Tribal-Led Renewal of Black Oak Traditions for Climate Adaptation

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Yosemite Valley Black Oak Groves (Orchards)

Introduction- acknowledgement

Black Oaks and traditional management

Historic Fire Return Interval (FRI)

Archival sources, Cultural Knowledge

NPS management of Black Oak Groves

Merced River Plan –Outstanding Remarkable Value due to their Cultural Importance

Project Planning and Implementation

Kootzaduka'a Mono Lake Indian Community Management of Pinyon Pines

Affiliated Tribes with Yosemite National Park

North Fork Rancheria of Mono Indians of California

Tuolumne Band of Me-Wuk Indians

Picayune Rancheria of the Chukchansi Indians

Mono Lake Kootzaduka'a Tribe

Bridgeport Paiute Indian Colony

Bishop Paiute Tribe

American Indian Council of Mariposa County, Inc. aka Southern Sierra Miwuk Nation

Mock orange
Elderberry
Mushrooms
Redbud
Hazel
Sour berry
Acorn
Dogwood
Willow
Bracken Fern
Wormwood

[Yosemite National Park Basketry Exhibit (nps.gov)]

Restoring a Meadow—Cultural Burning in Yosemite

weabe (Northern Paiute)

tele:li (Central Sierra Me-wuk)

tele’li (Southern Sierra Miwuk)

tikai´ya (Wuksachi)

wi´’upa (Wuksachi)

Pu’utuz Yokuts

TEK: time-tested knowledge passed down through generations, usually localized, containing spiritual beliefs about relationships and responsibilities to the earth and creation (Cajete 2000; Kimmerer 2011).

Native Science & Western Science

Both knowledge systems based on empirical observations, but Native science also contains a connection to spirit and a belief in the importance of reciprocity among humans and other beings (Cajete 2000)

Goals: Incorporate tribal perspectives in research and develop cultural metrics for black oak adult trees and acorn quality.

Indigenous Stewardship Legacies

"The Valley had then been exclusively under the care and the management of the Indians, probably for many centuries. Their policy of management for their own protection and self-interests, as told by some of the survivors who were boys when the Valley first visited by Whites in 1851, was to annually start fires in the dry season of the year and let them spread over the whole Valley to kill young trees just sprouted and keep the forest groves open and clear of all underbrush, so as to have no obscure thickets for a hiding place, or an ambush for any invading hostile foes, and to have clear grounds for hunting and gathering acorn. When the forest did not thoroughly burn over the moist meadows, all the young willows and cottonwoods were pulled up by hand"

Galen Clark (1910).

Archival Sources

Mariposa Gazette “Town and County Matters”

August 20, 1869

The Yo Semite Valley – Another Claim Raised Against It.

This season there will be a larger quantity of black oak acorns in the Yo Semite Valley than ever before known in one season. It is the custom with the Indians to commence gathering them for food very early in the Fall by cutting off the branches of the trees before the acorns are ripe enough to fall. While on a recent trip to the Valley, Mr. Galen Clark, one of the Commissioners and Guardian of the Valley, had a talk with the Indians living there, requesting them not to cut off the branches of the trees, but wait until the acorns fell off and then gather them. They replied that he had never paid them for their acorn trees nor the Valley, neither had anyone else paid them. If the State “officials,” or the American people would pay them for the Valley, they would not cut the trees, but until they were paid they had a right to cut them if they wished to. The Guardian explained to them that it would be better for them not to injure the trees by cutting them even if they had never been paid. But they failed to understand why it was right for the Americans to cut down and destroy large numbers of their best acorn trees in making ranches throughout the country, and that it should be so very wrong for them to cut down a few branches to gather acorns from trees which they had never been paid for.

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“At that time in the graceful bends nestled beautiful meadows. Outside of the meadows noble pines, Douglas Firs, and cedar dotted the valley. No underbrush, cottonwood nor second growth pines and fir to obstruct the view of the marvelous walls of the valley” (H.J. Ostrander).

“Too dirty; too much bushy” (Totuya) Maria Lebrado Ydrete, 1929).

Willis H. Baxley wrote of his observation of Indians setting fires in Yosemite Valley in his book published in 1865.

“A fire-glow in the distance, and then the wavy line of burning grass, gave notice that the Indians were in the valley clearing the ground, the more readily to obtain their winter supply of acorns and wild sweet potatoe root- “huckhau”/ fire to clear ground in the fall of 1861 for the purpose of obtaining acorns and wild sweet potato (huckhau).”

M.C. Briggs (Dec.18, 1882)

“In our brief report of 1880, we called attention to the rapidly increasing breadth of underbrush and second growth pines, and need not restate our convictions with respect to the importance of counter-working this spreading infestment. While the Indians held possess-ion, the annual fires kept the whole floor of the valley free from underbrush, leaving only the majestic oaks and pines to adorn the most beautiful of parks. In this one respect protection has worked destruction.”

