

Valley Wilds

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Burn Today, Flowers Tomorrow

Many fans of Sycamore Grove Park experienced a moment of panic last fall when they noticed a dense cloud of smoke rising from their favorite park. I'm sure they were relieved to find out the smoke was coming from a prescribed burn, a carefully tended, planned fire conducted by the Livermore-Pleasanton Fire Department and LARPD open space staff.

As part of Sycamore Grove Park's vegetation management plan, three burns were conducted in late October and early November of 2011. Extensive planning occurs before these burns. Permits are obtained and measurements are made the day of and during the burn to make sure conditions are suitable and safe.

So why do we burn? The idea of wildfire makes many people think of a scorched landscape where all life has been eliminated, nature's beauty ruined. The blackened

ground may look a little shocking at first, but give it time and you will see the beauty that regrows and the improvements fire can bring (In fact, join me for a hike January 22nd where we will do just that! See page 3 for details).

There are many reasons prescribed burns are conducted. A carefully monitored burn is a way to get rid of built up fuel that could cause a catastrophic fire if it were to occur without firefighters standing by. Burning off the "thatch" of dead grasses returns nutrients to the soil and allows seeds that have been smothered below to get the light they need to sprout and grow. A burn conducted at the right time of year can be used to help control invasive annual plants before

By Ranger Amy Wolitzer



Photo by Mike Nicholson

they go to seed. This can allow native plants, especially those well adapted to fire, to regain a foothold over the invasive plants.

This was the third time we have burned what I refer to as "Middle Hill" (in the upper portion of Sycamore Grove Park there are three ridges, this being the one in the center). When this was first chosen as a project area in 2009 I was a little disappointed as I didn't think there was much in the way of native vegetation remaining on this hillside that would benefit from fire. It, like most of the hills in the area, had probably been heavily tilled and planted with annual grasses for cattle grazing well over 100 years ago. Wild oats, medusa head, rippgut brome, mustard and thistles appeared to be all there was.

After the fire burned through, we were able to see the burnt crowns of native bunch grasses like purple needle grass and creeping wild rye here and there. Unlike the invasive annual grasses, bunch

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Livermore

Livermore Area Recreation and Park District

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Blue-eyed Grass

Photo by Amy Wolitzer

Burn Today (Continued)

grasses put down deep roots and live for many, many years. As we would soon see, they benefit from fire, sending out new growth around the base. As winter and the rains came, we saw the leaves of mules ears, California purple aster and soaproot beginning to grow out of the burnt soil. Mysterious pairs of grass-like leaves sprouted in great profusion. It wasn't until April, when they sent up flower spikes, that it became clear these were *Triteleia laxa*, also known as wallybaskets or Ithuriel's spear. These gorgeous purple-blue flowers belong to the iris family and grow from a small bulb. I had been hiking this hillside for years but never saw one blooming on the west facing slope until after the burn. These native plants had been lurking there for years, putting out their



Purple Needle Grass

Photo by Amy Wolitzer

grass-like leaves below all the thatch. They were getting enough light to stay alive, but not enough to flower until the burn cleared out the plants that had shaded them out and gave them opportunity to get a head start. That year there was a beautiful bloom of *Triteleia*.

Fire has a long history in California. The natural fire regime for coast live oak woodlands is fairly long, with a notable fire once every 25 - 50 years, but grasslands are considered to have a short interval regime - fires at least once every 10 years. Before European contact, Indians in California used fire extensively to optimize natural resources. It is estimated that 5.6 to 13 million acres were burned in California each year, some fires started by lightning but many were started purposefully by indigenous peoples. Their careful



Triteleia

Photo by Amy Wolitzer

land management shaped the "wilderness" that early explorers found. Explorers and missionaries wrote about meadows blanketed with wildflowers and park-like forests of gigantic trees one could easily ride a horse through. When the Indians were brought to missions and no longer allowed to burn, the diversity of plants and abundance of wildflowers plummeted. The forests became over-crowded with underbrush. As one Miwok elder put it, "The white man sure ruined this place. It's turned back to wilderness."

Why did the Indians burn? There were several reasons. One was that a major food source was the seeds of various flowering plants like redmaids and clarkia that grow in open meadows. After seed gathering in the late spring, fields would be set on fire. This kept meadow areas open and maintained habitat for desired species to grow. Fire also helped increase the abundance of plants that were gathered for berries, greens, tubers and bulbs. These California grassland plants have evolved in a

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Photo by Glen Florey

Ranger-led Programs

Experience nature and history in a special way. Programs are generally 1 - 2 hours in length. A \$2 donation is requested. A \$5 parking fee is charged at both park entrances.

