

SISKÁ 'E HÉEMETEYA PUICHON WOLWÓOLUM

PLANT LIFE OF THE PUICHON OHLONE

THE NATIVE PLANTS OF JASPER RIDGE BIOLOGICAL PRESERVE AND THEIR
TRADITIONAL USES BY THE MUWEKMA OHLONE

COMPILED BY LEON J. NO'EAU PERALTO

IN COLLABORATION WITH:

ROSEMARY CAMBRA, CHAIRWOMAN, MUWEKMA OHLONE TRIBE

MONICA ARELLANO, VICE CHAIRWOMAN, MUWEKMA OHLONE TRIBE

ALAN LEVENTHAL, ETHNOHISTORIAN, MUWEKMA OHLONE TRIBE

SISKÁ 'E HÉEMETEYA PUICHON WOLWÓOLUM

PLANT LIFE OF THE PUICHON OHLONE

THE NATIVE PLANTS OF JASPER RIDGE BIOLOGICAL PRESERVE AND THEIR
TRADITIONAL USES BY THE MUWEKMA OHLONE

COMPILED BY LEON J. NO'EAU PERALTO

IN COLLABORATION WITH:

ROSEMARY CAMBRA, CHAIRWOMAN, MUWEKMA OHLONE TRIBE

MONICA ARELLANO, VICE CHAIRWOMAN, MUWEKMA OHLONE TRIBE

ALAN LEVENTHAL, ETHNOHISTORIAN, MUWEKMA OHLONE TRIBE

JASPER RIDGE BIOLOGICAL PRESERVE DOCENT PROGRAM

JUNE 2008

TABLE OF CONTENTS

ACKNOWLEDGMENTS

PUICHON WOLWÓOLUM: THE PUICHON OHLONE	1
ČOČENYO NÓONO: THE CHOCHENYO LANGUAGE	2
‘ARWEH (<i>Quercus lobata</i>)	3
‘ENÉSMIN (<i>Rubus ursinus</i>)	4
MÁARAX (<i>Alnus rhombifolia</i>)	5
MIRYAN (<i>Artemisia californica</i>)	6
MIŠŠUR TUR (<i>Adiantum aleuticum</i>)	7
RAWWEN (<i>Chlorogalum pomeridianum</i>)	8
ROOKOŠ (<i>Scirpus acutus</i>)	9
RÓOREH (<i>Trifolium repens</i>)	10
SOKÓOTE (<i>Umbellularia californica</i>)	11
TÚHHE (<i>Quercus kelloggii</i>)	12
TUMMAY (<i>Heracleum maximum</i>)	13
TUYUK (<i>Heteromeles arbutifolia</i>)	14
YÚUKIŠ (<i>Quercus agrifolia</i>)	15



'Arweh (*Quercus lobata*) at Jasper Ridge Biological Preserve.

ACKNOWLEDGEMENTS

THIS PROJECT WOULD NOT HAVE BEEN MADE POSSIBLE
WITHOUT THE CONTINUOUS HELP AND SUPPORT OF:

ROSEMARY CAMBRA
CHAIRWOMAN, MUWEKMA OHLONE TRIBE

MONICA V. ARELLANO
VICE CHAIRWOMAN, MUWEKMA OHLONE TRIBE

ALAN LEVENTHAL
ETHNOHISTORIAN, MUWEKMA OHLONE TRIBE

CINDY WILBER
EDUCATION COORDINATOR, JASPER RIDGE BIOLOGICAL PRESERVE

LAURA JONES
DIRECTOR OF HERITAGE SERVICES, STANFORD UNIVERSITY

DENNI WOODWARD
ASSISTANT DIRECTOR, STANFORD NATIVE AMERICAN CULTURAL CENTER

THE MEMBERS OF THE MUWEKMA OHLONE TRIBE AND THE
MUWEKMA LANGUAGE COMMITTEE

MAKIŠ HORŠE 'EK-HINNAN! MAHALO NUI IĀ 'OUKOU!
THANK YOU ALL!

