

# ***The Living Balance***

Mural design and educational packet by



This 5,000-square-foot mural celebrates the rich biodiversity of the American River Watershed, featuring over 60 species woven into a composition inspired by the Miwok Creation Story.

This packet provides details about each plant, animal, and cultural object depicted in the artwork, including their Miwok, Nisenan, and Latin names where available.

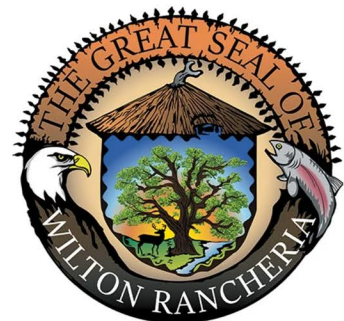
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*City of*  
**SACRAMENTO**  
Youth, Parks, & Community Enrichment







**Term Key:** *Miwok* • *Nisenan* • *Latin*

### 1 Fremont Cottonwood

*Tat-tah'-kal' • Wad'-da-dah' • Populus fremontii*

This tree is native to riparian ecosystems of the Southwestern United States. It provides shade, stabilizes riverbanks, and supports diverse wildlife, including nesting birds and insect populations.

### 2 Mt. Diablo

*O'yum Buli • Suku Yahn*

A prominent landmark in the Bay Area, Mt. Diablo holds deep significance for all the tribes within its viewshed, including the Miwok and Nisenan, who consider it a sacred place. Ecologically, it's a biodiversity hotspot, supporting unique plant and animal communities due to its varied elevations and habitats. Mt. Diablo can be seen from a few higher vantages like the Landing Mound at Sutter's Landing, and the banks of the Sacramento River.

### 3 Coyote

*O'leti • O'leh • Canis latrans*

A highly adaptable predator, the coyote thrives across California, including the Sacramento region. Coyote is an important figure in the traditional stories of the Miwok and Nisenan people, often depicted as a trickster and teacher. Coyotes regulate populations of rodents and other small mammals, preventing outbreaks and maintaining balance in the ecosystem.

### 4 California Condor

*Mo'luk • Mo'luk • Gymnogyps californianus*

The distinctive California Condor is the largest land bird in North America, with a wingspan up to 9.8 feet. This massive vulture plays a crucial role in nutrient cycling as a scavenger. After a steep population decline, the remaining wild population was captured for a breeding program in 1987, and then successfully reintroduced to the wild in 1992. The condor is revered by many local Indigenous tribes. While Condors have been seen in Sacramento, a more common species found near Sutter's Landing is the smaller turkey vulture.

### 5 Tule Boat

*Wakkaj*

Indigenous peoples of California crafted boats from tule reeds to navigate rivers and wetlands for fishing, transportation, and trade.

### 6 Tule

*Schoenoplectus acutus var. occidentalis*

This tall marsh plant, sometimes called Bulrush, is vital to California's wetlands. It provides critical habitat for many species, helps filter water, and stabilizes shorelines.



**1 Pipevine Swallowtail**

**Holokit'deewah** • **Ko-wah'wah'** • *Battus philenor*

A striking black-and-blue butterfly found in California woodlands, its caterpillars feed on native pipevine, making them toxic to predators. This butterfly's life cycle is closely tied to the health of pipevine populations.

**2 Blue Dicks Flower**

**Chuka** • **Chuka** • *Dichelostemma capitatum*

A drought-resistant wildflower with vibrant purple blooms, commonly found in California's foothills and grasslands alongside California Poppies. Native Americans, including the Miwok and Nisenan tribes, consumed this flower's bulbs as a food source.

**3 Wild Sweet Pea**

*Lathyrus sp.*

A native vine with delicate purple flowers, often found in California's coastal and foothill regions. It provides food for pollinators and its seeds are consumed by birds and small mammals.

**4 Sulphur Butterfly**

*Family: Pieridae*

widespread group of bright yellow butterflies, with several species found in California's grasslands and open spaces. These butterflies are important pollinators and indicators of grassland health. Sulphurs are especially fond of alfalfa, and can be seen in large clouds exiting alfalfa fields in the fall.