Fuel reduction & Open Understory

Merced River Plan ORV 8

ORV 8—Yosemite Valley American Indian ethnographic resources include a linked landscape of specifically mapped traditional-use plant populations, as well as the ongoing traditional cultural practices that reflect the intricate continuing relationship between indigenous peoples of the Yosemite region and the Merced River in Yosemite Valley.

Location: Segments 2A and 2B (Yosemite Valley)

Rationale: Yosemite Valley Native American ethnographic resources include relatively contiguous and interrelated places that are inextricably and traditionally linked to the history, cultural identity, beliefs, and behaviors of contemporary and traditionally-associated American Indian groups. These areas include specifically mapped traditional plant gathering areas rooted in the history of traditionally associated peoples that are important to maintain and continue their cultural identity (Bibby 1994; Parker and King 1998). The traditional use plants gathered at such areas within Yosemite Valley comprise a complete system that is culturally significant. Because this ORV is the ethnographic system itself, which is fundamentally river-related, it includes some non-river related traditional use plants.

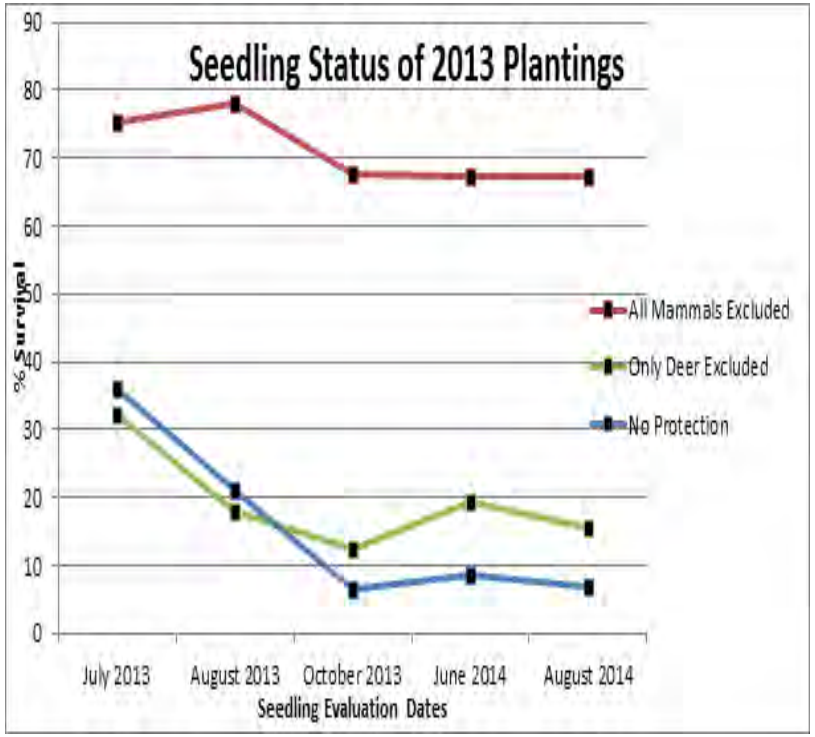
Management Objective: Maintain ethnographic resources, and encourage future propagation to meet cultural restoration purposes to the extent ecologically feasible. Support access for traditional practitioners and other traditionally associated American Indians through the administrative elements of the user capacity and non-recreational tribal pass programs, and ongoing consultation with traditionally associated tribal groups to ensure the success of these programs.

Management Actions & Trigger Points to Maintain Desired Conditions for Black Oak Indicator

Trigger Point at Which Management Action Would Be Taken	Required Management Actions (at least one action will be taken)	Rationale for Management Actions
Trigger Point: In either (but not both) stands, total numbers of adults decline by 15% OR the ratio of saplings to all non-sapling adults in that stand falls below 0.55.	Protect existing adults (particularly if the adult trigger is reached) Protect existing saplings (particularly if the ratio trigger is reached) Ecological restoration, primarily through planting of seedlings, possibly over a number of years Protect individuals of all age and size classes through fencing, removal of competing plants, fuel reduction, public awareness, signs, removal of facilities Reduce deer browsing Reduce rodent pressure Reduce public use	0.65 is the expected ratio, notwithstanding natural variability, and management action when the ratio reaches 0.55 allows for a declining trend to be reversed before the management standard is reached. Similarly, management action when adult decline reaches 15% allows for a declining trend to be reversed before the management standard is reached.

Black Oak Groves in Yosemite Valley

Seedling Survivorship



The graph is based on results of all 305 replicates in 10 Yosemite Valley locations. It shows that seedlings are much more likely (67% versus 7%) to still be alive if they are inside a cage that is both deer and rodent-proof versus no cage.