PUICHON WOLWÓOLUM

THE PUICHON OHLONE

The lands of Jasper Ridge Biological Preserve were once inhabited by the Puichon Ohlone tribe of the western regions of the San Francisco Bay Area. Randall Miliken, describes the Puichon Ohlone, in his ethnographic account of the San Francisco Bay Ohlone tribal groups, as follows:

“The Puichon were the largest local tribe on the west shore of San Francisco Bay. Their lands were along lower San Francisquito Creek [right through the heart of the Jasper Ridge Biological Preserve] and lower Stevens Creek, now the areas of Palo Alto, Los Altos, and Mountain View. Their San Francisquito Creek village of Ssipùtca was mentioned six times in the Mission Dolores baptismal records. At Santa Clara they were lumped into the "San Bernardino" district with other people from the west of Mission Santa Clara. Some of them were identified more specifically as being from the rancheria of San Francisquito...Puichon people went to mission Dolores between 1781 and 1794 and to Mission Santa Clara between 1781 and 1805.”

The title of this book, “Siská ‘E Héemeteya Puichon Wolwóolum” (Plant Life of the Puichon Ohlone), honors and recognizes the Puichon Ohlone, who were the tribal ancestors of the Muwekma Ohlone Tribe.

ČOČENYO NÓONO

THE CHOCHENYO LANGUAGE

Chochenyo is the Native language of the Muwekma Ohlone People. In 1934, Jose Guzman, the last Native speaker of Chochenyo, passed away, but the language was not lost. In 2003, the Muwekma Language Committee worked with a University of California, Berkeley linguist and graduate student in their efforts to revitalize the Chochenyo language. Since then, the Committee has been traditionally teaching the language to its members so that, once again, the Chochenyo language will be spoken amongst the Muwekma Ohlone people.

Throughout this booklet, the names of various plants, animals, and geographic features are given in the Chochenyo language. All Chochenyo language materials were provided for this book by the Muwekma Language Committee.

Notes on Writing System and Pronunciation

Vowels have similar pronunciations to the Spanish vowels *i, u, o, e, a*.

Doubled letters are long sounds.

y = first sound of English *yes*, last sound of *hay*

č = first and last sound of English *church*

š = first sound of English *sheep*, last sound of English *wish*

ṭ = similar to the t-sound in English *train* or *hurt*

' = glottal stop; the first, middle, and last consonant sound in English *oh-oh*

' = accent marks on vowels show stress. These vowels are louder and longer than others, as in the word *máarax* = *alder tree (and leaves); tree, leaf*.

Notes on Word Stress

Long vowels (doubled ii, uu, ee, oo, aa) are stressed.

Vowels followed by long consonants (doubled letters) are usually stressed.

The first syllable of a word is usually stressed, unless the word starts with CVCV... (no long vowel or CC cluster). In words of this type, the first syllable can be unstressed, and the second syllable is stressed. An example is *toréepa* 'pipe', or *muwékma* '(Indian) person.'



'ARWEH

Valley Oak

Quercus lobata



TRADITIONAL USES

****Food:** The acorns of the 'Arweh were gathered, leached in water to remove their bitter tannins, and then consumed as a dietary staple.

PLANT DESCRIPTION

The largest of the oaks in North America, the 'Arweh is a large deciduous tree, which can reach heights of up to 90 feet, with pale green lobed leaves.

****'**Arweh is known to produce large amounts of acorns about every three years.

'Arweh can often be found in open woodlands on the slopes of *šáaṭošikma* (hills). In the large canopy of the 'Arweh, *kaknukma* (hawks) like the red-tailed hawk can often be seen resting. Also, on older 'Arweh, *paraatatikma* (woodpeckers) can often be seen pecking holes into its trunk.



'ENÉSMIN

California Blackberry

Rubus ursinus



TRADITIONAL USES

Food: Ripe berries of the 'Enésmin were eaten as a source of polyphenol antioxidants.

