# THE FORGOTTEN CANOPY

Guidebook for Workshop 1: Ecology
UCLA MILDRED E. MATHIAS
BOTANICAL GARDEN

Except where otherwise indicated, this work is licensed under a Creative Commons – Attribution 4.0 International License.



Text © 2022, The Authors.

#### You are free to:

- **Share** copy and redistribute the material in any medium or format
- **Adapt** remix, transform, and build upon the material for any purpose, even commercially.

This work is published by Florida State Open Publishing, 116 Honors Way, Tallahassee, FL 32306.

#### Authorship

This guidebook is the creation of a group of dedicated, gifted, and hardworking graduate students at UCLA and FSU. They meticulously researched, organized, and produced this guidebook.

They are:

#### **CONTENT TEAM:**

Gabriel Silva Collins (Team Leader)

Amanda Brito

Alex Casteel

Miranda Claxton

Olivia Hackney

Julia Kershaw

Adam Lubitz

Jackie Padilla

Laura Parces

Tanya Pattison

**Kevin Torres Spicer** 

#### PRODUCTION TEAM:

Amanda Brito (Team leader) Matt Hunter Estefanía Vallejo Santiago

#### FACULTY ADVISORS:

Paul Niell (Coordinator and Editor) Stella Nair

We thank Victoria Sork, Director of the Mildred E. Mathias Botanical Garden & Herbarium at UCLA and its Venue Coordinator & Marketing Specialist, Ignacio Contreras, for providing us with lists of the plants in the garden.

#### Acknowledgements

This guidebook is part of "Workshop 1: Ecology" of the UCLA William Andrews Clark Memorial Library Core Program, "The Forgotten Canopy: Ecology, Ephemeral Architecture, and Imperialism in the Caribbean, South American, and Transatlantic Worlds." We acknowledge the support of Clark Library staff and the director, Bronwen Wilson. The workshop component of the Core Program has been funded by the Terra Foundation for American Art and supported by the American Indian Studies Center and the Latin American Institute of UCLA. Workshop 1: Ecology was co-organized by Stella Nair, Paul Niell, and Shannon Speed along with an outstanding group of graduate students. These students comprised the aforementioned Guidebook Team and the following: Diana Blanco, Alba Menéndez Pereda, Camille Neira, Rachel Schloss, and Avory Wyatt.

#### California

#### Adenostoma fasciculatum



"J20160707-0116—Adenostoma fasciculatum—RPBG (28194229941).jpg" by John Rusk is licensed under CC BY 2.0

**Common names:** Common chamise, greasewood **Distribution:** California and Baja California

**Indigenous Names:** Ko'alh: *iipsi*; Kumiai: *iipshi*, *i.ipshi*, *ipxi*; Tiipai: *iy pshii*; Tongva: *huutah* 

**NatureServe Conservation Status: Secure** 

Adenostoma fasciculatum is a flowering shrub both common and iconic to the California chaparral ecoregion. Covering the dry hills of coastal California, the common chamise grows densely and provides fodder for many foraging animals. It was used by the Cahuilla, Costanoan, and others as a building material for structures and baskets, for fuel, and for hunting/fishing implements. Its branches have been used as a building material for ramadas and fences, and its fibrous wood has been used in basketry.

#### Baccharis pilularis



"Coyote brush.jpg" by Wikimedia user J.smith is licensed under CC BY-SA 3.0

Common names: chaparral broom, coyote brush (or bush), dwarf chaparral false willow Distribution: California, Oregon, Washington, and Baja California NatureServe Conservation Status: Secure

*Baccharis pilularis*, or coyote brush, is a fragrant perennial shrub native to western North America. These salient plants thrive in lush grasslands and coastal areas and can grow to be upwards of 10 feet. They possess several human uses, with the Chumash often using coyote brush clusters to aid in the collection of cacti. The Chumash, Coast Miwok, and Costanoans have all historically used the plant for medicinal purposes, with the Chumash employing its boiled leaves as a cure for poison oak. The plant's light-weight yet durable wood has also been used by the Native American peoples of Mendocino County to construct arrows. It is theorized that coyote brush may have been used in the construction of dwellings.

