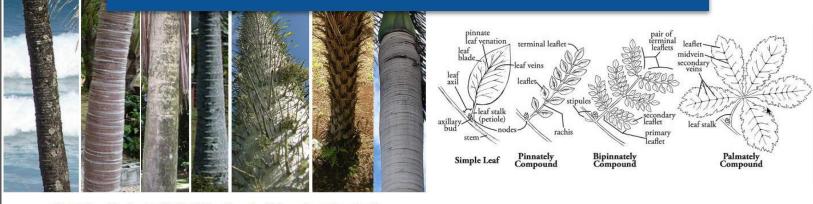
Urban Trees of Guam

Identification and Assessment Guide

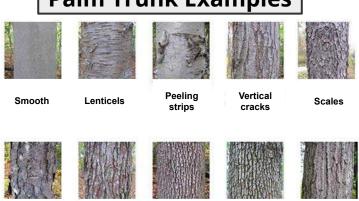


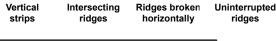
Identification Characteristics

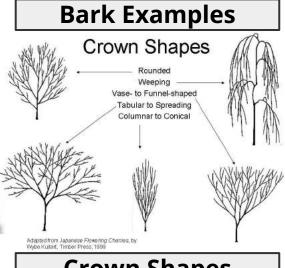


(From left to right: Coconut, Manila, Fiji Fan, Alexander, Aiphanes, Pygmy Date, Royal)

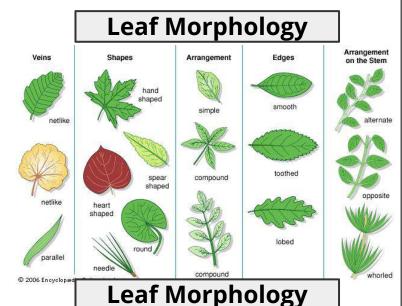
Palm Trunk Examples

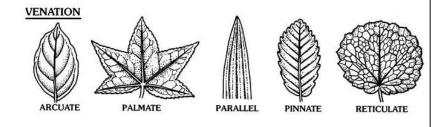






Crown Shapes





Leaf Venation

Other Tools:

- Use the Pacific Island Dichotomous Tree Key
- Complete an <u>Unidentifiable Tree Form</u>

Assessment Guide

Common Name:

Dead/Stumps, Unknown if uncertain.

Number of Stems:

Does stem come from the



ground?
From ground=stem
From stem=branch
Use your best
judgement.

Live Crown ratio:

Use the shaka!



Do Ratio when collecting height measurement

Condition:

based on crown method

GOOD

If the defect level for all of these categories, collectively, **is less than 15%**



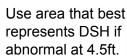
If the defect level is between 15-50%

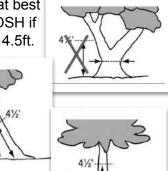


If the defect level is greater than 50%

DSH:

Multistems: Take DSH of each stem at 4.5ft, <u>calculate</u> in <u>TreePlotter</u>.



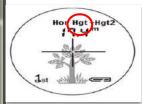


Measuring Split Trunk Tree

Height:

Palms: Measure to the *bottom* of fronds.





Use best estimate if the hypsometer is not calibrated.

Use people's height or nearby buildings to estimate.

Wires: Conflicting if wires are within 10 ft of tree

Growth Space: Park is

usually bare soil

Common Deciduous Trees

Plumeria Narra

Gold tree Crepe Myrtle Royal Poinciana Monkeypod

Ficus (partially) Wiliwili



% Dieback:

Dieback is from the <u>EDGES</u> of the crown.

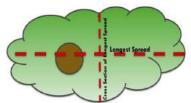
It is an indicator of root problems.

What is NOT dieback:

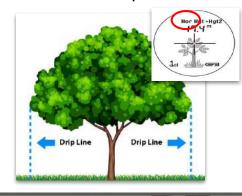
- empty branches with buds
- branches under the canopy that die from lack of light

Crown Spread:

Perpendicular drip lines.



Use pace or horizontal feature on hypsometer if in a difficult space.