Basketry: The 'Enésmin was also used to make an '*enésmin* (purple) color dye that was used to dye plant material used for basket weaving.

PLANT DESCRIPTION

Small to medium size shrub with short, sharp thorns. The branches of the 'Enésmin will root from the node tip when they reach the ground. Individual stems can reach in excess of 10 feet in length. The 'Enésmin is very common in broadleaf evergreen forests where it can often dominate the under story. Also found in the broadleaf evergreen forest is the '*éx* (squirrel).



MÁARAX

White Alder

Alnus rhombifolia



TRADITIONAL USES

Medicine: Medicinal uses; Tea used to induce vomiting.

Washing: Strong tea made from the bark of the Máarax is also used as a wash.

***Food:** Inner bark of the Máarax eaten.

****Tinder:** Soft wood from the young shoots of the Máarax used as tinder for fire.

****Dye:** Inner bark of the Máarax pounded and juices used as a red dye for basketry.

****Implements:** Young Máarax shoots used as arrow shafts or looped stirring sticks.

PLANT DESCRIPTION

Tall deciduous tree, reaching heights of up to 60 or 70 feet, with light brown bark. Leaves are dark green with serrated edges. Máarax can often be found in riparian woodlands near the edge of *rúmmeyikma* (streams) and lakes. Also found in the riparian woodlands, are *paalatminikma* (salamanders), like the California Newt.



MIRYAN

California Sagebrush

Artemisia californica



TRADITIONAL USES

***Medicine:** Leaves of the Miryan were tied over wounds or held against a sore tooth to reduce pain. Decoctions made from the Miryan were used to bathe patients with colds, coughs, or rheumatism. Decoctions were also taken internally, in addition to poultices placed on a patient's back and chest, to treat asthma.

PLANT DESCRIPTION

Hearty shrub with thin, flexible branches and long, hairy grayish green leaves. Miryan can often be found in open scrublands and chaparral on the hotter and drier south and west facing slopes of *šáatošikma* (hills). Often found in the open scrublands and chaparral among the Miryan are the *weerin* (brush rabbit) and the *'ipíhwa* (rattlesnake) which often preys on the *weerin*.

- 6 -

Chochenyo Language Information and Traditional Uses Provided By The Muwekma Language Committee
Monica V. Arellano, Committee Co-Chair; Sheila Guzman-Schmidt, Committee Co-Chair;
Gloria E. Arellano-Gomez, Committee Member; 'ayye Rosemary Cambra, Committee Member
Muwekma Ohlone Tribe of the San Francisco Bay Area 2008

* Bocek, Barbara. Ethnobotany of Costanoan Indians, California Based on Collection by John P. Harrington



MIŠŠUR TUR

Five-Finger Fern

Adiantum aleuticum



TRADITIONAL USES

****Basketry:** The black stems of the Miššur Tur were split, and their yellow interiors removed, before being used for black overlays in basketry weaving.

PLANT DESCRIPTION

A low-lying, medium sized fern with fan-shaped fronds. The fronds of the Miššur Tur are light green with black stems. The Miššur Tur is very common in broadleaf evergreen forests and riparian woodland where it can often growing in cracks and crevices near *rúmmeyikma* (streams). Also found in the riparian woodland near *rúmmeyikma* (streams) is the *partay* (frog).

- 7 -

Chochenyo Language Information and Traditional Uses Provided By The Muwekma Language Committee
Monica V. Arellano, Committee Co-Chair; Sheila Guzman-Schmidt, Committee Co-Chair;
Gloria E. Arellano-Gomez, Committee Member; 'ayye Rosemary Cambra, Committee Member
Muwekma Ohlone Tribe of the San Francisco Bay Area 2008

**** Edwards, Stephen W. Indian Uses of California Native Plants in the Regional Parks Botanical Garden
Photo on Right courtesy of Gerald and Buff Corsi © California Academy of Sciences
Photo on Left Courtesy of © Joseph Dougherty, M.D./ecology.org**



