Plant Giveaway Information

Once you have read the information below – be sure to fill out the evaluation below to register for a Hawaiian Plate pick up at HonCC campus on Friday April 22. **11:00 AM - 1:00 PM**

Lama
Scientific name: *Diospyros sandwicensis*

**General Description:** Lama is a type of endemic Hawaiian tree (only found here in Hawai‘i) that is closely related to trees like persimmons and ebony. Lama trees are partially why Kapālama has its name. A pā lama was a sacred enclosure often made of lama wood posts, though a pā lama could also be a grove of lama trees. This species of lama (there are two) are typically found in drier to mesic (moderately wet or dry) forest here in Hawai‘i. Though not endangered, lama trees are not nearly as common as they once were, since their primary habitat, Hawaiian dry-forests, have been reduced to less than 10% of its original range after Western contact in the islands. Lama trees can tolerate near desert-like climates once established, many lama trees in North Kona grow out of bare lava rock and are some of the few trees that can grow in that harsh habitat. Lama trees can range greatly in size, trees that grow in open/drier climates
may be over 400 years old but only be 10-15 ft., while trees that grow in more forested/wetter conditions grow tall and straight and be up to 40 ft.

Uses/Cultural Significance: Lama have many different uses in Hawaiian culture, ranging from foods, to medicines, religion and crafts. Mature female lama trees (lama are dioecious meaning they have separate male or female individuals) will produce 1-inch light-bulb shaped fruits call pi‘oi that are edible. The fruits start off as green and are mature when they turn orange to reddish in color. They are not exceptionally sweet and they have a large seed in the middle, but they do taste vaguely similar to kaki (Asian persimmons). The fruits were also sometimes used as an ingredient in lā‘au lapa‘au (traditional Hawaiian medicine).

The wood was used for posts for sacred places as mentioned earlier and were also used in general house construction of the main pou (posts) of the traditional hale house frame. The wood can range from being a medium-density wood (think monkey-pod) to very hard (it will sink easily in water and is very heavy), depending on the conditions it grows in and what population of trees the lama is from. As far as religion, lama is a major kinolau (physical embodiment) of the Hawaiian hula deity Laka, and a block or small log of lama wood was often put on an altar in the halau as a representation or kiʻi of Laka. Depending where they grow, very old lama trees have jet-black cored of wood, reminiscent of their relative the African ebony tree (*Diospyros ebenum*).

Care: Lama trees are slow growing by nature (younger trees grow a little faster, but older trees may grow only a few inches a year) so don’t expect this plant to be a large tree anytime soon. The best scenario for these trees is well-draining soil in a drier area (i.e. West-side) though they can moderately wet conditions (so probably not the best for the back of Mānoa or really wet areas of the Windward side). If you are keeping it in a pot for a few years before out-planting I would recommend getting a pot that is on the taller side rather than wide, as lama trees make long-taproots that don’t like to planted in shallow pots and get easily root-bound. Also if you are planting these in pots for a time, I would suggest a 3-parts perlite to 1 part potting soil mix, or 3 to 1 parts cinder to soil mix, as these plants prefer soil that drains well and can get waterlogged if put into straight potting soil. If in a pot, watering once or twice a week should be sufficient, unless in a hot/dry area. If these plants are out-planted and are taken care of well, they are some of the oldest living flowering trees in the world (conifers can live for thousands of years, but aren’t flowering plants). Some lama trees are thought to be around 500 years old!
Koʻokoʻolau

"Picture Credit: Kim and Forest Starr"

"Scientific Name: Bidens spp."
**General Description:** There are 19 different Hawaiian endemic species (found only here in Hawai‘i) of the genus Bidens. You might look at the plant and think it’s a weed, and that is because these plants are closely related to the non-native kīnehi (*Bidens pilosa*) or “beggars tick,” “Spanish needle” or what some people call locally kukū’s due to their seeds that annoyingly easily stick to your clothes. Unlike the non-native kīnehi, our native koʻokoʻolau species have lost their barbs due to the lack of animals with fur that they would typically travel on. Depending on the species of koʻokoʻolau, they can be small herbaceous plants to tall-woody shrubs.