#### Cardamine californica



"MilkmaidsFlowers crwb.jpg" by Wikimedia user Elf is licensed under CC BY-SA 3.0

**Common name:** Bitter Cress, California Toothwort, Milkmaids **Distribution:** Washington, California, and Baja California

**NatureServe Conservation Status: Secure** 

Cardamine californica is a perennial flowering plant endemic to California but found in many damp forested areas throughout western North America. The California Toothwort's stunning white blooms respond to their environment and close in tandem with the sunset. Because Milkmaids blossom from February to April, they are often used by the Yurok as an indicator for the coming of spring.

#### Cercocarpus montanus



"Alderleaf Mountain Mahogany.jpg" by Cory Maylett is licensed under CC BY-SA 3.0

**Common names:** True Mountain mahogany, Alder-leaf Mountain mahogany

**Distribution**: Western United States

**NatureServe Conservation Status: Secure** 

Cercocarpus montanus is a shrub or small tree endemic to northern Mexico and the western United States. It can grow several meters but is often limited to much shorter heights due to the interest of browsing elk and deer. It has been very popular historically; the Isleta, Jemez, Keres, Navajo, Tewa, Apache, Hopi, Karok, Kawaiisu, Mahuna, and many others have used it as a drug, for construction, and as a material to produce tools and implements. Its bark has been used in mixtures to create brown or red dyes for buckskin, moccasins, and baskets, its roots have been used to make hearths, and its wood and branches for arrow points and to make rough brooms, for weaving distaffs, tool handles, weaving combs, prayer sticks, spear points, bows, canes, and more.

#### Cornus nuttallii



"2338 PacificDogwood.jpg" by Paul Schultz is licensed under CC BY 2.0

Common names: Pacific dogwood, Western dogwood, mountain dogwood

Distribution: California, Oregon, Washington, British Columbia

**NatureServe Conservation Status: Secure** 

Cornus nuttallii is a large shrub or medium sized tree between 6 to 23 meters (20 to 75 feet) tall. This plant grows in forests and along forest edges and has had a wide variety of historical uses. Young *C. nuttallii* shoots were sometimes used by Indigenous people in making baskets, and the tree has also been used in construction and furniture. Dogwoods provided brown dyes, wood for bows and arrows, and had multiple medicinal uses. Their wood is recognized for its strength, hardness, and fine grain.

#### Elymus condensatus



Image: public domain

**Common Names:** Giant Wildrye

**Distribution:** Eastern Oregon, central western California, southwestern California, the Mojave

Desert, northern Mexico, western Canada

NatureServe Conservation Status: Vulnerable

*Elymus condensatus* is a vigorous and aggressive perennial grass that grows in clumps of up to six to twelve feet within western Mexico, the United States, and Canada. It can be grazed by foragers and its seeds are eaten by interested mammals and birds. Historically, it has been used by the Cahuilla, Klamath, Montana, Paiute, Shoshoni, and others in medicines, for building materials, in implements for hunting and fishing, and more. Giant wildrye was sourced for fibrous stalks used in roof thatching. Its striking silver drifts and blue-gray foliage are iconic.

#### Equisetum telmateia



"Equisetopsida.jpg" by Wikimedia user Rror is licensed under CC BY-SA 3.0

**Common Names:** Giant Horsetail (EN), Prêle géante (FR)

**Distribution:** California, Idaho, Washington, Oregon, British Columbia (American subspecies)

**NatureServe Conservation Status: Secure** 

Equisetum telmateia is a perennial and non-flowering plant that grows in damp and shady areas and in the woodlands of the western United States and British Columbia, Canada. Growing up to 5 feet in height, it has a spore-producing cone and spring-like appendages. Native American tribes including the Cowlitz, Quileute, and Coast Salish used E. telmateia's fibers for fashioning baskets. Some groups have also used this plant as a scouring material, as was the case for the southern Kwakiutl who used its tough leaves and stems for polishing canoes and wooden objects. E. telmateia can be herbicide resistant because of its deep and extensive roots.