**5 Purple Aster**

*Symphyotrichum puniceum*

A wildflower with purple petals, supporting pollinators in wetlands and meadows. Its late-season blooms from May to July provide a valuable nectar source for butterflies and bees when other flowers are scarce.

**6 California Poppy**

**Loiyehmah** • **Yoh'** • *Eschscholzia californica*

The state flower of California, its bright orange petals blanket hillsides in spring, thriving in dry conditions. It provides nectar for pollinators and its seeds are a food source for birds. Native folks used the greens of the poppy as a vegetable, and some parts of the plant as a mild pain-reliever.

**7 Monarch Butterfly**

*Family: Danaidae*

An iconic orange-and-black butterfly that depends on milkweed for reproduction, with a western population that migrates to California's coast. Its survival is tightly linked to milkweed availability and habitat protection. Monarchs are migratory and some populations migrate up to 3,000 miles a year—sometimes up to 100 miles a day!

**8 Showy Milkweed**

**Te'-koon** • **Me-wah'** • *Asclepias speciosa*

A crucial host plant for monarch caterpillars, its toxic sap deters predators while its flowers provide nectar for pollinators. Milkweed supplies tough fibers for making string, ropes, and coarse cloth. It plays a vital role in supporting biodiversity and the monarch migration. Cultural practitioners use the fibers of Milkweed stems for cordage. In the old days its juice was mixed with animal grease to create gum.







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### 1 Swainson's Hawk

*Buteo swainsoni*

A long-distance migrant that feeds on small mammals and insects, indicating grassland health. The Swainson's Hawk is a California Threatened species; fewer than 1,000 mating pairs visit Yolo, Sacramento, and San Joaquin counties each year.

### 2 Black-Necked Stilt

*Himantopus mexicanus*

A distinctive shorebird that feeds on aquatic invertebrates, helping control insect populations and depending on healthy wetland habitats. Black-necked stilts are mainly found in wetlands like those in the Yolo Causeway.

### 3 California Ground Squirrel

*O-pok* • *He-lo'* • *Otospermophilus beecheyi*

Ground squirrels aerate soil through burrowing, benefiting plant growth and providing shelter for other animals. It's a primary food source for raptors, snakes, and mammals.

### 4 Desert Cottontail

*Hik'-ah* • *Pah-lal'* • *Sylvilagus audubonii*

This adaptable rabbit thrives in a variety of dry habitats. It influences plant community composition and serves as an essential prey species for coyotes, foxes, bobcats, hawks, and owls.

### 5 Lesser Yellowlegs

*Tringa flavipes*

A shorebird that migrates through the American River watershed, seen locally in April, and again from August through October.

### 6 Black-Tailed Deer

*Oo-wu'-yah* • *Koot* • *Odocoileus hemionus columbianus*

The black-tailed deer found in the Sacramento region is a coastal subspecies of mule deer. They play a key role in ecosystem dynamics by browsing on shrubs and maintaining plant diversity and are an important prey species for predators.

### 7 American Beaver

*Hen'-net* • *Pahn'-chahk* • *Castor canadensis*

A vital ecosystem engineer, beavers shape riparian landscapes by constructing dams that create wetland habitats, which improve water quality and support diverse life. They were nearly wiped out by fur trappers in the 1800s, but have since begun to recover due to



## 1 Clapper Stick

*Ta'ka'-tah'*

The clapper stick is a traditional instrument used by many Native Californian tribes to keep rhythm in songs and dances. Clapper sticks are made out of Elderberry wood. Elderberry plants provide food and habitat for wildlife.

## 2 Elderberry

*Lah'-pah* • *Kock-um-chah* • *Sambucus nigra ssp. caerulea*

Elderberries are widely used by Native American tribes, often by drying the berries for relish along with cured salmon and deer. Elderberries provide food for birds and other wildlife and support pollinator populations. Note that the berries must be cooked before being eaten, as all parts of this useful plant are poisonous when raw.

