

Carlsbad Time Lines

Q1 2022

Carlsbad, California, Historical Society

President's Letter

I wish all of you a **Happy and Healthy New Year!**

For the past two years, with limited in-person activities and interaction with the greater community, our organization has turned the focus to the Carlsbad Historical Society website as a way to share our history and share our knowledge of Carlsbad's past. Our online presence is increasing through our continual uploading of scanned files. Researchers are accessing our materials even when we are not open to the public. Our ability to fulfill our motto of "preserving our local history, one source at a time", and reaching out to the community is met as our online presence increases. Inquiries from around the country are becoming more of the norm rather than the exception.

In this newsletter, we will share stories and photos that are drawn from our reference files and library material. One topic we'll cover and of personal interest relates to our native peoples and their knowledge and use of local flora and fauna.

Many of us have been following the decommissioning of the San Onofre Nuclear Power plant. We've got photos from our files that show when the plant was under construction in the 1970s.

Pulling photos from the recently donated Vigne collection, we will illustrate the Gerhard and Bertha Schutte Family genealogy.

As we move into the New Year, the Board of Directors would be remiss if we didn't thank those who made a year end contribution to our organization. Your financial support enables our organization to continue promoting and preserving Carlsbad History.

Native People and Plants

Often when we discuss Carlsbad history we start with European settlement; either with the Spanish arrival in 1769 and establishment of the Mission system and ranchos under Spain and Mexico, or the 1886 development of the downtown area under the Carlsbad Land and Water Company. What is often overlooked are the thousands of years that native people lived in this area.

Why have these people been overlooked? Perhaps because they did not leave any physical structures or archeological ruins such as those found in other areas. Or perhaps because their population was so limited in numbers when the Spanish first arrived. Nonetheless, there is abundant evidence of their presence through historical literature and archeological excavations.



One aspect of particular interest is their co-existence and dependence on local plant life in this environment. Local plants were used as food, medicine, and for spiritual purposes.

My research included archeologist, anthropologist, and botanist reports as well as historical records.

We were fortunate to have attended a lecture in November 2019 by Michael Wilken-Robertson on the theme of Kumeyaay EthnoBotany. This lecture was the impetus to research native people of our area, and how they lived off of the land.

Contrary to the common belief that their food sources were limited, and was of a subsistence type of diet as hunter gatherers, they moved around and did so in order to take advantage of many food sources in different areas, and to reduce the environmental impact of staying in one place for extended periods of time. It was a great surprise on my part to learn of the many food resources available to native people and their husbandry of these plants.

One point to be clear on, Carlsbad was home to two distinct groups of native people, the Luiseno and the Kumeyaay. They didn't intermingle; each had a defined area of land particular to their group. The names of the native peoples derive from the Spanish who assigned a name based on the nearest mission. These people were from different linguistic and ethnic backgrounds.

Luisseño spoke a Ute Aztecan language. Linguistically, they are the same as those native peoples near San Juan Capistrano known as the Juaneños.

Dieguenos or Kumeyaay spoke the Hokan language. Additionally, they are separated into 2 groups based on dialects Ipai in the north and Tepai in the south.

Before I discuss the plant sources available, it is important to understand how long people were living here, and who they were before the Spanish arrival.

There are three distinct time periods of native habitation in the Carlsbad area, and generally in San Diego County.

Three Time Periods

Early Holocene 6,000-4,000

San Dieguito–Hunter Gathers

Middle Holocene 5,000-4,000

La Jolla–Hunter Gatherers; seafood middens and introduction of metates

Late Holocene 3,000-1,300

This Late Holocene period of people is thought to be the ancestors of the present day Kumeyaay or Luiseno. They managed land, and through use of fire and aeration, made baskets and pottery to carry and store and cook food.

SDSU Professor Richard Carrico; "These people were not typical hunters and gatherers. They were not passive collectors. They controlled the vegetation, burned off parasites, and replenished the soil through fire management. There is strong evidence that they planted or transplanted what was of importance or value to them. They integrated plants for medicinal and defensive purposes."

Methods of farming and husbandry were incorporated into the lifestyle of these groups. Prior to the Spanish arrival, and the encroachment of European settlements and livestock grazing, the native peoples in San Diego County had sufficient local food resources for their population.



