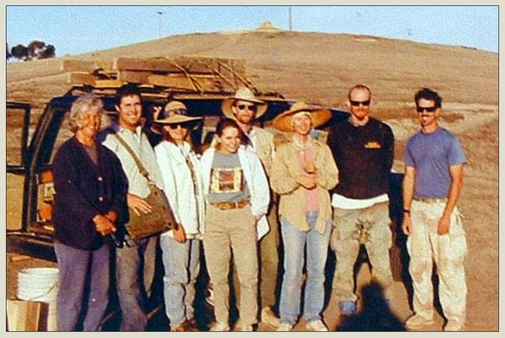
The View from Otay Mesa: Cultural Landscapes through Time

Otay Mesa is an elevated landform of approximately 15 square miles. It is the remnant of a marine terrace formed during the Oligocene Era—about 30 million years ago.

Otay Mesa is located in the southernmost part of San Diego County. The mesa and its surrounding river valley and mountain region stretch across the United States-Mexico border from the sea to the San Ysdiro Mountains. These 50 square miles are a microcosm of the greater San Diego Area, representing its past, present and future.

Archaeologists use the term *cultural landscape* to describe a widespread area of human activity unique to a particular group or culture. The concept of a cultural landscape includes the environment, the resources, the culture and the way a group's identity was linked to the area. In the past 9,000 years, many different groups have identified with Otay Mesa and cultural landscapes have overlapped. Archaeological excavations on Otay Mesa have provided us with new evidence about how our histories are intertwined.



Gallegos & Associates archaeological field crew at an excavation on Otay Mesa

Special thanks to **Dennis Gallegos** and the staff of **Gallegos & Associates** for his scholarship and for arranging for the curation of artifacts from Otay Mesa for present and future generations.

In this exhibit, we look at artifacts from five different archaeological sites from the Otay Mesa Management Plan Area to explore the environment, lifestyle, trade and technology of each cultural landscape represented. You will be surprised at some of the differences and commonalities that emerge over 9,000 years of history.

Remington Site
Early Holocene 9,000 years ago

Kuebler Ranch Site
Middle Holocene 7,000 years ago

Calpine Site
Late Holocene 500 years ago

Schott Homestead Site
Immigrant Family 1885 to 1925

McCool-Lohman Site
Border Issues 1890 to 1950

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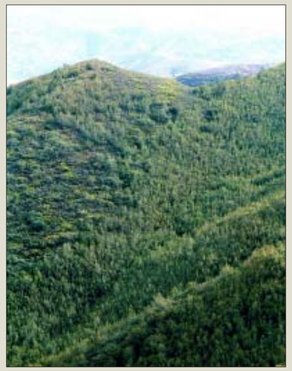
The View from Otay Mesa: Remington Hills Site
Early Holocene 9,000 Years Ago



Tecate forest on Otay Mountain

The Climate of Otay Mesa during the Early Holocene was cooler and wetter than today. This surviving tecate forest is a remnant of the past environment.

During the early Holocene (11,000 years ago) Otay Mesa resembled the Pacific Northwest. A wetter, cooler climate was present with an abundance of plants and animals. Oak, spruce, cypress and pine thrived on the mesa interspersed with grasslands. Plentiful water allowed people to live there year-round.

The Remington Hills Site is the oldest site on Otay Mesa discovered thus far. Seashell dated using the radiocarbon method reveals the site was occupied between 9,400 and 7,000 years ago. Archaeologists label this period *Early Holocene* or *Archaic Period* and the artifacts the *San Dieguito Tradition*.

We cannot know for sure how many people lived on Otay Mesa during the Early Holocene, but the number of artifacts indicates there were at least hundreds and possibly thousands. We have found no evidence of their houses, perhaps they were built of wood or plant material that disintegrated over time. About 20 to 100 people lived at this site at different times, probably extended family groups from one clan.

The people living at the Remington Hills Site followed a hunting and gathering lifestyle. Over 2,400 pieces of animal bone were found from rabbit, gopher and ground squirrel. Stone tools were tested for protein residue and revealed that the menu included dog, rabbit and deer. Pollen from cattail, pine, oak, prickly pear, chia, blackberry, wild buckwheat, mustard and sunflowers was found at the site. Twenty different shellfish species are represented, including clam, mussel and oyster.