## 3 Soaproot

*Sah'kani* • *Haw'* • *Chlorogalum pomeridianum*

The Nisenan and Miwok use soaproot bulbs for cleaning and other purposes. The juices of the bulb contain saponins that form a lather when mixed with water, making the bulbs useful as a kind of soap.

## 4 Soaproot Brush

*Sah'kani* • *Es'ken*

The Ohlone and Miwok peoples crafted brushes from the bulb of the soaproot plant for cleaning and other purposes. The bulb was processed to create a bristled end that could scrub surfaces. These brushes were particularly useful for cleaning baskets and mortar stones after food preparation. The use of soaproot brushes demonstrates a deep understanding of the plant's natural properties and its practical applications in daily life.

## 5 Arroyo Willow

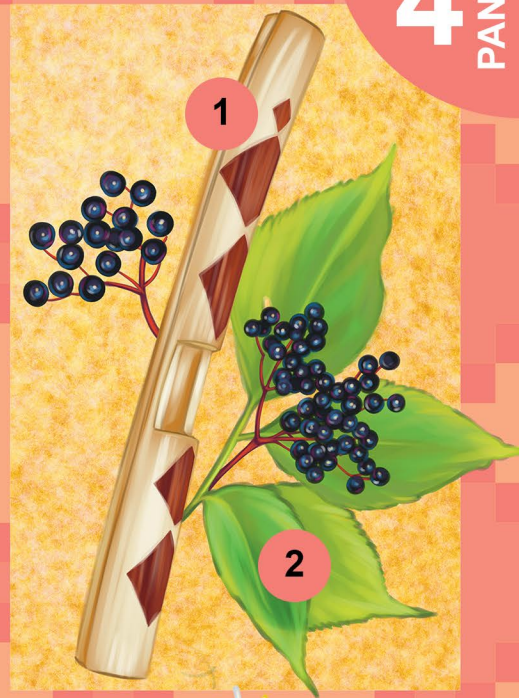
*Hal-ow'-we* • *Choo-yoo* • *Salix lasiolepis*

Many California tribes use arroyo willow for making baskets, tools, and shelter materials. Arroyo willow is crucial for riparian health, stabilizing stream banks and providing habitat.