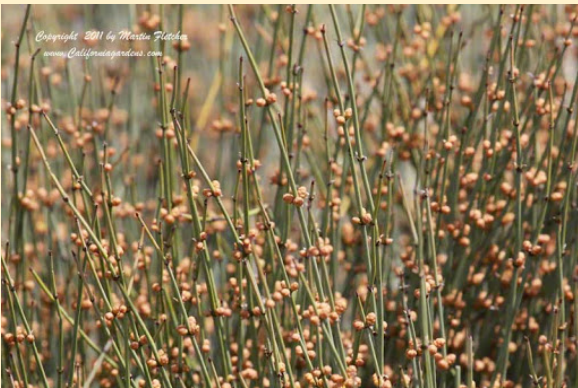
Bladderpod– flowers cooked as a vegetable

Below you will see a few of the many native and local plants still found today in the open spaces of Carlsbad and in San Diego County, and that were part

of the Luiseno and Kummeyaay diet. Next time you are out on a hike see if you can recognize any of these food sources. The Carrillo Ranch Botanical Guide is a great start to your journey.



Blue Elderberry– medicinal; fever reducer, food source



California Ephedra--made into a tea for kidney or urinary disease



Pear Cactus–food source and used as defensive fencing



“Wild Hyacinth- or Indian Potatoes– these were harvested and farmed by fire management to increase growth or aerate roots for larger production

We Love Donation Surprises!

Every donation we receive adds to our understanding of Carlsbad History. Once in a while we get more than we expected and find wonderful surprises included . The Vigne donation of Schutte Family photos included a few of these surprise finds.

The photo below is of the Beller home. Why is this a surprise? The only other photo of this residence that we’ve seen was of a later time period and of a different elevation.

This house was built on Forest Avenue by Alexander and Sarah Beller, in the mid- 1890s. As a Michigan farmer, Alexander moved to north San Diego County near Green Valley in the mid 1880s, and then shortly after to Carlsbad. He farmed 43 acres while his wife Sarah taught music in the Carlsbad School. In 1915, the Bellers gave half of their land to the South Coast Land Company in exchange for a water connection. The South Coast Land company had purchased the remaining defunct Carlsbad Land and Water Company land, and were in the process of bringing in water through redwood pipes across the Buena Vista lagoon from the San Luis Rey River.

In addition to farming, Mr. Beller served with the Carlsbad Sanitation District.



We found this little treasure among the Vigne donations. This photo is the only one that we know of that includes the entire Gerhard and Bertha Schutte family. A little background on this image, by 1906 most of the Schutte Family had moved to other areas of San Diego County. This image is not dated, but must have been taken between the later teens and when the Kentner Family purchased the Twin Inns and 1925 when Gerhard Schutte passed away. This photo was taken at the Twin Inns Restaurant in Carlsbad when the entire family gathered to celebrate the senior Schuttes anniversary at their former home. Gerhard Schutte was one of the Carlsbad Land and Water Company founders. Gerhard and Bertha were married in 1867.



History of the San Onofre Nuclear Generating Station (SONGS)



Aerial view of the San Onofre Nuclear Plant

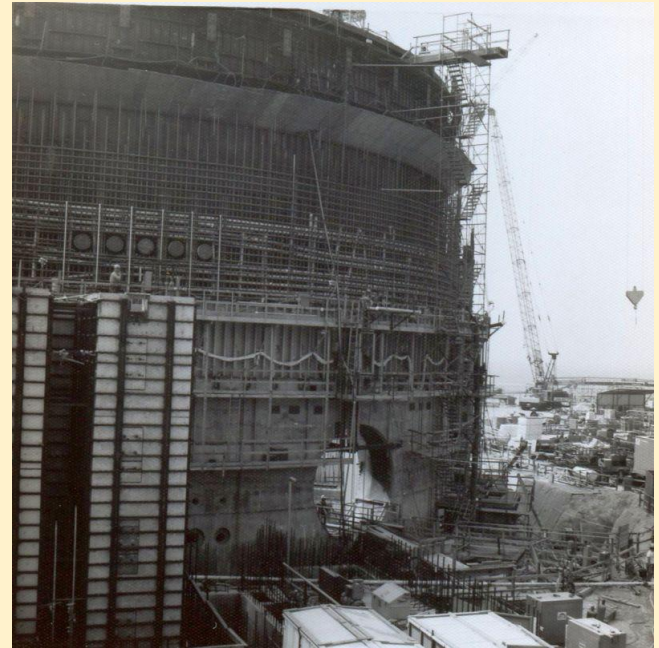
The San Onofre Nuclear Generating Station decommissioning started last year, and it will last about 8 to 10 years. In 2013 the power plant north of us ceased to operate after dangerous leaks were detected in the primary heat exchanger of one of the two units. Later it was determined that both units were degrading in the same way. The reason was a bad engineering design by Mitsubishi, Japan, but unfortunately the design had been approved by the owners of the power plant, Southern California Edison and San Diego Gas and Electric Company.