“Natural” (non-managed) condition

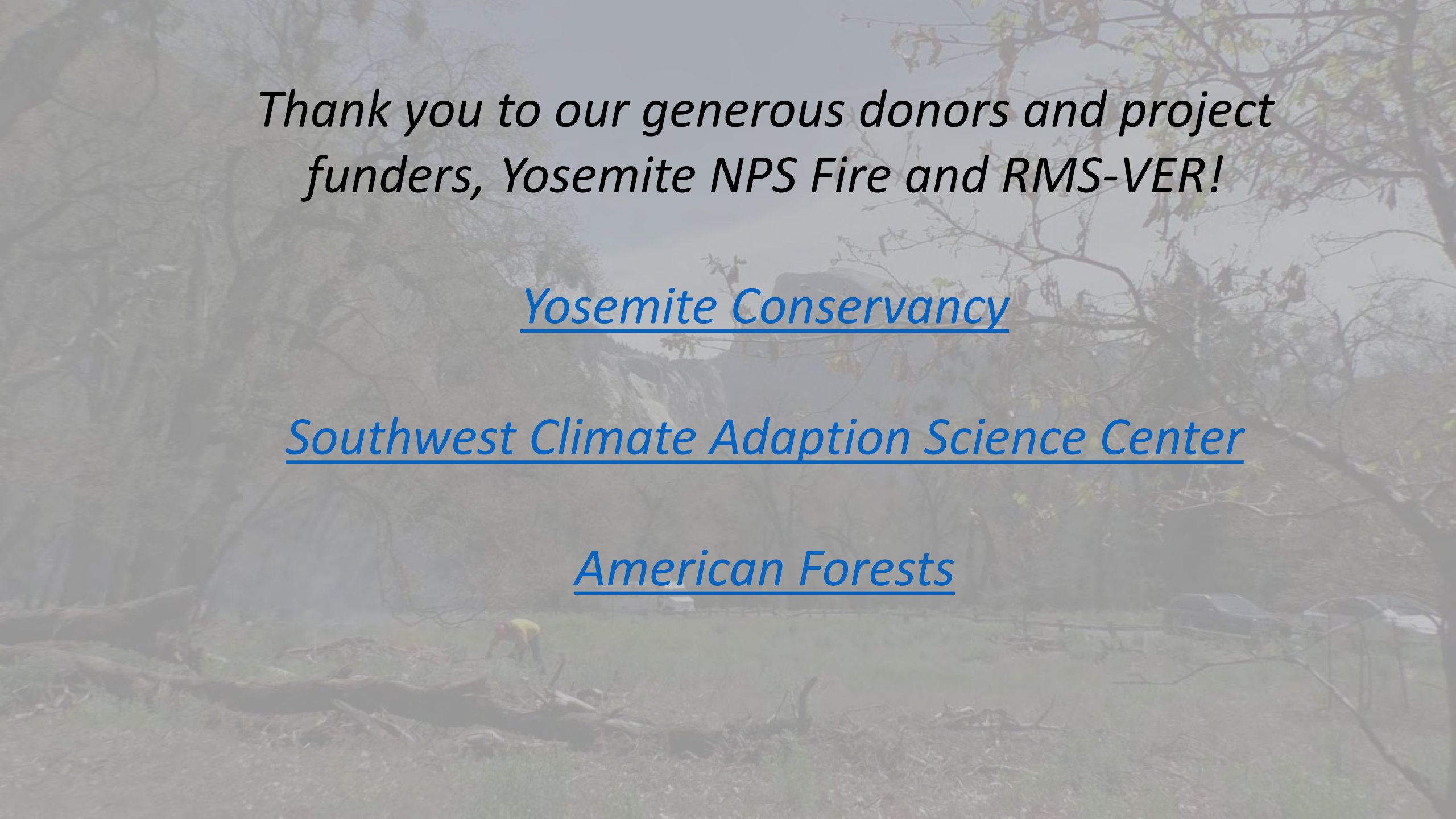

CHIPS Crews constructing burn piles

Pile burning/fuel reduction completed May 9, 2022

Black Oaks are Natural & Cultural Resources

Thank you to our tribal partners and participants.

Yosemite National Park resides in the traditional territories of the North Fork Rancheria of Mono Indians of California, Tuolumne Band of Me-Wuk Indians, Picayune Rancheria of the Chukchansi Indians, Mono Lake Kootzaduka'a Tribe, Bridgeport Paiute Indian Colony, Bishop Paiute Tribe and the Southern Sierra Miwuk Nation.



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Yosemite Conservancy

Southwest Climate Adaption Science Center

American Forests

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