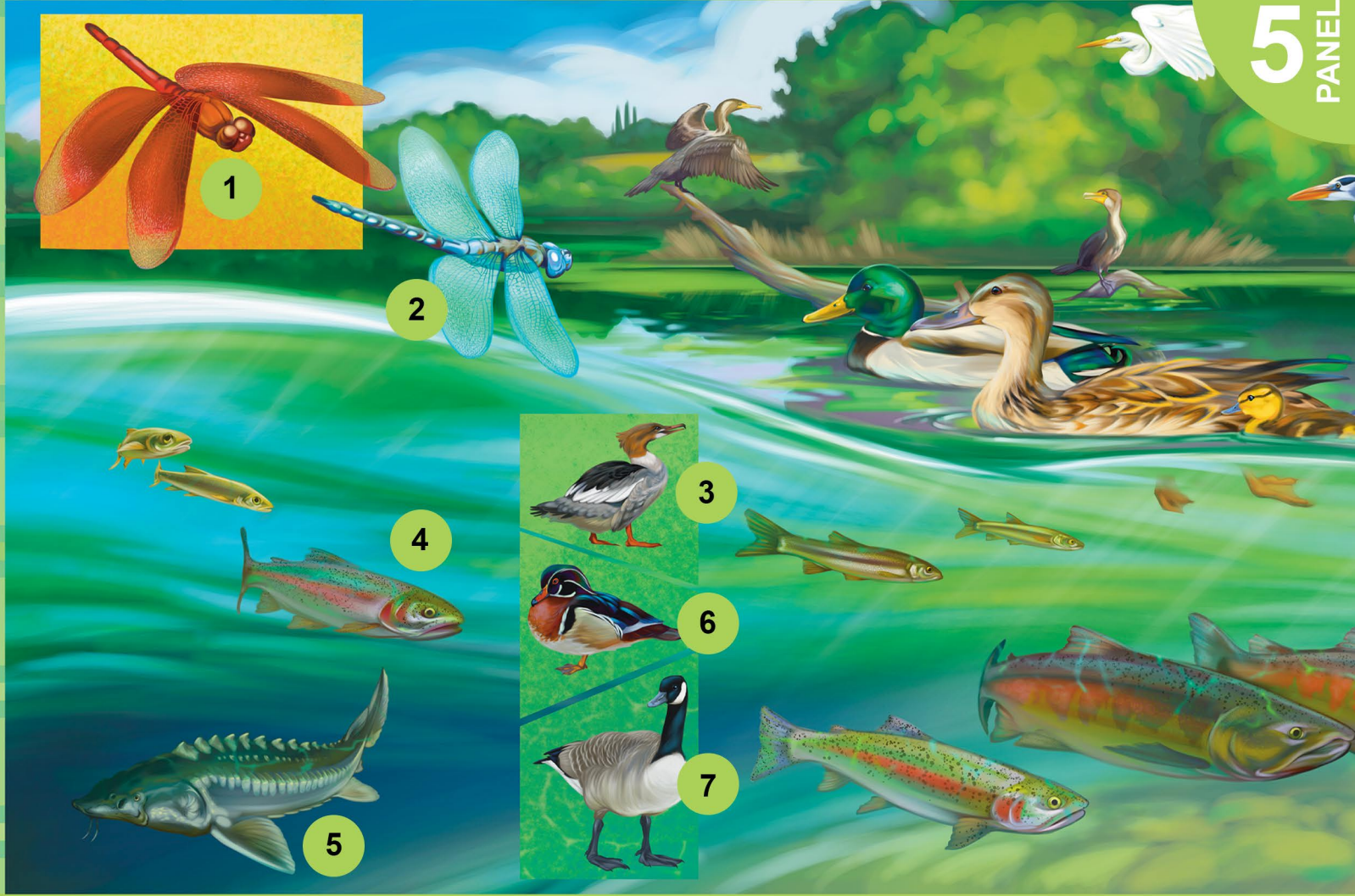
## 6 Burden Basket

*Too'-yoo-mah*

Twined burden baskets were integral tools for Native peoples, including the Miwok, who often crafted them from willow rods and plant fibers. They represent sustainable use of natural resources.







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**1 Big Red/Flame Skimmer**

*Libellula saturata*

A vibrant red dragonfly that helps regulate populations of smaller flying insects.

**2 Common Green Darner**

*Anax junius*

A large dragonfly that is a key predator of mosquitoes and other insects.

**3 Common Merganser**

*Mergus merganser*

A large fish-eating duck that plays a role in maintaining fish population balance. Merganser ducks nest in tree cavities along bodies of water.

**4 Steelhead Trout**

*Tahl-pah'dah • Ahl'-lah • Oncorhynchus mykiss*

Steelhead trout are anadromous: they travel up rivers from the sea to spawn. Young steelhead spend up to two years in fresh water before migrating, and unlike salmon, do not die after spawning. These fish contribute to aquatic ecosystems by influencing nutrient cycling and serving as a key prey species all along the rivers as they migrate to and from the Pacific.

**5 White Sturgeon**

*Acipenser transmontanus*

The largest freshwater fish in North America, they help regulate aquatic food webs and contribute to ecosystem stability. White Sturgeon are anadromous and travel up rivers from the ocean to spawn. Some sturgeons can live up to 100 years old! Their characteristic primitive-looking armor is mostly made of cartilage.

**6 Wood Duck**

*Aix sponsa*

Wood ducks are some of the most colorful native duck species found in the American River Watershed. They depend on wooded wetlands, making them a valuable indicator of habitat health.

**7 Canada Goose**

*Lah-kah'-loo • Lah' • Branta canadensis*

These migratory waterfowl are crucial seed dispersers and grazers in wetland ecosystems. Canada Geese fly in large flocks, often making a beautiful "V" in the sky as they travel. Many Canada geese now remain in the region year-round.