#### Eriogonum fasciculatum



"Eriogonum fasciculatum 5.jpg" by Stan Shebs is licensed under CC BY-SA 3.0

**Common names:** California Buckwheat, Eastern Mojave Buckwheat

**Distribution:** Arizona, California, Nevada, Utah **NatureServe Conservation Status:** Secure

Native to the southwestern United States, *Eriogonum fasciculatum* can grow in a number of habitats, ranging from scrubby slopes to chaparral and dry washes. It is a shrub that includes leathery leaves, branches, and pink and white flowers and can grow up to 6 and ½ feet tall. It provides a number of functions related to landscape design such as erosion control, habitat restoration projects, and wildlife gardens. California Buckwheat also produces nectar for butterflies and was used for its medicinal properties as an analgesic and gastrointestinal aid by the Cahuilla people. Another function of *E. fasciculatum* pertains to containers. For example, the Kawaiisu lined acorn granaries with leaves of *Eriogonum fasciculatum* to keep the interior dry.

#### Fremontodendron californicum



"Fremontodendron californicum ssp decumbens 3.jpg" by Stan Shebs is licensed under CC BY-SA 3.0

Common names: California flannelbush

**Distribution:** California, Mexico, Baja California **NatureServe Conservation Status:** Apparently Secure

Fremontodendron californicum is a vigorous evergreen shrub that can grow up to six meters within distinct higher elevation habitats in California and Arizona. It features bright deep yellow flowers and prefers sandy or well-drained areas with plenty of water. Historically, it has been used by the Kawaiisum, Shoshoni, and Yokut for largely overlapping usages: its inner bark as a cathartic drug; its bark for cordage, twine, rope, and binding; and its wood for furniture. This furniture includes the construction of cradles, and interestingly its bark twine has been used specifically for the winter storage of pinyon seeds. Today it is frequently encountered in the foothills of California from 2000 to 6500 feet in elevation and blooms in the late spring to early summer.

#### Hesperoyucca whipplei



"Yucca in Bloom at Big Tujunga Canyon in Sunland.JPG" by Wikimedia user MajaTrochimczyk is licensed under CC BY 3.0 US

Common Names: chaparral yucca, Quixote yucca, Spanish bayonet, foothill yucca

**Distribution:** Southern United States and Baja California, Mexico.

**IUCN Red List Conservation Status:** Least Concern

Hesperoyucca whipplei grows in the desert, chaparral, desert woodland, and coastal sage environments of California, Sonora, and the north of Baja California, approximately 300-2,500 meters above sea level, and can grow up to 4.3 meters. Indigenous communities used this species as a source for fibers for rope and cordage. Additionally, the Serrano community in San Bernardino and the San Gabriel mountains collected chaparral yuca hearts and consumed them as sustenance. Indigenous communities process the leaves by boiling them or roasting them, then scraping them clean to use their fibers for cords, basketry, blankets, and sandals.

#### Jatropha cuneata



"Jatropha cuneata.jpg" by Wikimedia user Pompilid is licensed under CC BY-SA 3.0

Common Names: Desert Limberbush, Leatherplant, Elephant tree, Limberbush

SP: Sangre de Drago, Piñocillo, Batácora, Torote Amarillo, Torote Prieto

**Distribution:** Arizona, New Mexico, and Baja California, Mexico.

NatureServe Conservation Status: Apparently secure

*Jatropha cuneata* could grow up to 2-4 meters in arid zones, such as deserts and mesas. It is found in Arizona in Pima County, Organ Pipe Cactus National Monument, and in the Cabeza Prieta National Wildlife Refuge in Yuma County. It is also found in western Mexico, Sinaloa, Sonora, and throughout Baja California. The Seri community in Sonora, Mexico, uses the stems for basketry due to their flexibility.

#### Koeleria macrantha/cristata



"Koeleria macrantha.JPG" by Wikimedia user Don Pedro28 is licensed under CC BY-SA 3.0

**Common names:** Prairie junegrass, crested hair-grass **Distribution:** Mexico, United States, Canada, Eurasia

**NatureServe Conservation Status:** Secure

*Koeleria macrantha*, also called *Koeleria cristata*, is a widespread grass that grows in tufts up to .6 meters (two feet) tall. In the Americas *K. cristata* is found throughout most of the U.S., Canada, and parts of Mexico. This plant was used by many Native American tribes, including the Cheyenne/Sutaio/Tsitsistas, Havasupai, and Navajo/Diné. *K. macrantha* was sometimes mixed with and used to strengthen adobe constructions. Additionally, the grass has been used in making brooms, scourers, brushes, and in some foods. Today *K. macrantha* is also planted and recognized as a fire-resistant species.