**Uses/Cultural Significance:** Many species of koʻokoʻolau have been used medicinally as a tea. Typically fresh leaves are steeped in hot water, or you can ‘cold-brew’ the leaves in lukewarm water for a longer period of time. The tea is said to help with issues of the blood as well as maintaining healthy sugar levels i.e. in diabetics. It is used in conjunction with many other plants in other Hawaiian medicinal recipes as well. To make the tea you only need a few leaves (whole leaves not the smaller leaflets) per cup of boiling hot water.

**Care:** Koʻokoʻolau do best in wetter areas, so watering more frequently, three times a week or more if you are in a particularly dry area. They can be in full sun, though keeping it in a partly shaded area may help to keep it from getting too stressed. These plants are very long-lived (a few months to a year), but if they are healthy they will produce flowers and seeds before they die, and will often replant themselves through the dropping of seeds on the ground below. You can also re-plant seeds by surface-sowing them on some soil or potting mix, where they should germinate in one to two weeks. They can also be propagated by cuttings.
Pāpala Kepau
Scientific Name: *Pisonia brunoniana*
General Description: Pāpala kepau can grow into a large tree (~30 ft), though can be kept much smaller if needed through trimming (they can be happy and healthy at only around 10-15 ft) and are found in mesic to dry forests. Pāpala kepau have large glossy leaves, and small-cigar shaped flowers, though their main feature are their 2 inch or so seed pods that are very sticky. The stickiness of these seeds allowed this plant to travel thousands of miles while stuck to birds, and is naturally found in several places in the Pacific basin, including Australia and New Zealand.

Uses/Cultural Significance: Pāpala Kepau were traditionally used to capture birds for making ahuʻula the feather capes worn by aliʻi (chiefs) and people of high status in ancient Hawaiʻi. The sticky exterior of the pods were scraped off onto the branches of trees near the blossoms that the birds would feed on. As the birds hopped their way on the branches near the flower their feet would get trapped on the sticky sap and then would be captured by the bird catcher (some were released alive though some birds may have been kept and/or eaten). If released, some kukui nut oil was rubbed onto the feet of the bird which would help to remove the sticky substance. Though not used to catch our now endangered Hawaiian honeycreepers, other wild birds still occasionally get stuck in the seed pods of pāpala kepau.

Care: Right now the pāpala kepau are quite small, so letting them grow till around 6 inches and then repotting into a bigger pot may be necessary before out-planting. When they are around 2 ft in height might be a good time to plant it into the soil. Pāpala kepau typically grow in mesic forests, so not super wet and not very dry, but can tolerate drier conditions (not desert, but just on the drier side, i.e. Honolulu, Middle to South Kona on the Big Island). Once established pāpala kepau are pretty resilient and besides watering and the occasional trimming, do not need a huge amount of care.

ʻAuhuhu
Scientific Name: *Tephrosia purpurea*

General Description: ‘Auhuhu is a small indigenous bush (2-3’ in height) that grows in dry coastal areas of Hawai‘i. This plant often grows in small patches with a number of individuals and is often seen flowering and/or seeding. These plants though short-lived (typically dying after a year or two) are attractive and hardy, and will often self-propagate through their small seeds that fall to the ground below the parent plants.

Uses: There are not many applications for ‘auhuhu in modern times, but traditionally large bunches of ‘auhuhu plants were gathered and then pounded into a pulp (leaves, stems, roots and all) and then thrown into tidepools to stun and stupefy fish for easy gathering. The interesting thing about this toxin is that it seems to have no long-lasting effects on the fish, so if the fish is stunned and then put in clean water, it recovers in a few minutes.