January Programs

Quick Look:

Predators
Saturday, Jan. 7th
10:00 am

Bright Winter Stars
Saturday, Jan. 14th
6:00 pm

New Year's Hike at Holdener
Saturday, Jan. 21st
10:00 am

After the Burn
Sunday, Jan. 22nd
4:00 pm

Winter Owls
Sunday, Jan. 29th
5:00 pm

Predators

Saturday, January 7th

10:00 am

They kill for a living. All branches of the evolutionary tree have them. Birds, mammals, insects and even plants all have killers in the family. Join us today for a look at a few of the predators that have existed in the past and rule today in the present.

Ranger Dawn Soles

*Sycamore Grove Park
Arroyo Road Entrance*

Bright Winter Stars

Saturday, January 14th

6:00 pm

It may be getting cold at night, but the cold clear air is perfect for astronomy. Come out to Sycamore Grove for a moderate walk into the park for some astronomical fun! Learn the stories behind some of winter's most stunning constellations and watch satellites zip overhead! Please dress warmly and wear comfortable walking shoes. Cancelled if raining. We will take a night hike instead if it is overcast.

Ranger Glen Florey

*Sycamore Grove Park
Wetmore Road Entrance*

New Year's Resolution Hike at Holdener

Saturday, January 21st

10:00 am

Already struggling with your New Year's resolution to exercise more? How about a little motivation? Join us for a vigorous two mile hike through the new trails of Holdener Park. Wear sturdy hiking shoes and be prepared for some steep terrain. The trails may be muddy, but we are hiking rain or shine! Park near the water tanks at the east end of Hansen Road.

Ranger Jamie Greco

*Holdener Park
Hansen Road*

[Map it!](#)

After the Burn

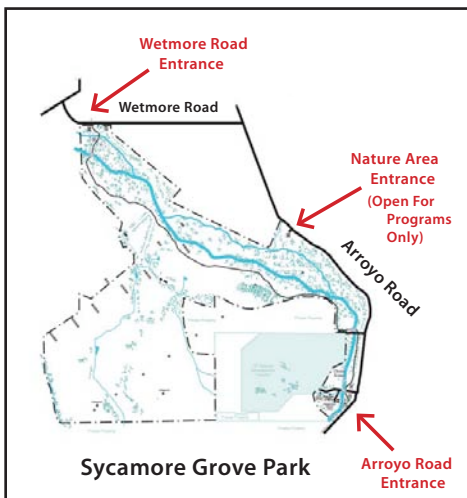
Sunday, January 22nd

10:00 am

Last fall the park district did some prescribed burning in the upper part of Sycamore Grove Park. Join us today to learn about how fire can be used as a resource management tool and to see what's growing in the areas that were burned. This will be a slow-paced hike of about 4 miles with some wandering off the trails into the areas that were burned.

Ranger Amy Wolitzer

*Sycamore Grove Park
Wetmore Road Entrance*



More January Programs

Burn Today (Countinued)

Winter Owls

Sunday, January 29 5:00 p.m.

Surprising to many folks is that our local owls are very active during the winter. For species like the Great Horned Owl, the “dead of winter” is nesting time. We’ll head out on an easy hike, just before dark, to start listening for owl “voices” or vocalizations. Then, if we’re lucky, we’ll see a silent flyer or two. Dress warmly. No flashlights or anything else that emits a white light. This hike is appropriate for ages 8 and above. Children must be accompanied by an adult. Please call (925) 960-2400 in advance to reserve your spot on this program. Cancelled if raining.

Ranger Patti Cole Sycamore Grove Park
Wetmore Road Entrance

Sycamore Grove Park

is open from 7:00 am until sunset 365 days a year! If you like evening walks you may want to save this calendar so you can plan your visit accordingly!

2012 Closing Times

Jan 1 - Jan 30	5:30 pm
Jan 31 - Feb 13	5:45 pm
Feb 14 - Feb 27	6:00 pm
Feb 28 - Mar 10	6:15 pm
Mar 11 - Mar 29	7:30 pm
Mar 30 - Apr 15	7:45 pm
Apr 16 - May 1	8:00 pm
May 2 - May 18	8:15 pm
May 19 - Aug 2	8:30 pm
Aug 3 - Aug 15	8:15 pm
Aug 16 - Aug 26	8:00 pm
Aug 27 - Sept 5	7:45 pm
Sept 6 - Sept 15	7:30 pm
Sept 16 - Sept 24	7:15 pm
Sept 25 - Oct 4	7:00 pm
Oct 5 - Oct 15	6:45 pm
Oct 16 - Oct 26	6:30 pm
Oct 27 - Nov 3	6:15 pm
Nov 4 - Dec 31	5:30 pm

landscape that burns frequently and have seeds that are not easily damaged by fire and/or resprout from the root base, bulbs or tubers after fire. Burning the meadows also maintained good grazing lands for deer, elk, antelope and other animals that the Indians depended on for food. There are also reports of fire being used during a hunt, to drive animals towards waiting hunters.

