

## Native Plants of Hawaiian Dry Forests and Traditional Uses for Them

- compiled from C.S. Judd's "Trees and other plants used by early Hawaiians." 1938.

A'E	<i>Zanthoxylum hawaiiense</i>	The trunk was used for kapa anvils, and the deep resonant tones emitted from this trunk when struck with a harder wood such as kauila or uhiuhi made this tree useful for longer-distance communications.
	<i>Zanthoxylum dipetalum</i> var. <i>tomentosum</i>	Federal Status: endangered, less than 20 individuals left in Pu'uwa'awa'a and whole state, only known from Pu'uwa'awa'a area - leaflets have rusty tomentum (hairs) on underside.
'ÄKALA	<i>Rubus hawaiiensis</i> <i>Rubus macraei</i>	Bark used for kapa, fruits eaten.
'ÄKIA	<i>Wikstroemia sandwicensis</i>	A shrub to small tree whose wood was used for 'auamo (bearing sticks) and the black, tough fiber of the bark for ropes.
'ALA'A	<i>Pouteria sandwicensis</i>	A tree with fruit resembling a yellow/orange plum and a milky sap used for bird lime. The hard, yellow wood was used for house building, 'o'o handles, and spears.
ALAHE'E	<i>Psydrax odorata</i>	A small tree common on all islands, usually in dry areas, with shiny leaves like maile and fragrant, white blossoms. The hard and durable whitish wood was used for adze blades to cut soft woods such as kukui and wiliwili for 'o'o (digging stick) and for adze handles and the leaves furnished a black dye.
ALANI	<i>Melicope</i> spp.	A small tree of many species with yellowish-white tough but rather soft wood. Alani was used for kapa beaters and canoe trim and rigging.
HALA PEPE	<i>Pleomele hawaiiensis</i>	Federal Status: endangered. A tall tree found in dry regions with long, narrow leaves occurring in tufts at the end of branches. The soft, yellowish wood is easy to cut and was hewn into idols.
HAME	<i>Antidesma platyphyllum</i>	A common, small forest tree with close-grained hard, reddish-brown wood which was used for narrow boards on which to scrape olona fiber. The pulp surrounding the seeds was mixed with the oil of the kamani nut to produce a red dye which was used on bathing malos.

HÄPU‘U PULU	<i>Cibotium glaucum</i>	The tree fern whose fleshy stems were eaten in times of famine.
HÄPU‘U I‘I	<i>Cibotium menziesii</i>	The tree fern with stiff, blackish hair. The pithy flesh in the core of the trunk was baked and eaten in times of scarcity.
HÄPU‘U MEU	<i>Cibotium chamissoi</i>	Narrow diameter tree fern with golden mustard colored pulu at base of frond only.
HAU	<i>Hibiscus tiliaceus</i>	The handle tree (He-au) whose light tough wood was used for adze handles, fire making and fish net floats. The curved branches were used for ‘iako (outrigger boom) for attaching the ama (outrigger float) of wiliwili to the body of the dugout koa canoe. The bast was used for a coarse tapa, twine and rope, netted bags and sandals.
HOI	<i>Dioscorea alata</i>	The common yam which was used for food.
HÖLEI	<i>Ochrosia kilaueaensis</i>	A relative of the plumeria, a small tree with milky sap and fragrant white flowers. From the bark and roots a yellow dye was extracted. This species is (was?) only known at Pu‘uwa‘awa‘a.
‘IE‘ IE	<i>Freycinetia arborea</i>	A tall woody climber which often forms impenetrable thickets with tufts of leaves like the hala pepe. Its tough aerial roots of uniform size were used for the choicest and most durable baskets, for tying parts of the house together, sandals, fish traps and the wicker framework for idols and helmets.
‘ILIAHI	<i>Santalum freycinetianum</i>	This and other related species are the sandalwood trees which gave the infant kingdom of Hawai‘i its first financial boost. The straw yellow, heavy, close-grained wood is scented with a fragrant oil and was called la‘au ala (fragrant wood) and was used for perfuming kapa.
KALO	<i>Colocasia esculenta</i>	This is the taro whose root supplied the principal staple food of the Hawaiians when baked and crushed into poi. The young leaves supplied very edible greens called lu‘au.
KAUILA	<i>Colubrina oppositifolia</i>	Federal status: Endangered, most common on the big island statewide. This species produced the hard, heavy, close-grained reddish wood so much valued for spears and javelins.
	<i>Alphitonia ponderosa</i>	This is a tall stately tree, most common on Kaua‘i, the

wood of which is flecked with black streaks. Both of these species were used to make durable house timbers, and were fashioned into kapa beaters, bearing sticks, lomi lomi (massage) sticks, kahili (feather standard) handles and fish net shuttles.