Care: Though these can be grown in large pots, it makes more sense to plant these out into the ground. ‘Auhuhu prefers drier/well draining soil and once established in the soil does not typically need a lot of care. ‘Auhuhu also prefer sunny places when possible. As mentioned before ‘Auhuhu does have a shorter life cycle, but is very easy to grow from seed and often re-seeds itself in the spot that it was planted.
**Chiles (Peppers)**

Scientific name: *Capsicum annum* or *Capsicum chinense*

General Description: Chiles are a great and hardy group of small bushes that were domesticated thousands of years ago by peoples of North and Central America. Though there are only handful of species that were domesticated from wild ancestors, there are now tens of thousands of cultivars and hybrids of chiles that we know of today. The fruit of chiles are most famous for their secret weapon, the compound known as capsaicin, which gives peppers their spiciness. This compound is meant to be a deterrent for large mammals who might eat the pepper’s small fruits and risk crushing their seeds. The fruits of peppers have evolved to be spread by birds, and so though capsaicin burns the mouths of mammals (like us humans), birds are unaffected!

We have several varieties of peppers to offer, but there are two main species that each these peppers belong to and are some of the most popular species of peppers, *Capsicum annum* and *Capsicum chinense*. *Capsicum annum* are chiles that are often seen in Asian cooking, smaller chiles that often grow in clusters that are long and thin (think thai chiles or cayenne peppers). *Capsicum chinense* (which is not from China) are more round and bell-shaped and include the peppers like the famous habaneros and scotch bonnets. These bushes typically grow only a few feet tall and can often fruit even in smaller gallon sized pots, or if planted out can grow a littler larger. Depending on the variety, some peppers can last for years out planted, while others tend to peter out after a year or two if growth.

**Uses:**

![Photo Credit: https://www.cayennediane.com/peppers/yatsufusa-chile-pepper/](https://www.cayennediane.com/peppers/yatsufusa-chile-pepper/)

**Yatsufusa Chile:** A Japanese variety of pepper, the yatsufusa can be used almost any way you use a cayenne or thai chili (with similar heat). I like to chop up a pepper or two and throw it into my curries to increase the heat a bit. You can even use these as substitutes for Hawaiian chile peppers i.e. making chili pepper water. The fruits of these chiles often grow in clusters and can
be picked when green or fully ripened red. Often times you may not need all of those chiles at once, so one tip is to freeze them where they can last years while still keep their flavor and heat.

**Photo Credit:** [https://peppergeek.com/how-to-grow-scotch-bonnet-peppers/](https://peppergeek.com/how-to-grow-scotch-bonnet-peppers/)

**Yellow Scotch Bonnet:** Scotch Bonnets are the same specie as habaneros, and so share some similar qualities including their level of heat (both are about 100,000-350,000 scoville units, 2-3 times as hot as a cayenne pepper). Though these peppers are spicy, they do have a special fruitiness to them which is prized in Caribbean cooking especially in Jamaica.

*Photo Credit: [https://peppergeek.com/trinidad-moruga-scorpion-peppers/](https://peppergeek.com/trinidad-moruga-scorpion-peppers/)*
Moruga Scorpion: Please do not take this pepper unless you are really into hot things and are knowledgeable about peppers, as these peppers if properly cared for do create intensely hot peppers (about 1.4-2 million scoville, over 10x as hot as habanero and half the strength of pepper spray). Carolina reapers are a hybrid of C. chinense varieties. These bushes can grow quite tall (up to 4 ft) and produce bright red and bumpy fruits that hold lots of capsaicin. These are the kinds of peppers you want gloves on when you are handling as capsaicin can stick the hands and it is difficult to get off (trust me I have had a very bad experience).

Some general pepper use tips: If you don’t like things too spicy, you can significantly reduce the heat of your peppers by leaving out the seeds and the white parts on the inside of the pepper fruits (this is where most of the capsaicin compound is held/produced). Chopping up the pepper spreads more of the capsaicin/spreads it more evenly, so leaving a pepper whole can reduce the amount of heat that goes throughout the dish. Peppers are often produced in great abundance over a few weeks or months, during which you may have an excess amount. Like I mentioned earlier freezing is a good method of storage, but making chili pepper water, or pickling peppers is another great way to store/use peppers long-term.