Deciduous leaf loss

How to record:

- Record
 measurements the
 way they are present
 at the time you are
 observing them.
- Indicate "Deciduous leaf loss" in comment







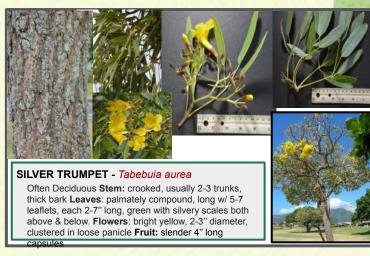






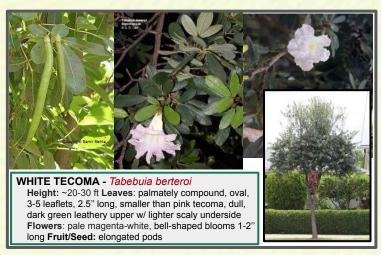






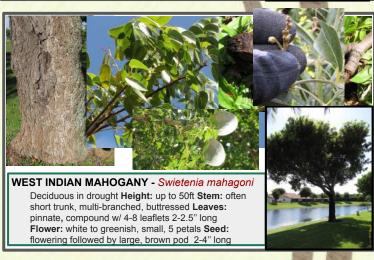














Deciduous **Stem**: straight, cylindrical, sometimes buttressed **Leaves**: bipinnate, 10-25" long, 20 pinna w/ 20-40 oval leaflets **Flower**: yellow, large compound racemes, 8" long **Fruit**: pod 2-4" long, start red, black when ripe, 1-4 seeds













cylindrical capsules .2" clustered

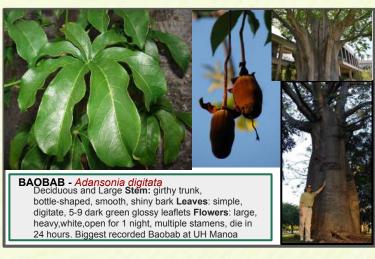
















NIYOK / COCONUT PALM - Cocos nucifera

Indigenous Stem: slender, leaning, ringed, swollen base



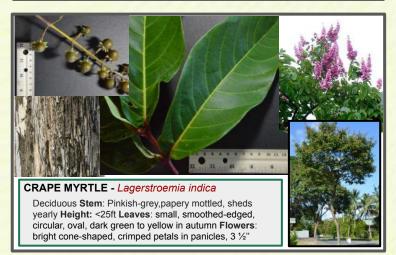




CHINESE BANYAN - Ficus microcarpa

Epiphytic **Stem**: smooth, light-gray bark, aerial roots, thick trunk **Height**: ~40ftt (world's tallest in Kauai 110ft!) **Leaves**: variable, coriaceous, oblong, elliptic to broadly elliptic or obovate **Fruit**: Sessile, depressed pyriform 8x10mm **Seeds**: less than 1mm



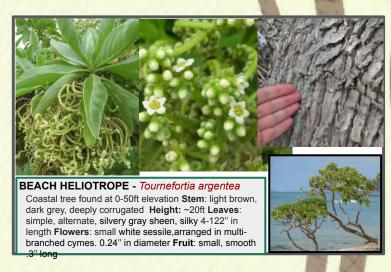


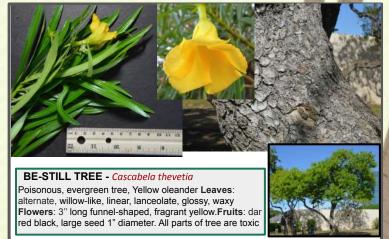


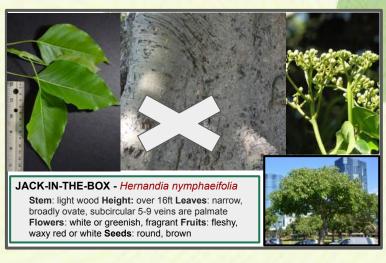








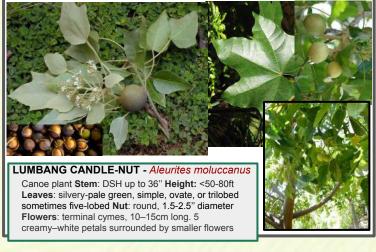




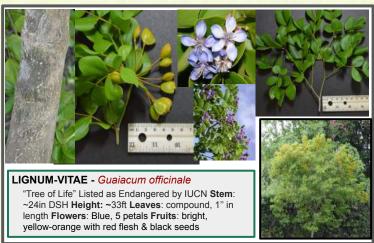












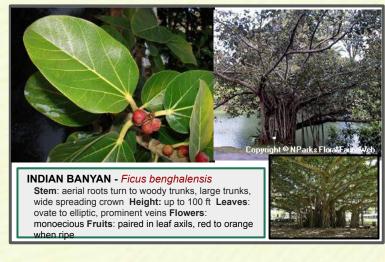
























BINALO - Thespesia populnea Indigenous Height: <33ft Leaves: spirally arranged, stalked, leathery, triangular heart-shaped, distinct yellow veins Flowers: bell-shaped, solitary, yellow w/ maroon center Fruit: brown capsules, round to pear-shaped, 1-5cm across, can split into 5 parts