Burning was also done in oak woodlands, and frequently enough that there wasn’t much underbrush. Fires did not get into the crowns of trees and were not catastrophic. It was important to burn after gathering acorns in the fall. Burning the leaf litter destroyed the fallen bug-ridden acorns and ensured that the larva of the pests had no habitat to overwinter and ruin the next year’s crop. Today, the great majority of the acorns on our trees have filbert worm larvae in them. Burning was also used to manage plants used for basketry, tools, and weapons. After burning, plants like buck brush, willow and redbud experience rapid growth, and produce long, straight, flexible shoots. For more information about the use of fire by California Indians, check out the fantastic, detailed book [*Tending the Wild*](#) by M. Kat Anderson.

Times have changed and now we have re-purposed the land for agriculture, ranching and housing. It is difficult to manage our nearby wild spaces the way they once were. The Park District and other managers of open space areas endeavor to maintain and enhance the diversity of our ecosystem and encourage native

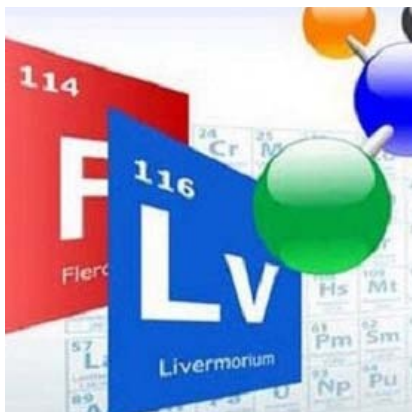
vegetation. Fire is a valuable tool in working towards this goal. So when you see smoke, think about the flowers it will bring.



Photo by Mike Nicholson

Elementary, My Dear Livermore

By Ranger Glen Florey



Growing up in Livermore, I always knew that the town had a long history of nuclear research. And while Livermore has played an important role in the development of modern nuclear weapons,

the accomplishment that will land the city in chemistry textbooks around the world was far more productive than destructive. With the naming of element 116 Livermorium, our small town has secured its place in scientific history.

Making a new element is a fairly simple idea that requires some very complicated equipment. All of the elements up to uranium (element number 92) are naturally found on earth. To create a new element all you need to do is smash the nucleus of one atom into another with enough energy to force them to fuse together into a new, heavier element. Once the new element has formed it will most likely be highly unstable and will typically decay back to a lighter element in a matter of microseconds. If the element does stick around long enough to be detected and the result can be duplicated by other scientists, the element is officially acknowledged and is on the road to receiving a name.

The Bay Area has been in the element creating business since 1932 when Ernest Lawrence built the world's first cyclotron in Berkeley. A cyclotron is a circular particle accelerator that allows scientists to increase the speed of particles inside of it to energy levels high enough for fusion. Ernest Lawrence received the 1939 Nobel Prize in Physics for his work creating the cyclotron. Today cyclotrons are used not just for physics but also to treat cancer with proton beam therapy.

On July 19th, 2000 at the Joint Institute for Nuclear Research in Dubna, Russia, scientists from both Livermore and Dubna used a cyclotron to accelerate calcium-48 ions. They then used the high speed ions to bombard a target made out of Curium (itself a synthetic element first created in Berkeley), creating a single atom of element 116 which almost immediately decayed. However, its presence was detected and confirmed through additional testing. On December 1, 2011 the International Union of Pure and Applied Chemistry (IUPAC) announced that, pending comments, it would name the new element Livermorium and give it the abbreviation Lv.

While it is exciting to make an entirely new form of matter, that excitement is somewhat tempered by the fact that the atoms created last for far less than a tenth of a second. However, many scientists believe that there may be more stable elements still waiting to be discovered. Unfortunately, this theory (known as "islands of stability") is looking less and less likely to be true. As heavier and heavier elements are being created and found to still be very short lived, it looks increasingly unlikely we will find the "unobtainium" of science fiction.

Having grown up here in town I always felt like Livermore didn't receive the acknowledgment that it deserved. From now on I can proudly look towards any Periodic Table of Elements and know that Livermore has earned its place in history.



Cyclotron by Edal via Wikipedia