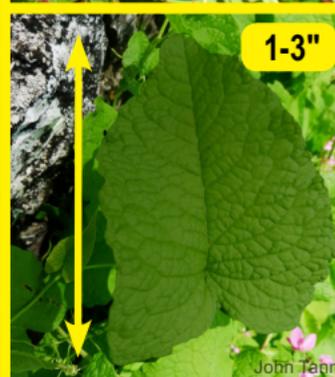
Don't confuse with:

Tamaligi (*Falcataria moluccana*), also called albizia, is a similar widespread invasive tree that is found throughout Samoa and covers the hillsides of Tutuila. It has light grey bark, grows to 120', and has leaves that are bipinnately compound with nectar-producing organs. Tamaligi has lighter colored bark and flowers with stamens that are half the size (.4-.7" long) of tamaligi uliuli. **THIS PLANT IS ALSO INVASIVE.**

FILIFILI *Antigonon leptopus*



Don't confuse with invasive fuchsia (left), which has similar leaves but small, white flowers or the nonnative bougainvillea (above), which has oval-shaped leaves and thorns.



VINE

FILIFILI

Antigonon leptopus

FAMILY: Polygonaceae

General Description: Filifili (chain of love) is a climbing herbaceous or sometimes woody vine with heart-shaped to triangular leaves (1-3" long) and clusters of pink bell-shaped flowers (.5-1.5" long). Vines can grow to 25'.

Impacts: Filifili is a smothering vine that can overgrow and eventually kill plants, shrubs, and small trees. It can also overgrow structures reducing access and causing damage. Leaves become dry during the dry season creating a fire hazard. It is recognized as invasive in Hawaii, Guam, Marquesas, Palau, Papua New Guinea, Australia, Tahiti, and the Virgin Islands.

Dispersal Mechanism: Filifili primarily reproduces vegetatively through small pieces of underground tubers and small buried stem pieces. Seed production is uncommon but prolific when it occurs. Seeds are dispersed by pigs and birds and remain viable in the ground for a long time. Seeds can float on water.

Origin, Distribution, and Habitat: Filifili is native to Mexico, but has been introduced throughout the tropics and subtropics. In American Samoa, filifili has been found on Tutuila Island. It thrives in dry to moist disturbed lowland areas and coral based soils, usually below 100'.

Cultivation: Filifili often escapes cultivation. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

Fue saina (*Mikania micrantha*), also called mile-a-minute, is a related invasive vine with similar leaves (1.5-5" long), but different flowers. Fue saina have small (.1-.2") white flower clusters. **THIS PLANT IS ALSO INVASIVE.**

Bougainvillea (*Bougainvillea* spp.) are nonnative vine-like shrubs that often have pink "flowers." Bougainvillea "flowers" are actually modified leaves surrounding small flowers. Common species have oval-shaped leaves (2-4") and are covered in thorns.

TOGO VAO *Ardisia elliptica*



Don't confuse with nonnative nonu vao, which also has reddish-tinted, young leaves. Look for large edible fruits and flowers with long stamens.



TREE

TOGO VAO

Ardisia elliptica

FAMILY: Myrsinaceae

General Description: Togo vao (shoe button ardisia) is a fast-growing shrub/small tree that grows up to 17' tall. Young trees have light colored smooth bark. Young leaves have a reddish tint. The leathery leaves grow in an alternate arrangement along the stem. It has small (.5" across), pale lavender, star-shaped flowers that hang near the end of the leaf stalk. Togo vao fruits are < 1" in diameter. Each fleshy fruit matures from white to inky black with white flesh and contains one seed. The pulp can stain fingers purple.

Impacts: Togo vao is a shade-tolerant, fast-growing tree that can reproduce prolifically. It can create carpets of seedlings (>40 plants per ft²). High seed viability (99%) and seed consumption by both birds and animals can lead to rapid spread into forests.