RAWWEN

Soap Plant

Chlorogalum pomeridianum



TRADITIONAL USES

- ***Soap:** Bulb of the Rawwen pounded to make a detergent foam which was used as a soap for washing and as a shampoo to reduce dandruff.
- ***Fish Poison:** Bulb of the Rawwen pounded and used as a fish poison to stun and catch fish.
- ***Brushes:** Fibers covering the bulb of the Rawwen were bundled up into brushes **which were used to clean acorn meal from mortars and baskets.
- ***Food:** Leaves of the young, immature Rawwen were eaten raw. **After overnight cooking the bulb is also edible.
- ****Glue:** Bulb of the Rawwen was roasted to make a glue which could be used to attach arrowheads to shafts, or to glue the handle of the Rawwen brush.
- ****Medicine:** Uncooked juice of the bulb was used to relieve the itch from poison oak.

PLANT DESCRIPTION

A small perennial plant of the lily family, the Rawwen have long green leaves which grow from it's base. It has a brown or white bulb below the surface of the ground, from which its leaves grow. Rawwen can commonly be found in broadleaf evergreen forests and open scrublands. Also common in the open scrublands are *tootikma* (deer) which often feed on the young leaves of the Rawwen.



ROOKOŠ

Common Tule

Scirpus acutus



TRADITIONAL USES

Building: Hollow stems of the Rookoš were thatched together to build shelter in the form of houses and huts; also used for making mats to sit on, rope, cordage, and twine.

Dolls and Toys: Rookoš used to make dolls and toy fish.

Hunting: Rookoš used to make decoy ducks which were used while hunting, either plain or painted and covered with feathers.

Basketry: Rookoš woven into loose baskets to collect berries and eggs, and tight baskets to carry water.

Clothing - Rookoš used to make grass skirts, leggings, sun visors.

Transportation: Hollow stems of the Rookoš were used to make balsa Rookoš boats and rafts which were able to hold a single person or multiple people.

***Food:** Roots of the Rookoš were eaten raw or ground into flour and cooked.

PLANT DESCRIPTION

A giant species of the sedge family, with a thick round green stem of about 4-7 feet in length. Rookoš is commonly found throughout California in riparian zones around the edges of *rúmmeyikma* (streams), ponds and lakes. It is common to see the *'aareh* (Great Blue Heron) walking through the Rookoš, hunting for its prey. It is also common to see the *šiwšiw* (duck) swimming in the waters near the Rookoš.

- 9 -

Chochenyo Language Information and Traditional Uses Provided By The Muwekma Language Committee
Monica V. Arellano, Committee Co-Chair; Sheila Guzman-Schmidt, Committee Co-Chair;
Gloria E. Arellano-Gomez, Committee Member; 'ayye Rosemary Cambra, Committee Member
Muwekma Ohlone Tribe of the San Francisco Bay Area 2008

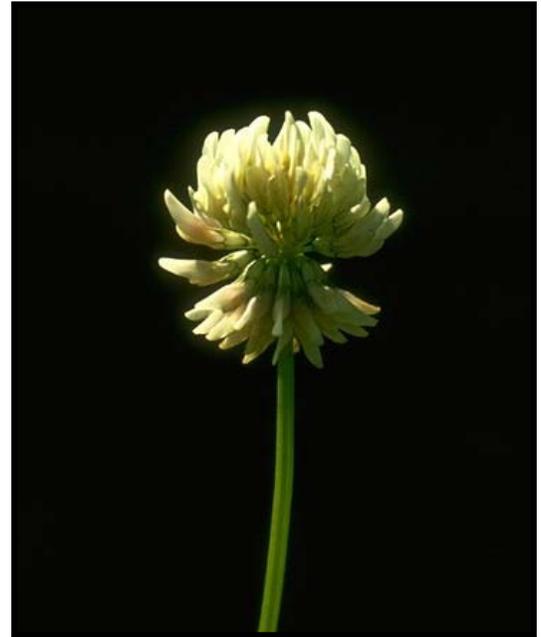
* Bocek, Barbara. Ethnobotany of Costanoan Indians, California Based on Collection by John P. Harrington
Photo on Right Courtesy of © Br. Alfred Brousseau, Saint Mary's College



RÓOREH

White Clover

Trifolium repens



TRADITIONAL USES

Food: Róoreh are a valuable survival food. They are high in protein and abundant. Róoreh are not easy to digest raw, but this can be easily fixed by boiling for 5-10 minutes. Dried flower heads and seedpods can also be ground up into nutritious flour and mixed with other foods.