#### Lupinus arboreus



"Pescadero State Beach May 2017.jpg" by Shannon Badiee is licensed under CC BY-SA 2.0

Common names: Tree Lupine, Yellow Bush Lupine

**Distribution:** California, Oregon

NatureServe Conservation Status: Vulnerable

Lupinus arboreus is a bush that grows along the coast of California and parts of Oregon. The bush holds leaves all year, and blooms yellow fragrant flowers in summer. The Kashia Band of Pomo Indians in Sonoma use the roots of the bush to craft nets for hunting deer, rabbit, and fish. L. arboreus has also been used in making cordage. While the species is native to parts of the state it is also invasive, especially in northern areas. The bush is fast-growing and produces seed banks which stunt the growth of surrounding species, and the stability of sand dunes. This is especially true for the sand dunes in Humboldt Bay in Northern California.

#### Muhlenbergia rigens



"Muhlenbergia rigens form.jpg" by Stan Shebs is licensed under CC BY-SA 3.0

Common Names: deergrass

**Distribution:** California, Nevada, Arizona, New Mexico, Texas, and northern Mexico.

NatureServe Conservation Status: Apparently Secure

Muhlenbergia rigens grows in deserts and shrublands of New Mexico, Texas, Arizona, California, Nevada, Chihuahua, Coahuila de Zaragoza, Durango, Nuevo León, Sonora, Zacatecas, throughout Baja California, Aguascalientes, Jalisco, Michoacán de Ocampo, and Puebla. It can grow up to 1 meter tall and is used as cover for mule deer during fawning periods. Additionally, during winter, many species of Lepidoptera (including butterflies and moths) and ladybugs use them as refuge. Furthermore, their seeds provide food for many different bird species. The fibers of Muhlenbergia rigens are used for basketry by the Kawaiisu, Luiseño, and Cahuilla communities. The Luiseno community also uses its fibers for hats, food containers, and drinking vessels. In contrast, the Shoshoni tribe uses M. rigens for sewing, and the Zuni tribe uses it in ceremonial offerings.

#### Nassella/Stipa pulchra



"Stipa pulchra (35034340452).jpg" by Matt Lavin is licensed under CC BY-SA 2.0

Common names: Purple needlegrass, purple tussockgrass, purple stipa

Distribution: California, Baja California

NatureServe Conservation Status: Apparently Secure

Nassella pulchra, also known as Stipa pulchra, is a common grass throughout much of California and into Baja California. This species grows in tufts that can be up to a meter (3.3 feet) tall, and is known for its extensive drought-adapted roots that sometimes reach 6 meters (20 feet) underground. Native American peoples throughout California used this species in cordage and basket weaving, especially when teaching the craft to children. N. pulchra also has edible seeds. This plant was once California's most widespread native grass species, and is now California's state grass even though populations have been harmed by habitat destruction and invasive competitors.

#### Quercus garryana



"Quercus garryana 1 (brewbooks).jpg" by Wikimedia user J Brew is licensed under CC BY-SA 2.0

**Common Names:** Oregon white oak, Oregon oak, Garry oak **Distribution:** Oregon, California, Washington, British Columbia

**Conservation Status: Secure** 

Quercus garryana is an oak tree species that grows in foothills and ranges of the western United States and in British Columbia, Canada. Q. garryana has large branching trunks, produces leaves and acorns, and can grow up to 90 feet tall. The Kawaiisu Native American tribe historically used this tree's wood to build homes. Because of its durability, it has also been used in a variety of capacities such as the construction of fence posts, boxes, and crates. These functions continue in the present day. Its fibers have also been utilized to make combs by the Native American tribe, the Cowlitz, and its acorns were an ingredient in bread recipes by the Mendocino Indians. Today, Q. garryana is a habitat for the western gray squirrel, which has been declared a threatened species in Washington.

#### Rhus ovata



"Sugar bush imported from iNaturalist photo 125941928 on 14 October 2021.jpg" by Madeleine Claire is licensed under CC BY 4.0

**Common names:** Sugar Sumac (Bush)

**Distribution:** southern California, Arizona, and Baja California

NatureServe Conservation Status: Apparently Secure

Rhus ovata is an evergreen shrub that commonly grows in the foothills and mountains of its native range within the southwestern United States. Ranging from two to ten meters tall, its twigs are thick and reddish in color, and is a target of many animal species such as rodents. Historically, it has been used by the Cahuilla for food and drug purposes, and by the Kumeyaay for food, medicine, fuel, and architecture. Interestingly, it may contain the same chemical irritant that features in poison ivy, and although its seeds are not edible, they are consumed by the larvae of certain wasps.