Dispersal Mechanism: Togo vao is spread by humans who use it as a landscaping plant. Berry-eating birds are attracted to the numerous red to blackish fruits and spread them long distances.

Origin, Distribution, and Habitat: Native to Asia, togo vao has been introduced throughout the tropics and subtropics. It has naturalized in the Caribbean, Florida, Cook Islands, Hawaii, and Samoa. It has not been found in American Samoa, but is spreading in Samoa on 'Upolu Island in lowland areas at Vailima village. It thrives in disturbed and intact rain forests and can grow as an understory shrub in moderately wet lowland areas.

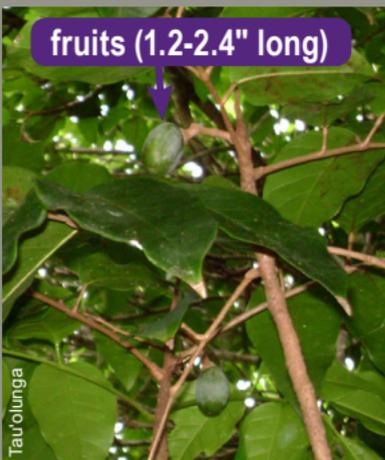
Cultivation: Togo vao is considered one of the 100 worst invasive species in the world by the International Union for Conservation of Nature. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

Nonu vao (*Syzygium samarangense*), also called wax apple, is a common nonnative tree (16-50') that has reddish-tinted young leaves similar to togo vao. It can be differentiated by its large edible fruit (2" in diameter) and puff-ball flowers with long showy stamens. There are also 15 other native *Syzygium* trees, such as asi vai (*S. clusiifolium*) and asi (*S. inophylloides*) found in Samoa that can be differentiated from togo vao in the same manner.

PULUMAMOE

Castilla elastica



Don't confuse with mafoa (left) or pili nut (above), which also produce a rubbery sap. The sap is fragrant. Also look for black fruits containing nuts.



TREE

PULUMAMOE

Castilla elastica

FAMILY: Moraceae

General Description: Pulumamoe (Panama rubber tree) is a medium-sized tree (15-30') that produces copious amounts of milky latex sap (rubber). Its leaves (8-12" long) grow in pairs and droop from the branches. The leaf veins curve along the edge of the leaf, almost making a loop. The young branches are covered with golden hair. Its seeds come in seed balls (1.5-2") that range in color from green when young to orange or red when ripe.

Impacts: Pulumamoe can invade intact rain forest, where it reproduces prolifically and crowds out native plants. This tree is widespread and invasive in Hawaii and French Polynesia.

Dispersal Mechanism: Birds and bats are attracted to pulumamoe fruit and can move seeds long distances into intact rain forest.

Origin, Distribution, and Habitat: Pulumamoe is native to Mexico, Central America, and northwestern South America. In American Samoa, pulumamoe is increasingly found in many places on Tutuila and Ta'u Islands. National Park of American Samoa staff is actively controlling and removing this tree from the park's forests. It readily invades moist forests, wetlands, and disturbed areas.

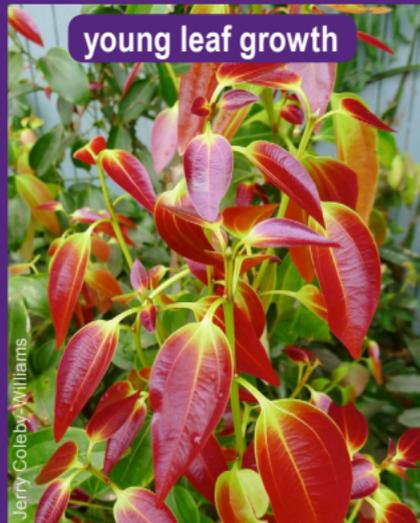
Cultivation: Pulumamoe is cultivated throughout the world for rubber production. Its latex is used to make kirikiti (cricket) balls. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

Native and nonnative canarium nut trees, such as *Canarium ovatum* and *C. harveyi*, have similar leaves to pulumamoe and also produce a rubbery sap. The sap is fragrant compared to pulumamoe sap, which is milky with no fragrance. Canarium nut trees have fruits that mature from green to black and some contain an edible nut.