Medicine: Dried flower heads of the Róoreh also can be steeped in hot water for a healthy, tasty tea-like infusion. Leaf tea soothes coughs, fevers and colds. *Decoction used as a purgative.

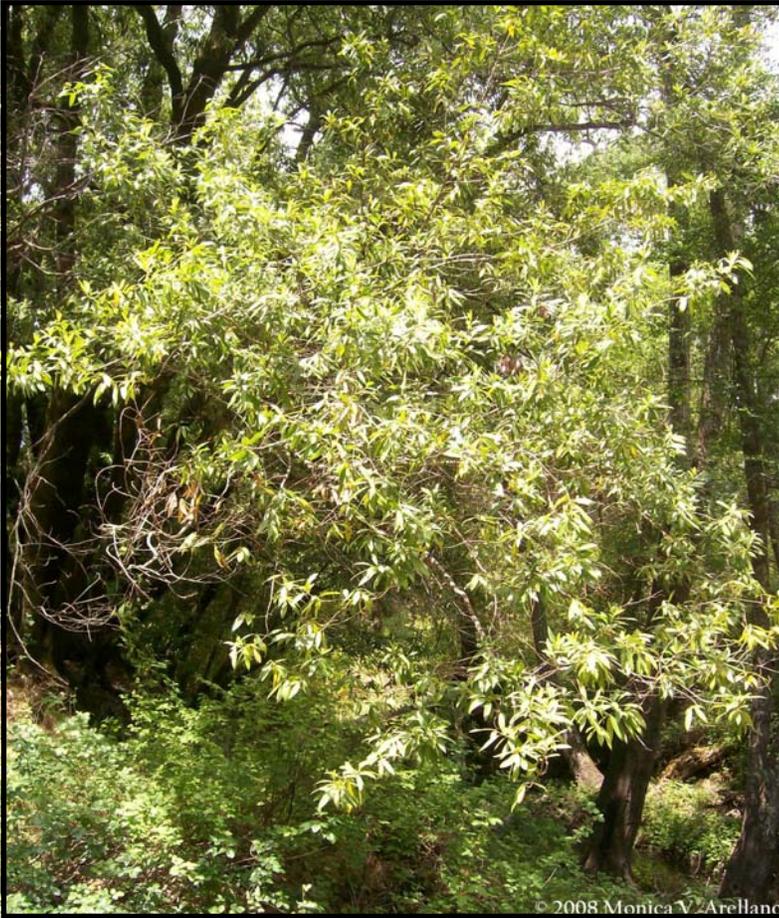
PLANT DESCRIPTION

A herbaceous, perennial member of the clover family, Róoreh is actually not Native to California. Róoreh was introduced to California as a pasture crop. The flowers of the Róoreh are white with shades of pink. The Róoreh is very common in non-serpentine grasslands where it is often widespread. Also found in the non-serpentine grasslands are *yoššokma* (field mice).

- 10 -

Chochenyo Language Information and Traditional Uses Provided By The Muwekma Language Committee
Monica V. Arellano, Committee Co-Chair; Sheila Guzman-Schmidt, Committee Co-Chair;
Gloria E. Arellano-Gomez, Committee Member; 'ayye Rosemary Cambra, Committee Member
Muwekma Ohlone Tribe of the San Francisco Bay Area 2008

* Bocek, Barbara. Ethnobotany of Costanoan Indians, California Based on Collection by John P. Harrington
Photos courtesy of © Br. Alfred Brousseau, Saint Mary's College



SOKÓOTE

California Bay Laurel

Umbellularia californica



TRADITIONAL USES

Medicine: Leaves of the Sokóote were used for headaches & stomach aches. Smoke from burning the leaves was used to rid one of *poorikma* (fleas). An infusion of the Sokóote was taken by women for the pains of afterbirth. Leaves were used in a steam bath or boughs were burned to fumigate house for colds. A poultice of ground seeds was applied to sores. * Leaves dampened and stuck on forehead for relief from headaches. Decoction from leaves used as a wash to treat poison oak dermatitis. Leaves hung in bunches to “freshen air.”