KÄWA‘U	<i>Ilex anomala</i>	The Hawaiian holly tree with white blossoms and black berries which grows commonly in wet forest. The greyish-yellow wood is soft but tough and was used for kapa anvils and canoe trim and rigging.
KI	<i>Cordyline terminalis</i>	The ti plant, common in the lower edges of the woods, the prototype of the kahili (feather standard), and was used as a flag of truce in war. The glossy, cool leaves are still used as wrappers for food and are superior to waxed paper for this purpose. The dry leaves were used for thatch and sandals, and the fibrous root was baked and eaten as a confection.
KOA	<i>Acacia koa</i>	Because of its large size and tough, dark brown wood, the koa was the standard tree for the bodies of dugout canoes. It was also used for house timbers, surfboards, spears, paddles, and kahili (feather standard) handles. It is found in extensive groves on well-drained soil. The tree is still in the process of evolution for the first leaves on germination are compound but soon change to sickle-shaped phyllodes which perform the function of leaves. Koa wood was never used for poi calabashes because of an unpleasant taste imparted to the food.
KOAI‘A	<i>Acacia koaia</i>	This is similar to the koa but it is smaller with a gnarled and twisted trunk, and its seeds are set in a direction parallel with the long axis of the narrower pods instead of transversely. The handsome reddish brown wood is harder than the koa and was used for fancy paddles, house timbers, kapa beaters, spears, calabashes and shark hooks. The latter were made by tying a knot in young shoots. At Pu‘uwa‘awa‘a, this species is found on the bluff adjacent to the <i>Hibiscus brackenridgei</i> enclosure.
KÖLEA	<i>Myrsine lanaiensis</i> <i>Myrsine lessertiana</i> <i>Myrsine sandwicensis</i>	These species are widespread in the forest, ranging from fairly dry areas ( <i>M. lanaiensis</i> ) to quite wet ( <i>M. lessertiana</i> ). <i>M. sandwicensis</i> is also known as Kolea lau li‘i as it has very small leaves. The pinkish, mottled wood of these species was used for house timbers and kapa anvils, its charcoal for a black dye, and its bark for

		a red dye. The leaves when young are pinkish.
KÖPIKO	<i>Psychotria hawaiiensis</i>	The reddish brown wood of this tree was used for kapa anvils.
KUKUI	<i>Aleurites moluccana</i>	The kernels of its nuts were used for illumination, hence the name the candlenut tree. These nuts were strung on the midrib of the niu (coconut) leaflets or the oil was expressed and burned with a kapa wick in stone lamps. The kernels were also roasted and eaten with salt as a condiment called inamona. From the acrid juice of the rind of the nut a black dye was obtained. A brown and durable dye was made from the bark as well as a black dye from the roots and charred shells of the nuts. The wood is white and soft and although it rots easily, it was used for canoe bodies which lasted a year or two and for fish net floats.
LAMA	<i>Diospyros sandwicensis</i>	The Hawaiian ebony is a small, slow-growing tree with black bark. Only in very large trees does the black heartwood develop beyond the usual dirty white sapwood. House timbers, usually for the gods, were made of this wood as well as durable tide gates for fish ponds. Palama means “the enclosure made of lama wood.” At Pu‘uwa‘awa‘a lama often grows in association with kauila ( <i>Colubrina oppositifolia</i> ) in extremely dry to mesic areas.
MAILE	<i>Alyxia olivaeformis</i>	A fragrant vine with glossy leaves and tiny white flowers, growing in wet to mesic forest. It was used to decorate houses and the bark with attached leaves was stripped from the succulent shoots and wound into leis. The perfume is not noticed until the bark is bruised.
MÄMAKI	<i>Pipturus albidus</i>	A common, small tree in the wet forest with leaves having three main veins. The bast was formed into a tough kapa and was also used for cords and ropes. The mulberry-like, white fruit was given to children as a laxative.
MÄMANE	<i>Sophora chrysophylla</i>	This high mountain species in the bean family grows extensively only on Maui and Hawaii. It has golden yellow wood which is very hard and heavy, straight-grained and very durable. It was used for house timbers, sled runners and o‘o (digging stick). This species can vary in habit from a low-lying shrub to a medium sized tree at higher elevations.
MANONO	<i>Hedyotis terminalis</i>	There are several species in this genus, some of which

are mere bushes. The wood was used for canoe trim and rigging. It is a fairly common constituent of the wet forest understory and subcanopy.