Care: Peppers often prefer to be in full sun when possible, but do tolerate some shade. The environment that peppers grow in greatly affects the heat (capsaicin levels) in the fruits, and so if you over-water your pepper or if its in a place that is too shady, your peppers won’t pack as much punch, so watering a little less and stressing the plant a little actually makes the fruits more potent. If you plan to keep your pepper in a pot, use a more well-draining potting mix, 1 part soil to 1-2 parts perlite or other well-draining potting medium. Fertilizing with a general fruiting plant fertilizer can help with fruit production.

Unfortunately peppers do get some of the more common garden pests i.e. aphids or whiteflies, though both can be treated with less harsh pesticides like safer soap or the organic pesticide neem oil. It is unlikely as they are very uncommon pests, but if you start seeing holes in a lot of your peppers you may have caught the infamous peppers weevil, an insect that specializes in eating peppers and their relatives, and once you have those you might want to consider getting rid of all your peppers for a time as they are very hard to get rid of.
Edible Pod Sugar Snap Peas

Photo Credit: https://www.groworganic.com/products/pv-org-pea-sugar-snap

Scientific Name: Pisum sativum

Description/Uses: A common food in many supermarkets, sugar snap peas like this variety have soft-edible pods which you can eat raw, use in stir-fries, fried, etc. As the name implies these peas have a natural sweetness to them that make them great even just eaten raw on their own, though many prefer to have a dip of some sort to accompany the pods.

Care: Because these peas are climbers by nature, they do need a trellis or support of some sort to climb on and spread. If you have an iron mesh fence of some sort that would work, but would probably be easier would be buying plastic mesh/netting from any home improvement/garden shop. For one plant you won’t need a lot of space, maybe a 2-3 foot tall by 3 foot wide meshing would be fine, making a small wall of netting. If planting in the ground you can put two tall stick in the ground at the desired length and stretch the meshing between the two stick and tie using some sort of cordage. Plant the peas right in front or under the netting and if the vine is long enough, gently lift the vine so that it rests on the netting. Given a week or two your pea plant should start to try and crawl and form tendrils on the netting. If you are keeping the peas in a pot, I would recommend replanting the pea into a larger pot (maybe around 6 inch to half gallon pot) and then figuring out a way to stretch the plastic net so that it can support some weight. Place the pot in front of our right under the netting. Given a few months you should start seeing pea flowers and eventually pea pods. You can pick the pods at any point really, but waiting till they are a 2-3 inches in length will give you the near maximum yield (if grown in the soil they can grow larger). You do no want to wait till the pods start to yellow as they are ripening at this point and will start to become tough.
If you are planning to replant or propagate the seeds, do not harvest them while they are green, instead allow the pods to yellow and eventually brown. At this point the seeds inside should be mature and can be planted or dried further for long-term storage.
Koaiʻa (Koaiʻe)

Scientific Name: Acaica Koaiʻa

General Description: Koaiʻa is the close relative to the more famous koa tree (*Acacia heterophylla*), and is a small tree that lives in typically mesic to dry forests. Koaiʻa are very similar to koa trees, though there are several big differences that make this species unique, the
first being its size. Unlike the large koa trees (which can grow over 100 ft) Koaiʻa trees typically grow only around 15 ft or so, especially the ones that grow in drier/windswept areas. Typically koaiʻa grow short in statue but umbrella out with a canopy that is often wider than their height. Koaiʻa trees also grow relatively slowly, some koa grow multiple feet a year when young, while koaiʻa may grow a few inches under the same conditions. Though this small tree may not seem as impressive as its cousin koa, its wood in some ways is far superior as in part due to its habitat and slow growth, koaiʻa have extremely dense wood (the kind of density that sinks like a brick in water). This smaller size and slow growth can be advantageous in the garden/home setting as koaiʻa are much more manageable than koa trees and can tolerate much drier conditions than their cousin.

**Uses/Cultural Significance:** Koaiʻa was prized for any type of traditional Hawaiian craft that required strength and durability. Weapons like the famous shark tooth lei o manō would often be made from koaiʻa. Kapa beaters and/or anvils were often made of koaiʻa since they needed to be dense and durable. One of the ways I remember the name of this tree is that is a “koa iʻa” or “fish koa.” I am not entirely sure if that is why the ancient Hawaiians gave Koaiʻa this name, but large shark hooks would often be made from the bent branches of this hardwood.