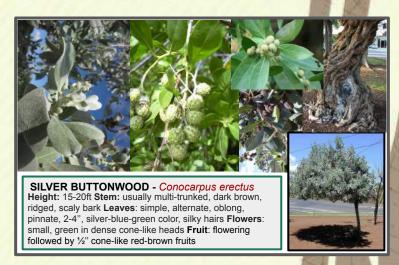
MORETON BAY FIG - Ficus macrophylla -Stem: can be massive, thick buttressing, ~8ft diameter, grey-brown, blemished bark, aerial roots Height: can reach 200 ft Leaves: large, elliptic, alternate, leathery, dark green top, brownish underside, 6-12in long **Fruits**: small, round, greenish









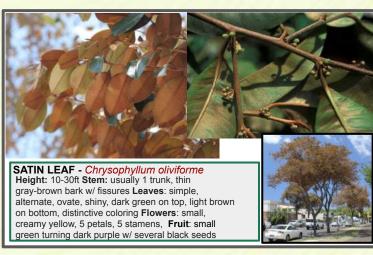




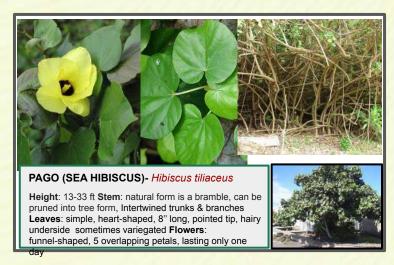
















Height: 10-20ft Stem: one trunk, fiber pattern at base, smooth, ~20" DSH Leaves: palmate, fan-shaped, 7'x6', no spines along petioles Fruit: green spherical, turn red then black when ripe, single seed Flower: fragrant,



FIJI FAN PALM - Pritchardia pacifica

brownish, growing among leaves



GEIGER TREE - Cordia sebestena

Stem: naturally multi-trunked, droopy branches Leaves: dark green, leathery, alternate ovate 7" long, wavy margins; smaller, rougher than True Kou Flowers: clusters, tubular, flaring, 2" wide; darker than True Kou Fruit: pear-shaped fleshy, white,





Indigenous, "Territory" tree of Guam Height: 22-40ft



IFIT- Intsia bijuga

Leaves: simple, opposite, ovate-elliptic and very large, 30 to 75 cm long by 15 to 40 cm wide, pubescent Flowers: in large panicles 30 to 50 cm long, flowers on very short stems, white or pink. Fruit: drupe 3 cm wide by 1.5 cm thick





CHINESE FAN PALM - Livistona chinensis

vase-shaped, milky sap, Leaves: deciduous,

elliptical, dark leaves, undulate margins, Flower:

fragrant, 5-petaled, pink to red ,Fruits: doesn't fruit if

Height: 30-50ft Stem: upright; showy trunk; single leader; no thorns Leaves: spiral arrangement, star-shaped leaf, palmate veination Flower: small, white flowers Fruit: round black/blue, fleshy



Invasive, Height: ~10m Stem: slender, solitary stemmed, roots grow with a boot structure Leaves: feathery leaflets, 3-4m long, tapering, dark green Flower: small, white flower and fruits



Images Courtesy of: Fairchild Botanical Garden Palm

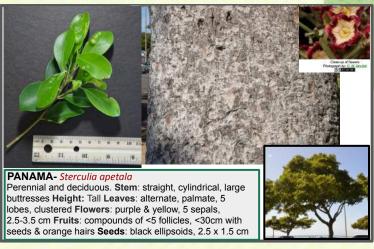


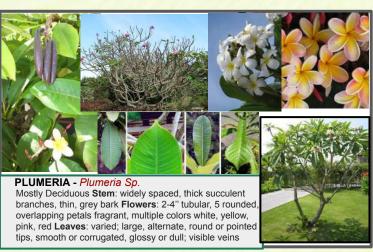


PACIFIC BANYAN or NUNU- Ficus Prolixa

Indigenous, Stem: many stemmed trunk, prop and aerial roots Leaves: opposite, glabrous, oblong, alternate, venation forming boxes, milky sap when broken, Flower: formed inside the fruiting body of the plant







Still Stumped?

This guide is not a comprehensive list of all of the amazing urban trees that can be found in Guam.

Are we missing a common tree in your neighborhood?

Still stumped on the correct identification of a tree?

Take a few photos, with a ruler or measuring tape for scale and contact us! info@kaulunani.org

Images in this guide are courtesy of Tom Foye, Forest & Kim Starr, and UH-CTAHR, unless otherwise referenced. Updated Feb 2021. Designed by Shannon Rivera















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