TINAMONI

Cinnamomum verum



TREE

TINAMONI

Cinnamomum verum

FAMILY: Lauraceae

General Description: Tinamoni (cinnamon) is a fast-growing medium-sized tree (30') that has a black-brown bark used for making cinnamon. The shiny leaves (4-6") grow in an opposite pattern along the stem and have a "leaf within a leaf" vein pattern. The leaves and bark of this tree are strongly aromatic. It has inconspicuous flowers that are grey to yellow and grow in bunches. Its fruits (.4") contain a single seed and are purplish when young and black when ripe.

Impacts: Once established, tinamoni can grow dense root mats that inhibit other plants from taking root. It can shade out all other trees, creating single species stands. It is a major invasive threat in Samoa and the Seychelles where it has invaded 70-90% of the forest on the island of Mahe.

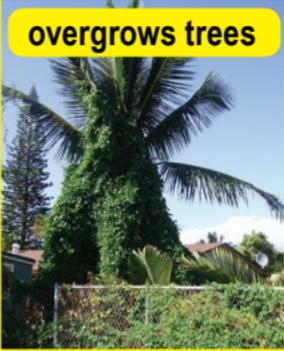
Dispersal Mechanism: Tinamoni seeds are moved long distances by birds, who eat the fruits, and humans, who grow this tree ornamentally and in plantations.

Origin, Distribution, and Habitat: Tinamoni is native to south Asia. It was widely distributed around the world in the 1700s. In American Samoa, it has become naturalized on Tutuila Island, where it is spreading in the ridge forests of Mt. Matafao, Matu'u, Utulei and Maloata. It thrives in lowland tropical forests.

Cultivation: Tinamoni is grown to produce cinnamon, which is made from its bark. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

AIVI *Coccinia grandis*

overgrows trees



infests equipment



Forest & Kim Starr (UH)

2"

flowers and fruit



leaves



2-3" long, variable
in shape



Ahmad Fuad Morad



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Don't confuse with fue lautetele. The nonnative fue lautetele (left) and the native fue lautetele (right) have heart-shaped leaves and funnel-shaped flowers.

VINE

AIVI

Coccinia grandis

FAMILY: Cucurbitaceae

General Description: Aivi (ivy gourd) is an aggressive vine. Its leaves are 2-3" long and variably shaped (sometimes deeply lobed). Aivi flowers are white and star-shaped, up to 2" across, and have five petals. The fruits are smooth and green (1-3" long) with whitish stripes turning to a uniform crimson red when ripe.

Impacts: Aivi grows aggressively and can climb over trees and shrubs, and on fences and power lines. It can also cover archaeological sites. If left unchecked, aivi can form a dense canopy that quickly smothers its host plant or structure under a solid blanket of vines.

Dispersal Mechanism: Aivi is dispersed long distances by humans who cultivate the plant for food. This pest can also be dispersed unintentionally via the transport of plant material by humans. Very small pieces of stem or root can resprout. Aivi seeds are spread by birds and rodents.

Origin, Distribution, and Habit: Aivi is native to Africa, India, Asia, and Australia. It is a known invasive on Guam and in Hawaii, and is present on Fiji, Tonga, Vanuatu. It is widespread in Samoa, especially around Apia where it was introduced in the 1990s. In American Samoa, National Park of American Samoa staff removed a small aivi population near the Fagatogo road on Tutuila Island in 2004. There are currently no known aivi populations.