#### Senegalia greggii



"Acacia greggii thorns.jpg" by Stan Shebs is licensed under CC BY-SA 3.0

Common names: catclaw acacia, Greggs catclaw, catclaw mesquite, wait-a-minute bush

**Distribution:** Southwestern United States and Northern Mexico

**IUCN Red List Status:** Least Concern

Senegalia greggii is a deciduous tree-like shrub that can grow up to 15 feet tall and 20 feet wide. Its common name refers to the claw-like thorns that grow along its sturdy branches and hook onto unsuspecting animals and people. Catclaw acacia possesses a myriad of applications and is thought to treat a variety of diseases including conjunctivitis, nausea, and dysentery. It is hypothesized that Native American peoples may have also used the plant to soothe the muscles of their horses. Beyond medicinal uses, catclaw acacia's durable multi-colored wood can be used for either construction or fuel. Much like *Prosopis tamarugo* in Chile, *Senegalia greggii* functions as an integral component of environmental restoration efforts in the American Southwest.

#### Washingtonia filifera



"California fan palm 02.jpg" by Bernard Gagnon is licensed under CC BY-SA 3.0

**Common names:** California palm, California fan palm, desert palm

**Indigenous names:** *moul* (Ivilyuqaletem/Cahuilla)

Distribution: Southern California, Arizona, Northern Baja California

NatureServe Conservation Status: Apparently Secure

Washingtonia filifera is a large palm tree that grows in scattered oases of the Southwestern U.S. and Northwestern Mexico. Growing up to 18m (59 feet) tall, this fire-resistant species provides habitats for animals such as the giant palm-boring beetle, hooded oriole, and western yellow bat. Native American peoples including the Ivilyuqaletem/Cahuilla and Nuwuvi/Southern Paiute historically used these trees' large fronds for thatch in roofs and walls of temporary dwellings. W. filifera fibers and wood were also turned into sandals, baskets, and cooking utensils. Additionally, the palm's fruits, buds, and seeds are edible. Its various uses have been important enough to provide the plant with a place in Ivilyuqaletem/Cahuilla sacred narratives, some of which say Washingtonia filifera is a transformed tribal leader.

#### Yucca baccata



"Yucca baccata whole.jpg" by Stan Shebs is licensed under CC BY-SA 3.0

Common names: Broad-leaf Yucca, Banana Yucca, Fleshy-Fruited Yucca, Spanish Dagger,

Amole

**Distribution:** deserts of southwestern US and northwestern Mexico

**NatureServe Conservation Status: Secure** 

*Yucca baccata* is a short blue-green plant with leaves that generally reach lengths of 20–30 inches. These leaves are used in the construction of baskets, with the remaining stiff fibers serving as a combination of needle and thread. The Apache tribe used its fruits to attract birds, deer, and insects. The fruits were also baked and pounded into a pulp and the juice was poured over the cakes.

#### Yucca brevifolia



"Joshua Tree 01.jpg" by Bernard Gagnon is licensed under CC BY-SA 3.0

Common name: Western Joshua tree

Indigenous names: Sovarampi, humwichawa, or umpu

**Distribution:** California, Arizona, Utah, and Nevada, and northwestern Mexico

NatureServe Conservation Status: Vulnerable

Yucca brevifolia is a slow-growing tree integral to the fabric of the Mojave Desert ecosystem. These fascinating plants are recognized as the largest species of Yucca in the world at a maximum height of 40 feet. Beyond their iconic silhouettes, Western Joshua trees have a myriad of applications within Indigenous communities. The tree's fibers and roots have been used by the Cahuilla, Kawaiisu, Panamint, and Shoshoni for cordage, clothing, basketry, ornamental elements, and dye. The tree's cultural and ecological significance has lent urgency to its potential reclassification as threatened under the California Endangered Species Act in 2023.