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### 1 Double-Crested Cormorant

*Nannopterum auritum*

A waterbird that feeds on fish, playing an important role in controlling fish populations. Double-crested cormorants are often seen perching with outstretched wings to dry their feathers between dives to forage.

### 2 Sacramento Pikeminnow

*Ptychocheilus grandis*

A native predatory fish that plays a vital role in aquatic food webs.

### 3 Mallard Duck

*Se'-nah* • *Poi-yeh* • *Anas platyrhynchos*

A key species in many ecosystems, mallards influence wetland plant life and contribute to predator-prey dynamics. A male, female, and ducklings are featured in the artwork.

### 4 Great Egret

*Ardea alba*

Great Egrets are striking, large white birds with long legs. They wade and spear prey in shallow marshes and wetlands. As important predators in wetland ecosystems, they control fish and amphibian populations.

### 5 Great Blue Heron

*Ahl'-kah'-we* • *Ahl'-kow* • *Ardea herodias*

A beautiful, large wading bird that plays a critical role in aquatic ecosystems by controlling fish and amphibian populations. Great Blue Herons build elaborate nests of sticks in trees, which are used for many years.

### 6 Chinook Salmon

*Too-koo'-noo* • *Mai'-ee* • *Oncorhynchus tshawytscha*

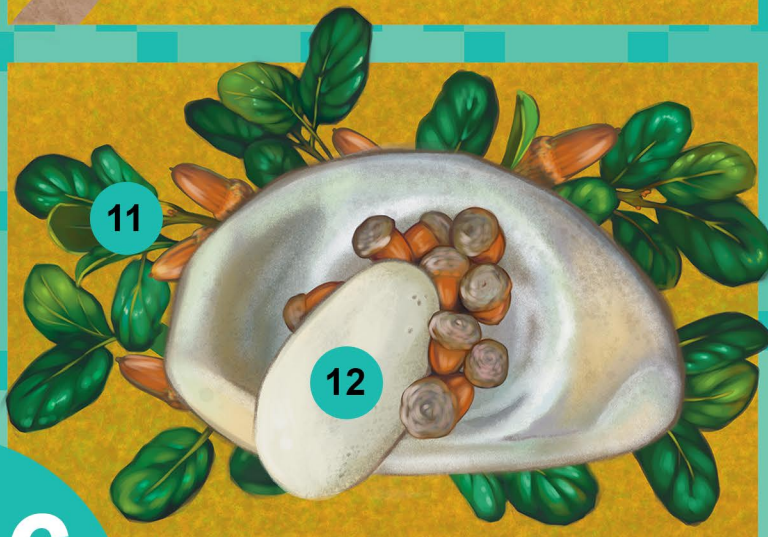
Chinook salmon are a keystone species in river ecosystems, providing nutrients and supporting diverse wildlife. Salmon are anadromous, meaning that they travel up rivers from the Pacific to spawn. After spawning, they die, feeding many species and contributing to healthy and nutrient rich rivers and riparian habitats. Salmon are essential for the well-being and identity of many Native people.

### 7 Sacramento Perch

*Archoplites interruptus*

The only native sunfish in California, its decline highlights habitat loss and competition from introduced species.





### 1 Anna's Hummingbird

*Calypte anna*

Anna's hummingbirds are one of five native hummingbird species, but the only one to stay in this region year-round. These hummingbirds are a vital pollinator for native and ornamental plants.

### 2 Yellow Warbler

*Setophaga petechia*

This bright yellow songbird is a key indicator of healthy riparian habitats. It feeds on insects, keeping populations in check, and migrates vast distances, linking ecosystems across the Americas.

### 3 House Finch

*Haemorhous mexicanus*

Highly adaptable, this finch thrives in both wild and urban environments. It is a primary seed disperser for many plant species and a common visitor to bird feeders.

### 4 American Goldfinch

*Spinus tristis*

A late-season breeder that times its nesting to peak seed availability, the goldfinch is an important seed disperser, favoring native thistles and sunflowers.