Cultivation: Aivi is cultivated for its edible shoots, leaves, and fruits. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

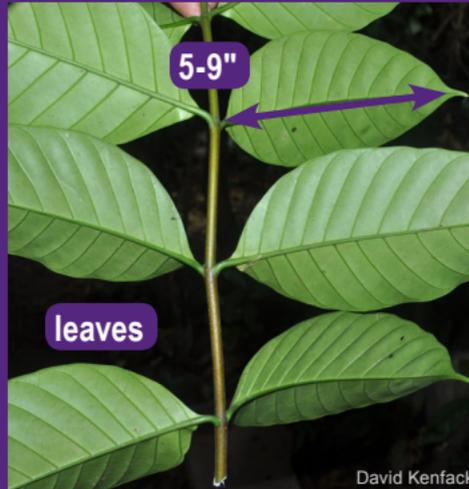
Don't confuse with:

Fue lautetele (*Merremia peltata*) is a fast-growing native vine with white or yellow funnel-shaped flowers, heart-shaped leaves (more broadly shaped like a shield), and small brown seed capsules (.2"). **THIS NATIVE PLANT CAN BE INVASIVE FOLLOWING CYCLONES.**

Fue lautetele (*Merremia umbellata*) is a fast-growing nonnative vine with yellow (sometimes white or orange) funnel-shaped flowers, heart-shaped leaves (more narrowly shaped and triangular), and small circular seed capsules (.4-.5"). **THIS PLANT IS ALSO INVASIVE.**

PULUVAO

Funtumia elastica



Don't confuse with invasive pulumamoe, which produces rubbery sap. Pulumamoe only grows 15-30' tall and has red-orange seed capsules.

TREE

PULUVAO

Funtumia elastica

FAMILY: Apocynaceae

General Description: Puluvaio (African rubber tree) is a tall tree (100') with smooth grey bark that produces copious amounts of milky sap (rubber). It has glossy, oblong leaves (5-9" long by 1.2-1.5" wide) arranged oppositely along the stem. It produces clusters of yellow-white flowers that are very fragrant. Its long, woody, grey-brown seed pods grow in pairs and open to expose plumed "parachute" seeds.

Impacts: Puluvaio is a shade-tolerant tree that can invade native forests. It can form single species stands that crowd out native vegetation. Puluvaio has a shallow root system and soft wood, making it susceptible to falling over in high winds, potentially causing damage to structures.

Dispersal Mechanism: Puluvaio has "parachute" seeds that can spread long distances in the wind.

Origin, Distribution, and Habitat: Puluvaio is native to Africa. It is not found in American Samoa, but in Samoa this tree is widespread on 'Upolu Island and is abundant on the east side of Savai'i Island and spreading west. It thrives in disturbed and native moist forests.

Cultivation: Puluvaio is cultivated throughout the world for rubber production. Its bark is used medicinally for respiratory ailments. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

Pulumamoe (*Castilla elastica*) is an invasive tree that produces a rubber sap, but is much shorter than puluvaio, only growing to 15-30'. This tree has leaves that grow in drooping pairs and has red-orange round seed capsules (1.5-2").

THIS PLANT IS ALSO INVASIVE.

KĀHILI GINGER

Hedychium gardnerianum



Don't confuse with other nonnative gingers, such as teuila (left) or teuila paepae (right), which tend to have skinnier leaves and non-red flower stamens.

**GRASS/
HERB**

KĀHILI GINGER

Hedychium gardnerianum

FAMILY: Zingiberaceae

General Description: Kāhili ginger (Himalayan ginger) is a showy ginger plant that grows in wet habitats from thick rhizomes to a height of 3-7'. It has lance-shaped leaves, 8-12" long by 4-6" wide, arranged in 2 rows along the length of the stem. Flower heads grow in stalks (6-12") with numerous strongly fragrant yellow flowers with elongated red stamens. Flowers are produced midsummer through fall. Its seeds are bright red and orange within.

Impacts: Kāhili ginger can rapidly grow into dense thickets, potentially displacing all other undergrowth in the rain forest and preventing the regeneration of all plants including trees and ferns. Once established, it can be difficult to control often requiring many visits over years. Removal can produce large muddy holes in the ground that look like pig wallows. This ginger is one of the worst pests of the native rain forests in Hawaii.