Food: Leaves of the Sokóote used to add flavor to food. * Fruits were eaten raw or boiled; kernels were either roasted or ground into flour for cakes.

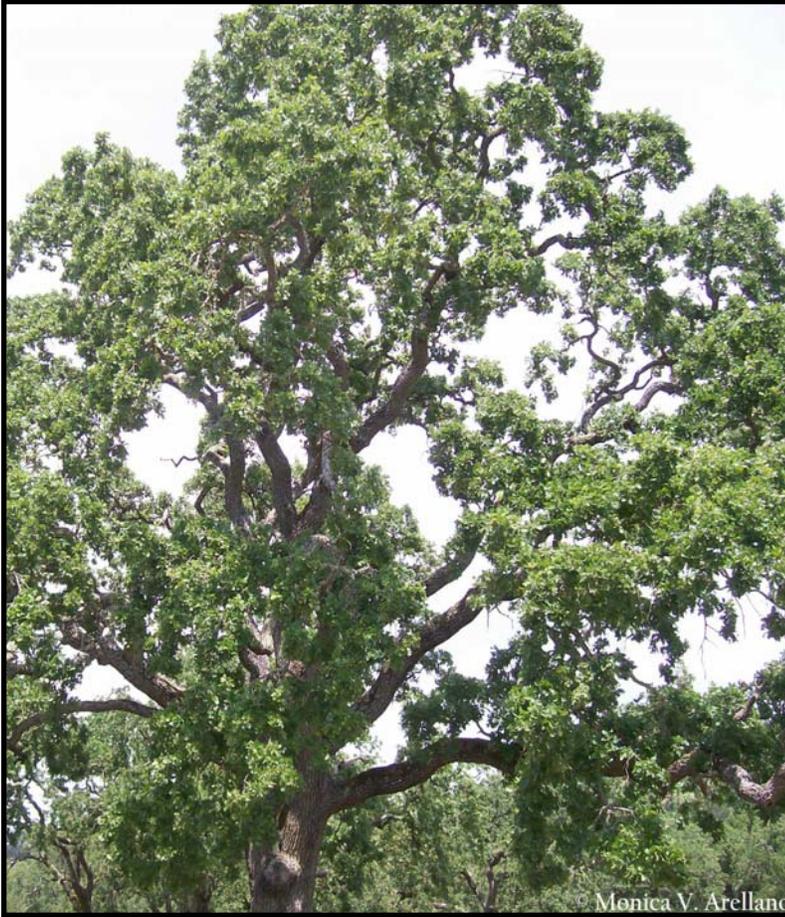
PLANT DESCRIPTION

An aromatic evergreen tree of the laurel family (Lauraceae), the Sokóote can grow to heights of 50 to 80 feet. The narrow leaves of the Sokóote exude a pungent scent when crushed, and its greenish berries ripen in autumn. The Sokóote is common in broadleaf evergreen forests.

- 11 -

Chochenyo Language Information and Traditional Uses Provided By The Muwekma Language Committee
Monica V. Arellano, Committee Co-Chair; Sheila Guzman-Schmidt, Committee Co-Chair;
Gloria E. Arellano-Gomez, Committee Member; 'ayye Rosemary Cambra, Committee Member
Muwekma Ohlone Tribe of the San Francisco Bay Area 2008

* Bocek, Barbara. Ethnobotany of Costanoan Indians, California Based on Collection by John P. Harrington



TÚHHE

California Black Oak

Quercus kelloggii



TRADITIONAL USES

Food: Acorns from the Túhhe were leached in water to remove bitter tannins, and then prepared for use in breads, soups and porridges.

