



## QUICK FACTS

Located on the western coast of the Big Island, or the Island of Hawaii, the Kealakekua Mountain Reserve (KMR) is composed of 9,600 acres.

KMR was a ranch for many years, used for cattle and logging, which hindered regrowth of the native forest. To reverse the damage, a conservation easement now restricts approximately 9,000 of the total acreage, protecting it from further overharvesting. Now the land can only be used for sustainable harvesting of forest timber, which must be carefully monitored.

Various native Hawaiian trees are being planted at KMR, including 'ohia, as well as several that serve as hosts for Sandalwood, like koa, a'ali'i, and hoawa.

We anticipate that KMR will be the largest native forest planting effort in the state of Hawaii starting in 2020.

According to the current management plan, which promotes complete sustainability, living Sandalwood trees can be harvested in limited quantities and dead trees can be removed freely.

There are several species of Hawaiian Sandalwood, called illiahi, one of which is Santalum paniculatum.



### Growing Sandalwood: It gets by with a little help from its friends

Though the Hawaiian Sandalwood tree can grow to be more than 30 feet tall, it can't reach such heights on its own. Sandalwood is a hemiparasitic plant, meaning that it needs a host for some of its nutritional needs. Sandalwood trees, including Hawaiian Sandalwood, can produce their own carbon through photosynthesis, but they must connect to the roots of other plants to receive water and other essential nutrients from the soil. Generally, a Sandalwood tree will be connected to many other trees and plants, which together support the healthy development of the Sandalwood.

### Distilling Sandalwood: Getting to the heart of the matter

The internationally prized essential oil from Sandalwood exists throughout the tree, with the highest concentrations found in the heartwood. The ratio of heartwood to sapwood in Sandalwood trees increases substantially as the trees age. It is, therefore, important to allow trees to grow to maturity before harvesting them for oil. This also enables the trees to fulfil their important ecological roles in the forests where they reside.

Once harvested, the wood is chipped. Then to obtain the essential oil a unique distillation process is used to prevent damage to the essential oil. Steam is passed through the chipped wood, separating the essential oil from the wood. As the water and oil mixture cools, the essential oil separates from the water by rising to the top of the mixture, thus allowing it to be collected.

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*Ra Lā Hiki'Ōla*

THE DAWNING OF A NEW DAY

Hawaiian Sandalwood: A Cō-Impact Story





Native KMR Forest

## Hawaiian Sandalwood

Situated over 2,000 miles away from the nearest major landmass, the tropical Hawaiian Islands lie in the central Pacific Ocean. The islands were formed by volcanoes, and the rich volcanic soil is ideal for farming. Among the other successful crops that are grown, Hawaii's native Sandalwood trees have long been prized for their beautiful aroma and unique properties. Unfortunately, the land and its resources have not always been managed properly, but dōTERRA now has the unique opportunity and ability to create a meaningful and positive impact on various native species that have been mismanaged for decades. The Kealakekua region is home to many of these native species, including Hawaiian Sandalwood, and together, dōTERRA and the Hawaiian government have put a plan in place for a brighter future.

**Hawaiian name for Sandalwood is "iliahī."**

## Stewardship Area Management Plan

Located near the western coast of the Big Island of Hawaii, Kealakekua is a region whose history is deeply intertwined with the many unique and endemic species of Hawaii.

"Kealakekua [translated, the Pathway of the Gods] Bay and the surrounding land area have been recognized as one of the most, if not the most, significant historical places in Hawaii. Supported by the abundance of agricultural products from the upland Kona field system and the rich marine resources of the bay, the Kealakekua area became a densely populated settlement and a religious-political center" due to the residence of the king (ali'i) of Hawaii Island, a priest compound, and chiefly burial sites.

"Kealakekua was also the site of the first extended contact between Hawaiians and Western explorers, specifically Captain James Cook in 1779.

"Kealakekua [has] remained a significant place after contact, playing a major role in the early history of the Protestant missionaries in Hawaii. During the Great Māhele [division of land] of 1848, Keohokalole, mother of King Kalakaua and Queen Lili'uokalani

claimed most of the lands around Kealakekua." —  
*Excerpts from The State of Hawaii's Kealakekua Stewardship Area Management Plan.*

## The Sad Past and Bright Future of Hawaiian Sandalwood

Shortly following European contact, in the early 1800s the Sandalwood trade with China boomed and King, Kamehameha I himself became heavily involved in the enterprise. The significant revenue generated by the trade caused substantial exploitation of common Hawaiians. The Hawaiian natives were forced to harvest the Sandalwood from the Kealakekua region under extremely difficult conditions.

Being mindful of the past is essential to dōTERRA and the Hawaiian people. dōTERRA's involvement with the Kealakekua Mountain Reserve is an opportunity to participate in a redefined future for growing Hawaiian native trees, including of course Sandalwood. Lani Yamasaki, a respected native Hawaiian practitioner notes, "By reforesting the land with iliahi [Sandalwood] and other native plants, iliahi becomes a symbol of regeneration, health and healing for both the land and the community." The reverent approach to Sandalwood management on the Kealakekua Mountain Reserve represents Ka Lā Hiki Ola or The Dawning of a New Day.



KMR Nursery Seedling Production



'Ohia and Sandalwood in the KMR Nursery

## Kealakekua Mountain Reserve

The Kealakekua Mountain Reserve (KMR) is located on an old ranch, which was overgrazed and over-logged, inhibiting natural regrowth. Although several key native species are difficult to find on the island due to its history of over-harvesting, there are still many indigenous trees in the forest, which covers approximately 9,000 acres of the recently formed Reserve.

To form the Kealakekua Mountain Reserve, a conservation easement was signed to protect these precious native plants, including Sandalwood trees. This management plan outlines harvesting limitations that must be followed at KMR to guarantee the regeneration and prosperity of the forest. Although some tree harvesting will be done in KMR, the amount and types of wood that will be harvested are overseen by our management plan and the Hawaiian government, so as to support our efforts to reestablish a healthy forest in KMR. In order to protect the immediate growth and regeneration of the Sandalwood trees, the management plan specifies that no living Sandalwood trees should be harvested

at this time. At the outset of our efforts, only dead or severely damaged trees will be collected, which will allow existing, healthy trees to grow to full maturity before they are harvested at the appropriate time under sustainable tree management practices.

With these reforestation efforts in place, sustainable harvesting of Sandalwood will be possible without compromising our initiative to restore the forest to its original beauty. The KMR Reserve, the management objectives, an extensive nursery, and our ambitious reforestation efforts will all synergize to help Sandalwood and other native Hawaiian species thrive once more. We anticipate that KMR will be the largest native forest planting effort in the state of Hawaii starting in 2020.