Dispersal Mechanism: Fruit-eating birds spread the seeds of kāhili ginger from the garden into the forest. Once established, it can spread vegetatively via densely growing rhizomes that sprout new stems. Even small root fragments can regrow.

Origin, Distribution, and Habitat: Kāhili ginger is native to the Himalayan Mountain regions of India, Nepal, and Bhutan. It has not been found in American Samoa or Samoa. It thrives in disturbed and native rain forests.

Cultivation: Kāhili ginger is considered one of the 100 worst invasive species in the world by the International Union for Conservation of Nature. 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 teuila and teuila paepae, can be found in cultivation and naturalizing throughout Samoa. Kāhili ginger tends to have wider leaves and is the only ginger that produces stalks of deep yellow flower heads with red stamens. **THESE PLANTS ARE ALSO INVASIVE.**

MATONI

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

MATONI

Miconia calvescens

FAMILY: Melastomataceae

General Description: Matoni (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: Matoni trees can grow quickly and close together, shading out nearly all other forest plants with their large dark leaves. Matoni 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 matoni 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.

Origin, Distribution, and Habitat: Matoni is native to South and Central America. It was introduced to Tahiti 70 years ago and now covers a majority of that island. In Hawaii, it is a widespread costly problem for watershed preservation. It has not been found in American Samoa or Samoa.

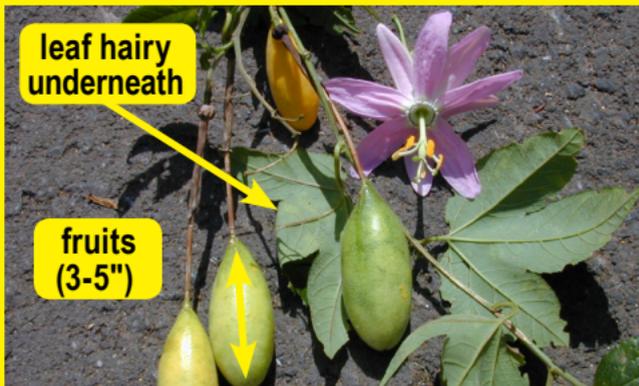
Cultivation: Matoni is considered one of the 100 worst invasive species in the world by the International Union for Conservation of Nature. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

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 present in American Samoa on Tutuila Island and the Manu'a Islands. Also a Melastome species, it can be differentiated by its shrubby growth and small leaves covered in coarse hairs.

FAIPOKA *Passiflora tarminiana*



Many nonnative passion fruit species are found in Samoa. None have the tubular pink flower and oblong yellow fruit like faipoka.



VINE

FAIPOKA

Passiflora tarminiana

FAMILY: Passifloraceae

General Description: Faipoka (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: Faipoka 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 faipoka are eaten by feral animals such as pigs, and many types of birds that carry the seeds long distances.

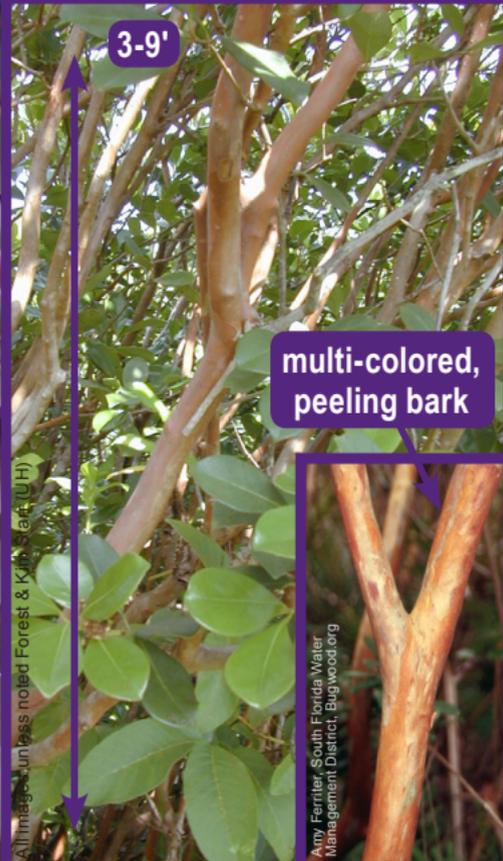
Origin, Distribution, and Habitat: Faipoka is native to the Andes Mountains and has been spread throughout the tropics as a garden plant. It is considered one of the worst invasive pests of New Zealand and Hawaii. It has not been found in American Samoa or Samoa. It can grow in a wide variety of climates and to over 7,000' elevation in its home range.