Brief History

Construction of Unit 1 started in 1964, and was completed in 1968. This unit was a first generation **Westinghouse** pressurized water reactor, and it operated for 25 years. It had an output power of 436 MegaWatts (MW). Construction on units two and three commenced in 1974 and completed in 1981. They are **Combustion Engineering** two-loop pressurized water reactors, and generate about 1100 MegaWatts of power EACH. *In a ten-year project completed in 2011 and costing \$671 million, Edison replaced the steam generators in both reactors with Mitsubishi steam generators of modified design.* (Wikipedia -SONGS)



Picture of construction of unit 2 or 3, by Allan O. Kelly



Units 2 and 3 are 200 feet tall (51m) - Photo Allan O. Kelly

Efficiency of the plant

It is surprising to learn that the efficiency of power plants that rely on boiling water to make steam to turn turbines is only about 33%. This means that for every 1000 MW of electrical power produced, each unit needs to dispose of 2000 MW of heat! More modern power stations can achieve efficiencies as high as 60 to 80% by capturing and selling the excess heat. The excess heat at SONGS was mostly dissipated by circulating sea water. In order to limit the temperature rise of the sea water, thousands of gallons per minute flowed through each unit. It is known that this affected the sea life in front of San Onofre, even attracting shark nurseries.

By contrast, about 9 meters squared of solar panels on the roof of a house can generate enough power for that house, at a low efficiency of 10 to 20 %. However additional power during the day needs to be stored in batteries to operate the home at night. Luckily, the cost of batteries has dropped 10 fold in the last 20 years, while the efficiency of solar cells, electric lights and motors keeps going up.

Operating Costs

Employees of SONGS often heard that their plant was making "a million dollars a day." This is likely since the price of a kiloWatt hour (kWh) of electrical power in southern California is around 20 cents, so a 2000 MW plant (operating at half capacity) can bill \$100,000 dollars an hour, or 2.4 million dollars a day, if they sell at 10 cents a kWhr. However, the plant had 2200 employees, at a daily cost of around 600,000. It also had a lot of maintenance costs, the highest being the replacement of the nuclear fuel, which was done in a rotation, replacing one fourth of the fuel rods every year. A 1000 MW plant uses about 45,000 fuel rods. Each reactor contained about 100 tons of uranium enriched to around 4% Uranium 235. The estimated cost of a kg of spent Uranium fuel is \$840. So to replace one quarter of the fuel rods would cost about 19 million dollars per year, per reactor.

Additional costs include distribution costs. The energy needs to be carried (at high voltage) to far locations. There are therefore transmission losses, and costs associated with paying for the transmission lines and switching yards used.

Radiation Danger

Carlsbad and Oceanside used to appear on a map, on the back of the telephone white pages, in a PINK zone around SONGS. In case of radiation emissions, as a result of a leakage or malfunction, the amount of exposure depends on the force and direction of the wind.

In spite of extraordinary safety regulations and great engineering designs, plants like Three Mile Island, PA, Chernoby, Ukraine, and Fukushima, Japan, have had disastrous accidents. SONGS decommissioning now faces the problem of a lack of a federal disposal facility, so the highly radioactive fuel rods and other exposed material need to be stored on site, in what is called dried storage.



Danger Circles Around the San Onofre Power Plant

Year End Donations - Thank you

Virginia Murphy
Knox Williams

New Life Long Member

Ken Baer

New Carlsbad Historical Society T-shirts

Moving into t-shirt weather (almost all the time here in Carlsbad) we now have Carlsbad Historic Artifact shirts featuring the Prehistoric Stone Bear found along the Agua Hedionda Lagoon. They are on sale

now at the Magee House for \$15. and free to anyone who signs up as a new member. They are selling fast!

The Carlsbad Stone Bear is the official California prehistoric artifact and considered the earliest realistic example of representational art in North America. It was discovered at the Allan O. Kelly site near Agua Hedionda lagoon in 1985 by Professor Henry Koerper's class from Cypress College.



Carlsbad Historic Artifact T-shirts

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