Building: The wood of the Túhhe was used for building structures.

Food Preparation: The wood of the Túhhe was used to fuel fire for cooking food.

PLANT DESCRIPTION

Tall, large deciduous tree with dark, relatively smooth bark, ascending limbs and open crown. Leaves are large and lobed. Túhhe can often be found in broadleaf evergreen forests. Also common in the broadleaf evergreen forest are *tukkuulišikma* (owls), like the Great Horned Owl, which prey on the various *riinyakma* (rodents) which live in the broadleaf evergreen forest.



TUMMAY

Cow Parsnip

Heracleum maximum

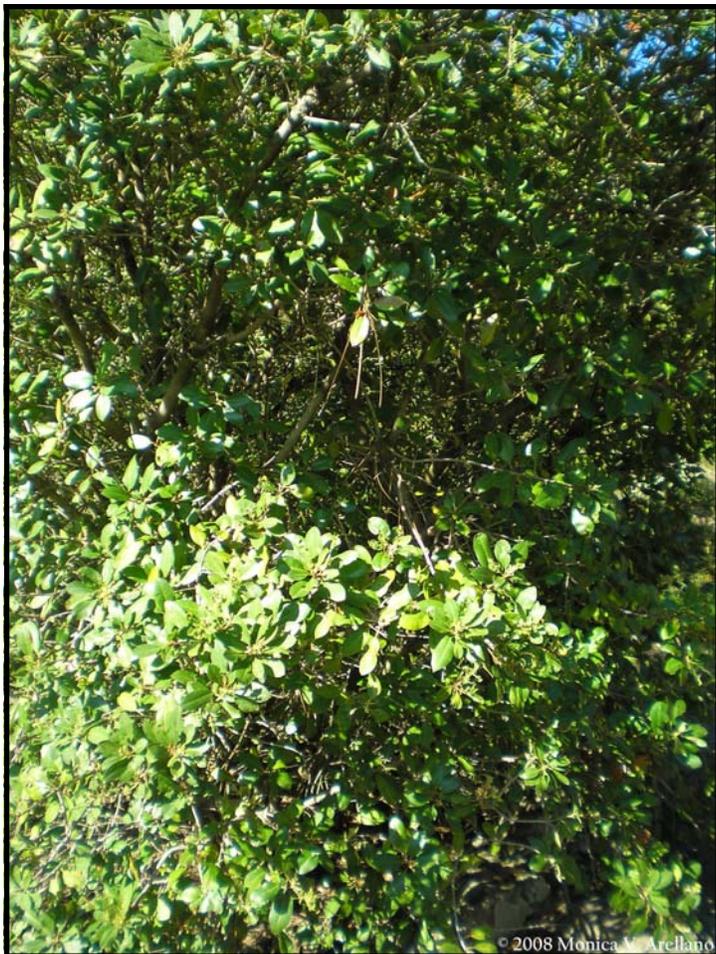


TRADITIONAL USES

***Food:** Roots and foliage of the Tummay were eaten, usually boiled.

PLANT DESCRIPTION

Tall herb, the largest of the carrot family (Apiaceae), reaching heights of up to 5 feet. The white flowers of the Tummay bloom in clusters, and its leaves are large, lobed, and green. The Tummay is very common in broadleaf evergreen forests across the continent, where it often grows like a weed. Also found in the broadleaf evergreen forest is the *yáarwi* (skunk).



TUYUK

Toyon

Heteromeles arbutifolia



TRADITIONAL USES

***Food:** The red berries of the Tuyuk were eaten toasted or dried.

Basketry: The red berries of the Tuyuk were also used to make a *pultewis* (red) color dye that was used to dye plant material used for basket weaving.