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

Don't confuse with:

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

KUAVA *Psidium cattleianum*



Don't confuse with invasive kuava (*Psidium guajava*) which has smooth green bark and larger yellow fruit.

TREE

KUAVA

Psidium cattleianum

FAMILY: Myrtaceae

General Description: Kuava (strawberry guava) is a small evergreen tree or shrub (3-9'). It has distinctive smooth, multi-colored, peeling bark and glossy dark green leaves with a leathery texture. Its leaves have 6-7 pairs of veins, are egg-shaped, and have an aroma when broken. It produces white flowers (.2") with numerous stamens (fragile stalks in the center of the flower with pollen-producing tips). It has round fleshy fruits (.4-1") that are red or sometimes yellow and look like small pomegranates.

Impacts: Kuava can form dense single species stands that crowd out all other vegetation. Its roots and leaves contain chemicals that can inhibit the growth of other plants. Trees produce prolific amounts of fruit that have up to 70 seeds with high germination rates. Kuava can act as a refuge for fruit flies, contributing to agricultural damage.

Dispersal Mechanism: Birds and mammals, especially pigs, are very attracted to kuava fruits and spread the seeds long distances. Trees spread vegetatively via suckers and roots sprouts. Root suckers can grow rapidly after trees are cut down, creating impenetrable thickets of clones. Uprooted plants can resprout. Kuava are moved long distances by humans for intentional fruit production plantings.

Origin, Distribution, and Habitat: Kuava is native to Brazil and has been introduced as an ornamental and fruit tree throughout the tropics and subtropics. It is considered a serious invasive pest in Tahiti and Hawaii. In American Samoa, National Park of American Samoa staff removed three populations on Tutuila Island in 2005. It can thrive in a variety of habitats from shore to summit, but is particularly problematic in pastures and rain forests.

Cultivation: Kuava is grown for its edible fruits. It is considered one of the 100 worst invasive species in the world by the International Union for Conservation of Nature. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

Kuava (*Psidium guajava*) is found throughout Samoa. It can be differentiated by its smooth green bark and larger yellow ripe fruits (1-4"). Its leaves have 10-20 pairs of veins. **THIS PLANT IS ALSO INVASIVE.**

MALAPA

Samanea saman



Don't confuse with lōpā, an invasive tree with similar leaves. Lōpā has red seeds and does not grow a wide crown like malapa.

TREE

MALAPA

Samanea saman

FAMILY: Fabaceae

General Description: Malapa (rain tree, monkeypod) is a medium-sized to large tree (80-150'+) with a spreading crown that can be twice as wide as the tree is tall. Its trunk is grey and wrinkled and can reach 6-10' around. Malapa has compound leaves composed of 6-16 pairs of stalkless leaflets, with a gland/dot between each pair. Its leaves fold in rainy weather and in the evening. It has white and pink showy flowers (2-2.4" across) that are produced near the end of stalks. It produces long flat seed pods (4-8") that contain oblong reddish-brown seeds.

Impacts: Malapa is fast-growing (2.5-5' per year). As a nitrogen-fixing species, it can alter the structure and composition of native ecosystems, potentially facilitating further invasion by other invasive species. Large branches can break off in storms causing damage to structures. It has become the one of the most widespread exotic trees of Fiji and is considered a noxious weed in Western Australia and Puerto Rico.