### 5 California Scrub Jay

*Aphelocoma californica*

This intelligent, nonmigratory bird is a key player in oak woodland ecosystems. By caching acorns in the soil, scrub jays inadvertently aid in oak regeneration, shaping the landscape over time.

### 6 Black-headed Grosbeak

*Pheucticus melanocephalus*

This striking bird plays a role in seed dispersal and insect control. Its powerful beak allows it to crack hard seeds and even eat monarch butterflies, which are toxic to many other species.

### 7 Song Sparrow

*Melospiza melodia*

A highly adaptable bird found in wetlands, grasslands, and urban areas. The Song Sparrow lives locally year-round, building its nest of grass in a bush or on the ground.





## 8 Red-Shafted Flicker

*Colaptes auratus cafer*

This subspecies of the Northern Flicker is common in the Sacramento region. Unlike most woodpeckers, the Red-shafted Flicker often forages on the ground, feeding on ants and beetles. In many Native cultures, including those in the Sacramento region, bird feathers were often used for regalia, ornamentation, and ceremonial purposes.

## 9 Western Meadowlark

*Sturnella neglecta*

A grassland specialist with a distinctive flute-like song, the western meadowlark helps regulate insect populations and is a symbol of open prairie ecosystems.

## 10 American Robin

*Turdus migratorius*

One of North America's most abundant and well-loved songbirds, the robin thrives in diverse habitats, from forests to urban areas.

## 11 Blue Oak

*Quercus douglasii*

As California's most drought-tolerant deciduous oak, the blue oak plays a crucial role in foothill ecosystems, providing food and habitat for wildlife. Its acorns were a dietary staple for Indigenous Californians. Acorns were a dietary staple for Native peoples who harvested acorns from various oak species, such as the California Black Oak, and ground them into meal using bedrock mortars for cooking.

## 12 Mortar and Pestle

The bedrock mortar and pestle were essential tools for processing food, particularly acorns, seeds, and berries. Used communally by women in a village, these mortar sites remain visible today as deep depressions in granite boulders, marking generations of food preparation.





**1 Belted Kingfisher***Megaceryle alcyon*

A striking bird often seen hovering over water before diving for fish, the belted kingfisher plays a key role in controlling aquatic prey populations. It relies on clean, undisturbed waterways for nesting and feeding, making it a strong indicator of ecosystem health.

**2 White-Tailed Kite***Elanus leucurus*

A graceful raptor of open grasslands and wetlands, the white-tailed kite is a skilled hunter of rodents, playing an essential role in balancing prey populations. It relies on healthy, open landscapes for nesting and hunting.

**3 Downy Woodpecker***Dryobates pubescens*

The smallest North American woodpecker, it helps control insect populations and creates tree cavities used by other wildlife. These adaptable birds thrive in forests, parks, and even urban green spaces.

**4 Grasshopper***Family: Acrididae*

This large grasshopper is an important food source for many birds and small mammals. There are several types of grasshopper species in the Sacramento region. Native peoples consumed grasshoppers as an essential food source.

**Term Key:** *Miwok • Nisenan • Latin***5 River Otters***Lontra canadensis*

North American river otters are semi-aquatic mammals vital to wetland ecosystems, helping regulate fish and amphibian populations. They thrive in rivers, lakes, and coastal estuaries, where their presence indicates healthy waterways. Otters are known for their playful antics and often seen in family groups. Otter skins and bones were also used in ceremonial regalia and medicine bundles.

**6 Western Pond Turtle***Actinemys marmorata*

This freshwater turtle, once widespread along the Pacific Coast, is now at risk due to habitat destruction, invasive species, and declining water quality. This turtle is the only native freshwater turtle found in the Sacramento region.