PLANT DESCRIPTION

A common perennial, evergreen shrub and small tree, growing to heights of up to about 20 feet, with long green, ovular leaves. In the late summer the Tuyuk produces small red berries which mature in the late fall and persist in to the winter. Tuyuk is commonly found in many different areas, including broadleaf evergreen forests, open woodlands, and the chaparral. When the berries of the Tuyuk ripen, it is common to see various *wirakmen* (birds) feeding on the berries, as well as an occasional *máyyan* (coyote) which will also eat the red berries.



YÚUKIŠ

Coast Live Oak

Quercus agrifolia



TRADITIONAL USES

Food: Slender reddish brown acorn of the Yúukiš was first leached in water to remove their bitter tannins, and then consumed as a preferred dietary staple.

***Medicine:** Decoction of bark or insect galls used to soothe tooth aches or to tighten loose teeth. Water from the acorn leaching process used to remedy diarrhea.

***Utensils:** Wood of the Yúukiš used to make various utensils like bowls and mortars.

Fire Wood: Wood of the Yúukiš was used to fuel fire, *and the bark was used as tinder.

PLANT DESCRIPTION

Tall to medium evergreen tree, highly variable in size, with a many branched trunk. Leaves are dark green with spiny-toothed edges. Yúukiš can often be found in open woodlands and on *šáatošikma* (hills). Also found in the open woodlands, are *tootikma* (deer) which often feed on the seedlings of the Yúukiš, and the 'éx (squirrel) which often feed on its acorns.

- 15 -

Chochenyo Language Information and Traditional Uses Provided By The Muwekma Language Committee
Monica V. Arellano, Committee Co-Chair; Sheila Guzman-Schmidt, Committee Co-Chair;
Gloria E. Arellano-Gomez, Committee Member; 'ayye Rosemary Cambra, Committee Member
Muwekma Ohlone Tribe of the San Francisco Bay Area 2008

* Bocek, Barbara. Ethnobotany of Costanoan Indians, California Based on Collection by John P. Harrington

REFERENCES

BOCEK, BARBARA. "ETHNOBOTANY OF COSTANOAN INDIAN, CALIFORNIA, BASED ON COLLECTIONS BY JOHN P. HARRINGTON." IN *ECONOMIC BOTANY*. VOL. 28, NUMBER 2. SPRINGER NEW YORK: 1984.

EDWARDS, STEPHEN W. "INDIAN USES OF CALIFORNIA NATIVE PLANTS IN THE REGIONAL PLANTS BOTANICAL GARDEN: A SELF-GUIDED TOUR." IN *FOUR SEASONS*. VOL. 7, NUMBER 3.

MILIKEN, RANDALL. *NATIVE AMERICANS OF MISSION SAN JOSE*. MALKI MUSEUM PRESS: 2008.

CHOCHENYO LANGUAGE INFORMATION AND TRADITIONAL PLANT USES PROVIDED BY:

THE MUWEKMA LANGUAGE COMMITTEE: MONICA V. ARELLANO, COMMITTEE CO-CHAIR, SHEILA GUZMAN-SCHMIDT, COMMITTEE CO-CHAIR, GLORIA E. ARELLANO-GOMEZ, COMMITTEE MEMBER, 'AYYE CHAIRWOMAN ROSEMARY CAMBRA, COMMITTEE MEMBER.

MUWEKMA OHLONE TRIBE OF THE SAN FRANCISCO BAY AREA 2008

ETHNOGRAPHIC INFORMATION PROVIDED BY:

ALAN LEVENTHAL, ETHNOHISTORIAN, MUWEKMA OHLONE TRIBE

PHOTOS BY:

LEON J. NO'EAU PERALTO

© MONICA V. ARELLANO

© GEORGE W. HARTWELL

© JOSEPH DOUGHERTY, M.D./ECOLOGY.ORG

© BR. ALFRED BROUSSEAU, SAINT MARY'S COLLEGE

BEATRICE F. HOWITT © CALIFORNIA ACADEMY OF SCIENCES

GERALD AND BUFF CORSI © CALIFORNIA ACADEMY OF SCIENCES