Dispersal Mechanism: Malapa produces prolific amounts of seeds that are dispersed by wind and animals, including cattle.

Origin, Distribution, and Habitat: Native from Central America to northern South America, malapa is cultivated throughout the Pacific. It has become invasive in Papua New Guinea, French Polynesia, Fiji, the Philippines, Hawaii, and Tonga. In American Samoa, it has naturalized in the Malaeimi Valley on Tutuila Island. It can be found along roadsides, in disturbed areas, and thriving in swampy lands.

Cultivation: Malapa is grown as a shade tree, for timber including wood carving, and as an animal fodder. Due to its potentially invasive qualities in wet forests and along streambeds, it should not be cultivated.

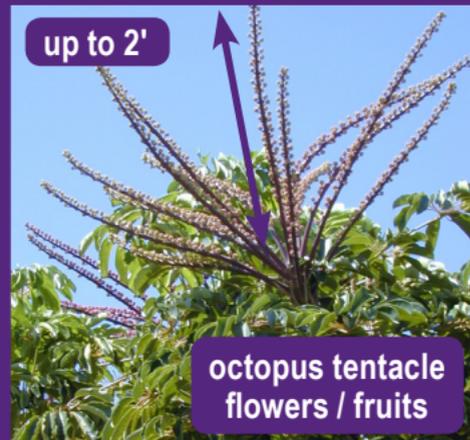
Don't confuse with:

Lōpā (*Adenantha pavonina*), also called false sandalwood, is an invasive tree (20-50' tall) with similar leaves that is found throughout Samoa, including Manu'a. Lōpā has distinctive red seeds that are exposed when the seed pod splits open. It does not have a wide, rounded crown like malapa. **THESE PLANTS ARE ALSO INVASIVE.**

LAAUFE'E *Schefflera actinophylla*



Don't confuse with dwarf umbrella tree, which can also grow epiphytically. It does not have "octopus tentacle" flowers/fruits.



TREE

LAAUFE'E

Schefflera actinophylla

FAMILY: Araliaceae

General Description: Laaufe'e (octopus 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: Laaufe'e 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. Laaufe'e leaves can cause an allergic rash or inflammation of the skin to sensitive individuals. Control of mature trees is difficult as herbicide can take months to take effect.

Dispersal Mechanism: Birds and animals are attracted to laaufe'e 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: Laaufe'e is native to Australia and New Guinea and has been introduced as an ornamental plant throughout the tropics and subtropics. In American Samoa, it has been found on Tutuila Island in the villages of Futiga and Nu'uuli.

Cultivation: Laaufe'e is widely cultivated throughout the world as an ornamental plant. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

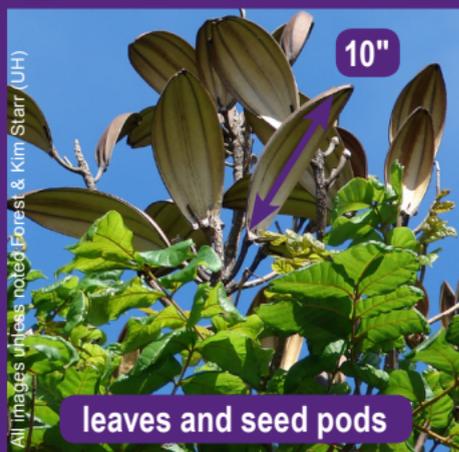
Don't confuse with:

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

FA'APASI *Spathodea campanulata*



Don't confuse with native tavai, which has similar leaves but different flowers.