#### Mexico

#### Agave cupreata



"Agave cupreata.jpg" by Wikimedia user Meredithmartin is licensed under CC BY 3.0

Common names: Maguey Papalote, Magues de Mescal, Maguey Chino, Maguey de Mezcal

**Indigenous names:** Papalome (Nahuatl)

**Distribution:** Mexican states of Michoacán, Guerrero, and Oaxaca.

**IUCN Red List Conservation Status**: Endangered

The succulent Maguey Papalote is exclusively found along the dry basin of the Balsas River in the Southwestern region of Mexico. When fully matured, taking approximately fifteen years, flowering stems grow from the Maguey's leaves. These flowers are edible, and the unflowered stems used as building material. Though for the last few generations, Maguey Papalotes have been exploited for their use in the mezcal industry. Though there are efforts to preserve parts of the plant for local uses (architecture, consumption, etc.) in areas such as Mártir de Cuilapan, Guerrero, the plant population is projected to decline up to 75% by 2045.

#### Agave nuusaviorum



"N20150210-0001—Agave guadalajarana, Agave victoriae-reginae, Agave polianthiflora, et alia—UCBG" by John Rusk is licensed under CC BY 2.0

Common name: American aloe

**Distribution:** Southern California. Southwestern Mexico

**IUCN Red List Conservation Status:** Vulnerable

Agave nuusaviorum is an evergreen, stemless, succulent plant forming a rosette of leaves. They can grow to a height of .5 meters (1 foot) and their leaves can grow to 20-30 cm tall (7-11 inches). Their fibers are useful for supporting roofs, walls, and fences in traditional constructions. The leaves are also used for thatching houses and fiber is used to make cords for tying structures of the houses. This plant is also used in the production of the alcoholic beverage mezcal.

#### Southern Mexico

#### Sabal mauritiiformis



"Sabal mauritiiformis.jpg" by Scott Zona is licensed under CC BY 2.0

Common names: Bay-leaf palm, bay palmetto

Distribution: Southern Mexico, Central America, Trinidad, Venezuela, Colombia

*Sabal mauritiiformis* is an evergreen palm that can measure anywhere from 32 to 65 feet. The leaves were used for thatch, hats, and crafts, and petioles are used for fencing. It is neither as resistant to the cold nor as hardy as most Sabals, needing rich well-drained soil to thrive. This plant often gets mistaken for the Sabal palm.

#### Yucca periculosa



"Yucca periculosa 1.jpg" by Stan Shebs is licensed under CC BY-SA 3.0

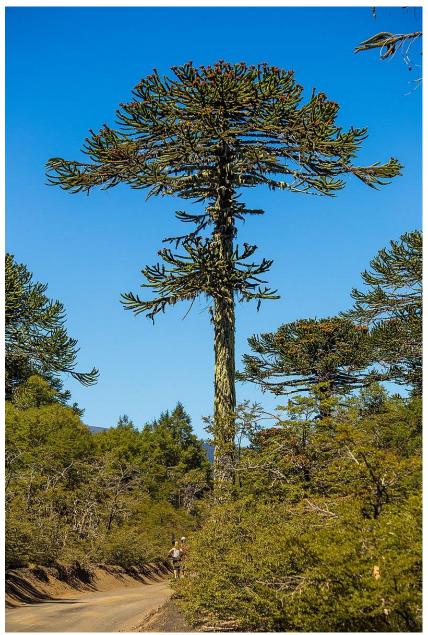
Common names: Izote

**Distribution:** Southern California and Southern Mexico **IUCN Red List Conservation Status:** Near Threatened

*Yucca periculosa* is a tree-like evergreen perennial plant with a much-branched main trunk. The plant can grow up to 10 meters tall (32 feet) and they have sharp, sword-shaped leaves that grow from rosette-like centers. As slow-growing plants, they require minimal maintenance and are drought-resistant. Their leaves were used for roofing. As the sole host for the yucca moths, flowers from *Y. periculosa* produce a unique fragrance that attracts the moths, which in turn are the only pollinators for their hosts.