NAIO	<i>Myoporum sandwicense</i>	The bastard sandalwood has a dark yellow, hard wood with a waxy luster and spicy odor. It made the best house timbers and was used for torches in fishing. The tree grows from sea level to 10,000 feet. When the supply of real sandalwood began to dwindle, this bastard sandalwood, called 'a'aka, was sent to China instead.
NÄ'Ü	<i>Gardenia brighamii</i>	Federal Status: Endangered. A small tree gardenia of the dry forest. Its fruit pulp was used as a yellow dye. Na'u used to exist at Pu'uwa'awa'a until the mid to late 70's when the last tree died. Na'u is still found on Lanai, from which seedlings have been reintroduced to Pu'uwa'awa'a.
NENELEAU	<i>Rhus sandwicensis</i>	The Hawaiian sumac grows in clusters in the lower forest zone, often in disturbed areas. Today this species can be observed along roadcuts on the Hamakua coast or along lower Saddle Road near Kaumana City. The yellowish-grey wood is light and tough and was used for saddle horns, plain calabashes, and lomi lomi (massage) sticks.
'OHE MAKAI	<i>Reynoldsia sandwicensis</i>	Federal Status: Species of Concern. A deciduous tree growing with wiliwili in dry locales. The wood is white and soft and was used for stilts.
'ÖHI'A LEHUA	<i>Metrosideros polymorpha</i>	There are several other species of this genus which constitutes the most prevalent tree in the Hawaiian islands. The wood is hard, heavy, close-grained and varies in color from a light red to a purplish blue. It was used for house timbers, poi boards, idols, enclosures about temples, kapa beaters and for coupling double canoes. It has tassel-like blossoms which vary from the common, bright-red through salmon-pink to orange yellow and pale yellow in color. The blossoms contain the food for the native forest birds, the honeycreepers.
'ÖLAPA	<i>Cheirodendron trigynum</i>	A mountain tree from which it was convenient to cut poles for catching birds with sticky gum. The bark and leaves made a bluish dye. The tree has thin petioles on the leaves so that the foliage is constantly in motion. The olapa hula is named after this tree. The foliage

when crushed gives forth the odor of carrots.

OLOMEA	<i>Perottetia sandwicensis</i>	A small common bushy tree in the lower wet forest with leaves whose stems and midrib are usually red. The golden-brown wood was used for making fire by friction.
OLONÄ	<i>Touchardia latifolia</i>	A low bush with long, pointed, rough leaves growing in deep ravines and in the spray of waterfalls. It was cultivated for bast which was highly prized for tenacity and durability and is probably the strongest in the world for its weight. Olona cords were the best for fish lines, nets, mesh for capes and helmets, strangling cords, waist-bands for chiefs, sewing kapa and for netted bags to hold gourds. Because of its strength, the early whalers sought it for harpoon lines.
OLOPUA	<i>Nestegis sandwicensis</i>	A common tree of the lower forest zone with leaves varying in size. Because of the purple fruit which resemble ripe olives, which are not edible, however, it is called the Hawaiian olive. The yellowish-brown wood with black streaks is very hard and resembles that of the true olive. It was used for adze handles and as a rasp to shape fish hooks and was preferred for fuel because of a hot flame even when green.
ÖPUHE	<i>Urera glabra</i>	A small forest tree with milky sap and rough, pointed leaves somewhat like olona. It has soft, light wood and its fibrous bark was used for twine and rope in making fish nets and kapa.
PALA'Ä	<i>Odontosoria chinensis</i>	A common, low, stiff fern with delicate foliage. A red dye was extracted from the fronds.
PALAPALAI	<i>Microlepia strigosa</i>	A low fern with pliant leaves. It is a favorite because of its pleasing odor and was used as table decorations at feasts and was woven into leis.
PÄPALA	<i>Charpentiera obovata</i>	A common tree with attractive, tiny, reddish flowers and wood that is very soft and fibrous and so light such that when it is dry it will burn like paper. It was used for torches and on the Na Pali cliffs of Kaua'i was used for fireworks where the air currents would keep the lighted sticks afloat in the air until consumed by fire. This species is common along stream courses in wet to mesic forest.
PÄPALA KĒPAU	<i>Pisonia brunoniana</i>	A common tree bearing dense shade and soft wood.

From the long sticky fruit of this tree Hawaiians secured a bird line with which the forest birds, bearing beautiful feathers, were ensnared. Kepau is the general word for tar and pitch. This tree often grows in association with the papala tree on the banks of streams.

PÜKIAWE     *Styphelia tameiameia*

Called the Hawaiian heather because of resemblance of the small leaves. It bears dry, white or red berries and has a slender twisted trunk. The hard, close-grained wood was used for cremating criminals. It grows to six feet in height and is found up to timber line on the higher mountains.

UHIUHI     *Caesalpinia kavaiensis*

A tree of dry regions with beautiful red blossoms and flat bean-like seeds in flat pods. The very hard, durable and blackish wood was used for house timbers, sled runners, o'ō (digging stick), kapa beaters and spears. Federal Status: Endangered

'ÜLEI     *Osteomeles anthyllidifolia*

The single, sweet-scented, thornless Hawaiian rose is typically a scandent shrub. The close-grained, pinkish hard wood was most useful for its pliability. It was used for bows for shooting mice and slender sticks were used to open the nets for catching opelu fish. Out of the wood were also fashioned o'ō (digging stick), kapa mallets, 'ukeke boards, back scratchers, and short tapered javelins for playing the game of pahee.

WAUKE     *Brousonetia papyrifera*

The paper mulberry which furnished the fiber for kapa. It is not widespread but was cultivated for this purpose. The bast was also used for twine and rope and for netted bags and made comfortable sandals.