All images unless noted Forest & Kim Starr (UH)



FA'APASI

Spathodea campanulata

FAMILY: Bignoniaceae

General Description: Fa'apasi (la'au fa'apasi, African tulip tree) is a large (80'+) tree with glossy leaves and big showy tulip-like red-orange flowers (up to 8" long) that appear at the ends of branches. Leaves have prominent veins and are bronze when young. The branches are covered with small white lenticel (pore) spots. Its fruits are upright canoe-shaped pods (10" long). Each pod contains 500+ heart-shaped, tissue-papery, flat seeds that are dispersed in the wind when the pod bursts.

Impacts: Fa'apasi readily escapes intentional plantings. It can form dense stands that crowd and shade out other vegetation. Plants can grow 2" in diameter per year and are tolerant of shade. Its dropped flowers can create a slipping hazard for people and cars. The branches are easily broken in the wind, potentially creating road and structure hazards.

Dispersal Mechanism: Fa'apasi produces large numbers of wind-dispersed seeds that establish quickly and grow rapidly. It can reproduce from stump suckers.

Origin, Distribution, and Habitat: Native to tropical Africa, fa'apasi has been introduced and become invasive throughout the Pacific, especially in the Cook Islands, Guam, Vanuatu, Fiji, and Hawaii. This tree is found throughout Samoa and is spreading in American Samoa around Leone and Taputimu on Tutuila Island. It is particularly invasive in low to mid-elevation rain forests and plants can spread in open agricultural land, waste areas, and intact native forest.

Cultivation: Fa'apasi is considered one of the 100 worst invasive species in the world by the International Union for Conservation of Nature. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

Tavai (*Rhus taitensis*) is a native Samoan tree found in mesic to wet forests with leaves that look similar to fa'apasi. Tavai has leaflets that are unequal at the base and clusters of small flowers that develop into small hairy reddish fruits.

TIPOTI *Tibouchina urvilleana*



Don't confuse
with invasive
matoni (left),
which has large
leaves or native
fua lole (above),
which has small,
white flowers.



SHRUB

TIPOTI

Tibouchina urvilleana

FAMILY: Melastomataceae

General Description: Tipoti (tibouchina) is an aggressive shrub/small tree (10-15') with velvety leaves and showy flowers. Tipoti leaves (4-6") are arranged in an opposite pattern along the stem and have the distinctive "leaf within a leaf" vein pattern like other related melastome plants, such as matoni (*Miconia calvescens*). It has large, deep purple, 5-petaled flowers (5") with noticeable purple stamens (fragile stalks in the center of the flower with pollen-producing tips).

Impacts: Tipoti can grow into dense thickets that exclude all other plants. It is a member of the notorious melastome family, which contains many plants considered highly invasive throughout the Pacific. In Hawaii, tipoti is considered one of the worst pests of the lowland native rain forest, a habitat type also found in Samoa.

Dispersal Mechanism: Tipoti is spread long distances by humans for garden cultivation. It primarily spreads vegetatively via underground runners and branches that take root when they touch the ground. Improper disposal of garden waste can also spread this plant. Small root and stem fragments can grow into a new plant.

Origin, Distribution, and Habitat: Native to southern Brazil, tibouchina species are considered invasive in New Zealand, La Réunion, and Hawaii. They are excluded from French Polynesia. Tipoti has not been found in American Samoa, but is present in Samoa on 'Upolu Island. It is particularly invasive in wet lowland disturbed areas, but can also invade intact native rain forest.

Cultivation: Tipoti is a popular ornamental that is widely available for sale on the internet. It has been classified as "High Risk" by the Hawaii-Pacific Weed Risk Assessment and should not be cultivated.

Don't confuse with:

Matoni (*Miconia calvescens*) is a related invasive pest with the "leaf within a leaf" vein pattern. Matoni has large leaves (1.5'+) with purple undersides. **THIS PLANT IS ALSO INVASIVE.**

Fua lole (*Melastoma denticulatum*) is a related native shrub with the "leaf within a leaf" vein pattern. Fua lole grows to 7', has white flowers (1.6" across), and leaves (2.4-4.8" long by .8-1.6" wide) covered with sparse, fine hairs.