#### South America

#### Araucaria Araucana



"Araucaria en Parque Nacional Conguillio.jpg" by Vicente Fernández Rioja is licensed under CC BY-SA 4.0

Common Names: Chilean-pine, monkey puzzle, monkey puzzle tree, araucaria de Chile

Indigenous Names: Pehuen (Mapudungun)

**Distribution:** Central and southern Chile, western Argentina

**IUCN Red List Conservation Status:** Endangered

Araucaria araucana is a tall conifer native to Chile and Argentina, where it grows at 600-1,800 meters above sea level. It can grow 50 meters high with a circumference of 2.5 meters, and is listed in CITES as a species in danger of extinction. The species was considered one of the most valuable in the southern Andes during colonial times, and its timber was used for railway sleepers, pit props in mines, ship masts, joinery, and furniture. A. araucana is sacred to the Pehuenche people, and its seeds or piñones are an essential component of their diet. In fact, the name Pehuenche translates to "people of A. araucaria." The tree is also a national monument of Chile, and its common name "monkey puzzle tree" that even a monkey would be confused by its specific appearance. A quote from Alfredo Melinir, the longo or chief of the Pehuenche community near Longuimay, emphasizes the importance of A. Araucaria:

"The monkey puzzle is our tree. It's a symbol for us. It's a tree that God left on Earth for us, the Pehuenche. We cannot cut it down because it gives us our daily bread. In the end, we would rather die than give up defending this tree."

#### Brachyotum strigosum



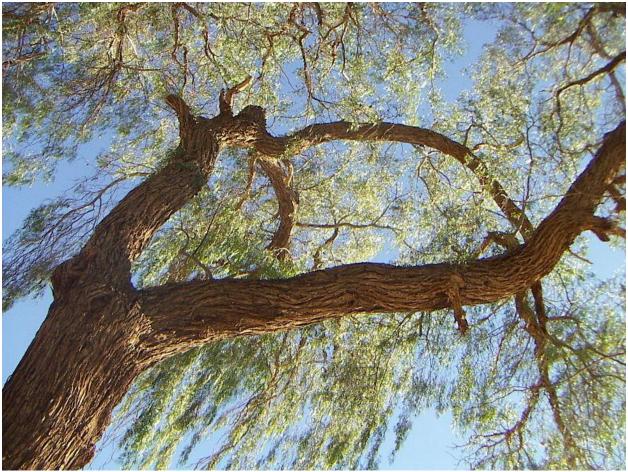
"Brachyotum strigosum 1.jpg" by Franz Xaver is licensed under CC BY-SA  $4.0\,$ 

Common Names: almorrana, moradito, tuno, zarcillejo, zarcillejo morado, zarcillo

**Distribution:** Colombia and Peru **IUCN Red List Status:** Least Concern

*Brachyotum strigosum* is a native climbing shrub of Colombia where it grows in Antioquia, Bogotá, Boyacá, Cundinamarca, Meta, and Quindío. It is found in the high mountain desert 2,000-4,000 meters above sea level and could grow up to 1.5 meters. This shrub is planted as a boundary marker between different properties and areas.

#### Prosopis tamarugo



"Prosopis tamarugo.jpg" by Pablo Trincado is licensed under CC BY 2.0

Common name: Tamarugo Distribution: Northern Chile

**IUCN Red List Status:** Lower Risk/conservation dependent

*Prosopis tamarugo* is a large, durable legume tree integral to the agroforestry industry in Chile. It is endemic only to the arid Pampa del Tamarugal plain of the Atacama Desert, though it presently exists as an exotic species in both India and Argentina. Its pods function as a food source while its lumber can be used for construction and furniture. Over-harvesting for firewood has led to its gradual decline and classification as a conservation dependent species. Because of the tree's resilient nature, it has been used by researchers to re-forest inhospitable desert areas.

#### Puya (Indeterminate species)



"Puya berteroana.jpg" by Dr. David Midgley is licensed under CC BY-SA 2.5

**Common names:** Puya, Queen of the Andes, various others **Indigenous names**: *titanka* (Quechua), various others

The exact identity of UCLA's *Puya* specimen is unknown, but the genus contains some 226 species that vary in sizes, colors, appearances, uses, and names. These plants are native to mountainous western areas of South America and southern Central America. Known for their impressive flowers (which can reach 10 meters or 33 feet tall amongst the largest species), these plants' leaves were a source of fiber used in making fishing nets and ropes to tie or lash items and constructions in place. Corks and bungs can also be made from some *Puya*, and at least one species is partially edible.