**Care:** As these individuals are on the small size, upgrading to half gallon to gallon size pot for another six months to a year may help ensure its success in out planting later. When repotting make sure to use a pot that is taller than wider (koaiʻa like to make deep roots rather than spreading them out wide) and that your potting soil is well draining, so a recommended 1 part potting soil to 3 parts perlite or small cinder would be ideal. Koaiʻa do not need a lot of water once established in their new pot, so watering 2 at most 3 times a week (less if you are in a very wet area) should be sufficient to keep it happy and healthy. If you plan to plant it in your garden or yard, I would suggest waiting till the plant is at least 1 ft in height, though 2-3 ft would be preferable, just to ensure that the plant survives the shock of out planting.
Thai Basil

Scientific Name: *Basilicum ocimum var. thyrsiflorum*

**General Description/Uses:** Thai basil belongs to the same species as your typical Italian basil, but definitely has a different flavor profile all of its own. Thai basil are short herbs that grow 2-3’ tall depending on where/how they are planted. These herbs easily grow from seed, and are ready to start plucking within a few months. Thai basil can be used for a number of different South-East Asian dishes, though probably is most famous for its use as a topping for Vietnamese Pho noodles. Of course many Thai dishes incorporate the leaves of this plant, including various thai stir-fries and curry pastes.

**Care:** Thai basils as with other basils don’t like to get very dry or they will start to wilt, so watering three times or more a week would be ideal for potted plants especially. Planted in the soil these plants often thrive and grow 2-3’ tall, but are also content to grow in medium to large pots if needed. Thai basils start to lose their vigor after a year or so, so replanting from their seeds or making cuttings from the stems are easy ways to replant this easy to grow herb. A tip for

*Photo Credit: Kim and Forest Starr*
more leaf/stem production is to snip off the flower buds as they start to grow (unless you want a whole bunch of seeds), as these flower buds take energy away from leaf/plant growth and the plants will kind of peter-out after seeding. Like I mentioned earlier these plants are very easy to grow from cuttings, so if you have a mature plant and want to grow more, snip off 6” off the ends of some of the branches or stems and place the bottoms in a jar of water. Give the cuttings a week or two in the jar and you should see roots and then you can plant them in potting soil.
Green Onion – Heshiko

Photo Credit: https://www.littleshopofseeds.com/HeShiKo_Bunching_Onion/p5068479_19299228.aspx

Scientific Name: *Allium fistulosum*

**Description and Uses:** Often called bunching onions and sometimes spring onions, green onions are a staple in many local-Hawaiian and Asian cuisines. Here in Hawai‘i typically the green parts are used as an ingredient simply chopped and sprinkled as a garnish i.e. as a topping for tofu with shoyu, or as a cooked ingredient. Many dishes utilized green onions ranging from local dishes like chicken hekka (type of chicken stir-fry), lomi lomi salmon, or chicken long-rice to Asian dishes like Chinese cold-ginger chicken, Korean pajeon (scallion or green onion “pancake”), or as an additive to kick up your eggs in Japanese tamagoyaki.

**Care:** These plants are fairly easy to grow and typically don’t get a lot of pests if they are happy and healthy. Plants can be kept indefinitely in a large pot though fertilizing once every few months and/or repotting in new soil once a year will help to keep up your onion’s health and vigor. These plants do well in full sun, an need watering 2-3 times a week depending on how hot or dry of an area you are in. If you are in a place that is naturally fairly wet (i.e. the back of Mānoa Valley) you won’t have to water it much. The wonderful thing about green onions is that you can use them over and over again. If you are just using the green parts you can snip them off the plant and they will regrow over time. If you are using more of the white portions of the onion you probably will want to pull up the onion and if you use a lot of it may not be able to replant it, but typically as long as you have a few inches of the stalk with the roots it should grow back.
Project Uluwehi – Grow a Pothos Plant

See link to information about cultivating a pothos plant

Click on this link for the event evaluation – and to register to pick up a free Hawaiian Plate pick up and container give away!

Evaluation Link