**7 Broad-Leaved Cattail***Typha latifolia*

Broad-leaved cattails provide habitat for numerous species, improve water quality by filtering pollutants, and prevent erosion by stabilizing shorelines. Cattails have been widely used by Indigenous peoples for food, medicine, and materials. Many California tribes, including the Miwok and Ohlone, used cattail leaves for weaving mats, baskets, and roofing, while the roots and pollen were used as food and



**1 California Buckeye*****Aesculus californica***

California buckeye is a drought-tolerant, deciduous tree endemic to California. It provides nectar for pollinators like native bees and butterflies but is toxic to most mammals. Local Native peoples traditionally leached its toxic seeds to make them safe for consumption, using them as a famine food when acorns were scarce. The nuts were also crushed and placed in streams to stun fish for easier harvesting. Medicinally, parts of the tree were used to treat wounds and respiratory ailments. The wood of the buckeye tree was also useful for fire-making drills.

**2 Mugwort*****Artemisia douglasiana***

Native mugwort grows in riparian and coastal habitats, stabilizing soil and supporting pollinators. It is known for its insect-repelling properties and its ability to thrive in disturbed areas. Mugwort is highly valued in many Native traditions for its medicinal and spiritual properties. It was used as a remedy for colds, fevers, and skin irritations and played an important role in spiritual practices. The plant was viewed as a symbol of peace, and is still used today in Maidu ceremonies.

**3 California Bay Laurel*****Umbellularia californica***

Also called California bay, this evergreen tree thrives in coastal and foothill forests, providing habitat and food for birds and insects. Its strong aromatic leaves have antimicrobial properties. Bay laurel was used by Native peoples for both food and medicine. The leaves were placed in baskets to repel pests, and teas were made for colds and headaches. The nuts, though strong in flavor, were sometimes roasted and eaten.

**4 Santa Barbara Sedge*****Carex barbarae***

This sedge is a wetland species that helps prevent erosion and provides nesting material for birds and small mammals. It thrives in riparian zones and stabilizes stream banks. Santa Barbara sedge was a key basket-weaving material for Native peoples. The long, durable fibers were woven into intricate designs for storage, gathering, and ceremonial baskets. Sedge roots were sometimes used as binding materials in tools and other crafts.

**5 Sifting Basket**

Sifting baskets were essential for processing acorns and other seeds. Native peoples crafted them using willow, sedge, and other native materials, shaking them to separate husks from grains. These baskets were also used in ceremonial and everyday food preparation. This basket's design comes from a member of the Wlton Rancheria.







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### 1 Sutter Buttes

The Sutter Buttes are an ancient volcanic formation rising dramatically from the Sacramento Valley, creating a unique ecological island. Their rugged terrain supports diverse wildlife, including raptors, deer, and native plant communities distinct from the surrounding lowlands. The area is a crucial stopover for migratory birds and provides habitat for endemic and rare species. For the Nisenan, Maidu, and Wintun peoples, the Sutter Buttes were a place of spiritual significance.

### 2 Bald Eagle

*Haliaeetus leucocephalus*

Bald eagles are apex predators that help regulate fish populations and scavenge carrion, playing a crucial role in maintaining ecosystem health. Their presence in California has rebounded significantly due to conservation efforts, and they are now commonly seen around large lakes and rivers. There are several active Bald eagles nests on the lower American River. Bald eagles were considered powerful spiritual beings in Native cultures. Their feathers were highly prized for ceremonial use and were sometimes worn by leaders and shamans to signify strength and vision.

### 3 Sandhill Crane

*Antigone canadensis*

Sandhill cranes are an iconic migratory bird species that rely on California's wetlands, including the Central Valley and the Buttes region, as critical wintering grounds. They are mainly seen and/or heard overhead in the Sacramento area as they migrate into the region in the fall and head back north in early spring. These cranes perform elaborate courtship dances and communicate with loud, trumpeting calls. The sandhill crane held cultural and spiritual importance for many Native Californian tribes. Some associated them with seasonal cycles, as their migrations marked the changes in weather and food availability. Their feathers were used in regalia, and their calls were sometimes interpreted as messages from the spirit world.

### 4 Marsh Grasses

Many marsh grasses are found in the Sacramento region, providing essential habitat and food sources. Some common native species include **California Cordgrass** (*Sporobolus foliosus*), **Meadow Barley** (*Hordeum brachyantherum*), and **Saltgrass** (*Distichlis spicata*)