#### Vachellia caven



Image: public domain

**Common names:** Roman Cassie

Distribution: Southern S. America - Argentina, Chile, Paraguay, Uruguay, Brazil, and Bolivia

*Vachellia caven* is an evergreen, spiny shrub that can grow between 9 to 22 feet tall. It grows in grasslands and savannahs, preferring well-drained soils. The wood was used to make fence posts because it is resistant to rot. The flowers are used for essential oils and perfumes and the bark contains tannins that are used for tanning hides. The seeds can be a coffee replacement when toasted.

#### List of Plants Mentioned by Conference Speakers

The plants listed below include some of those featured in the presentations of speakers in *The Forgotten Canopy*, and they encompass a variety of species that were used in the Americas for architecture and other purposes. The list, however, is not inclusive of all species discussed. Plants given in bold are both mentioned by speakers and present in UCLA's Mildred E. Mathias Botanical Garden, though they may not be featured in the Guidebook's plant descriptions. Italicized plants are mentioned by speakers but not used in architecture.

Thank you to our speakers, Denise Arnold, Michael Carrasco, Mark Delancey, Justin Dunnavant, Jorge Baracutei Estevez, Maria Paz Gutierrez, and Brendan J. Weaver for sharing their knowledge to help us compile this list.

Adansonia sp.
Annona senegalensis
Arundo donax
Attalea butyracea
Attalea cephalotes
Attalea phalerata

**Agave spp.** Ceiba pentandra

Chamaedorea tepejilote Commiphora kerstingii

Dioon spp.
Festuco dichoclada
Geonoma diversa
Heteropsis flexuosa

Irartea deltoidea
Lepidocaryum tenue
Lepidocaryum tessmanii
Mauritia flexuosa

Oenocarpus bataua
Panicum stagninum
Phragmites australis
Phyllostachys edulis
Phytelephas macrocarpa
Phytelephas microcarpa

Phytelephas microcarpa

Quercus suber

Schoenoplectus/scirpus californicus subsp.

totora

#### Sabal mauritiiformis

Sabal mexicana
Sabal yapa
Saccharum officinarum
Socratea exorhiza
Stipa ichu
Tamarindus indica
Wettinia augusta
Zamia spp.

#### Research Databases & Sources

Encyclopedia of Life. Encyclopedia of Life. <a href="https://eol.org/">https://eol.org/</a>

Global Biodiversity Information Facility. Species. https://www.gbif.org/species/search?q=

Moerman, D. (1998). *Native American Ethnobotany*. Timber Press. National Institutes of Health. National Library of Medicine. <a href="https://www.ncbi.nlm.nih.gov/">https://www.ncbi.nlm.nih.gov/</a>

Native American Ethnobotany Database. Native American Ethnobotany. <a href="http://naeb.brit.org/">http://naeb.brit.org/</a>

NatureServe. (2022). NatureServe Explorer. <a href="https://explorer.natureserve.org/">https://explorer.natureserve.org/</a>

Plants for a Future. Database Plant Search Page. https://pfaf.org/user/Plant.aspx?LatinName=Puya+chilensis

Practical Plants. (2013, June 11). Practical Plants. https://practicalplants.org/wiki/practical\_plants/ Royal Botanic Gardens, Kew. Plants of the World Online. https://powo.science.kew.org/

United States Department of Agriculture. (2022, July 26). Fire Effects Information System. <a href="https://www.feis-crs.org/feis/">https://www.feis-crs.org/feis/</a>

United States Department of Agriculture: Forest Service. Treesearch. https://www.fs.usda.gov/research/treesearch

United States Department of Agriculture: Natural Resources Conservation Service. PLANTS Database. <a href="https://plants.usda.gov/home">https://plants.usda.gov/home</a>

Useful Temperate Plants Database. (2022, July 25) Useful Temperate Plants. <a href="https://temperate.theferns.info/">https://temperate.theferns.info/</a>.

Useful Tropical Plants Database. (2022, July 20). Useful Tropical Plants. <a href="https://tropical.theferns.info/">https://tropical.theferns.info/</a>

• • • • •

## We are indebted to the following organizations for their critical support of the Conference series and Workshops.

The Terra Foundation for American Art supports individuals, organizations, and communities to advance expansive understandings of American art. Established in 1978 and headquartered in Chicago, with an office in Paris, the Terra Foundation is committed to fostering cross-cultural dialogues on American art locally, nationally, and internationally, through its grant program, collection, and initiatives.



### UCLA International Institute Latin American Institute