There were plenty of resources at Otay Mesa to provide a comfortable life, but there is evidence of trade with other regions. Obsidian flakes and tools were found at the site, traced to the Coso formation in Inyo County over 300 miles away. Coso obsidian was traded extensively during this period and has been found in sites from San Francisco to Baja, California.

Early Holocene scraper planes

These scrapers would have been much likea plane or adze for working with wood. They decrease in number over time as the trees start to disappear from the mesa when the climate changes.

Stone Cores for tool making

Santiago Peak metavolcanic stone was found on Otay Mesa and was popular for making stone tools because it held a very sharp edge.

Almost all of the artifacts found at the Remington Hills Site were made of stone. Without a doubt, there were objects made of bone, wood or leather, but these did not last in the earth. The tools show a level of sophistication that equals the technology of Stone-Age hunters in Europe. The preferred raw material was a fine-grained felsite called Santiago Peak meta-volcanic stone. Otay Mesa contains the highest concentration of this stone in San Diego County. Several quarry sites have been located on Otay Mountain and Otay Mesa, and there are large cobble outcroppings near the Remington Site.

Archaeologists found domed scrapers and large leaf-shape points, effective tools for a hunting and gathering lifestyle.

Archaeology on Otay Mesa

In 1998 **TMP Homes** began plans for a residential community in Otay Mesa. Adopting a western theme, they named the development Remington Hills with street names such as Wyatt Earp. An Archaeolgoical excavation by **Gallegos & Associates** done propr to construction resulted inthe discovery of the oldest known site on Otay Mesa.

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The View from Otay Mesa: Kuebler Ranch Site
Middle Holocene 7,000 Years Ago

The Kuebler Ranch Site was occupied about 7,000 years ago, one of many sites from this time period on Otay Mesa. Environmental changes were occurring on Otay Mesa during this time. The climate was warming and drying out, although the Kuebler Ranch Site is close to a perennial spring. Pine and spruce trees retreated to higher elevations, giving way to oak, coastal sage scrub and chaparral. The sea level was rising, causing siltation in nearby lagoons. This provided mudflats for shellfish and habitat for water fowl.

Some archaeologists believe that the greater number of sites indicates from this time period an influx of people during this time. However, the Early and Middle Holocene is viewed by many as a continual occupation of the same people adapting to environmental changes in the southern San Diego region. Their ingenuity in resource exploitation and mobility allowed them to successfully remain on the mesa even with profound climate changes.

Claude B. Kuebler purchased land in Otay Mesa in 1908 and established a horse ranch and raised cattle. Later, he planted barley and an olive grove. Kuebler continued farming into the 1920s and the area became known as Kuebler Ranch. In 1990 road widening near the ranch led to the discovery and excavation of an archaeo-logical site from the Middle Holocene period.

The wide range of artifacts found at the Kuebler Ranch Site reflect the varied needs of a group of people living in the area for an extended period, or for repeated seasonal visits. Once again, we have no evidence of the appearance of their homes, except for stone hearths. Milling stones and charred seeds indicate a growing reliance on plant foods. Small game, shellfish and fish made up the rest of the diet. Large amounts of oak pollen found in the soil of the site point to the acorn becoming an important food.

Santiago Peak vein

Outcroppings of Santiago Peak metavolcanic felsite are available on Otay Mesa. This hard, versatile stone was favored during the Early and Middle Holocene as raw material for making stone tools.

A large outcrop of Santiago Peak metavolcanic stone was near the Kuebler Ranch Site, and was used to make spear and dart points. Scrapers were expediently produced out of felsite or quartzite cobbles found in stream beds. Punches and gravers indicate that fine detailed work was produced on wood or bone, but those artifacts were lost to us over time.

The majority of artifacts found at the Kuebler Site are made of stone, but a drilled scallop shell that once decorated a throat survived. Other examples of ornamentation are olivella shell beads, even though the site is 13 miles from the ocean. Shells may have been traded with other tribes in exchange for the Coso Range obsidian found at the site. A tourmaline crystal mined from local mountains could have been a trade item as well.

Middle Holocene tools

Evidence of Middle Holocene life survived better in the archaeo-logical record, as there were more sites and they are younger. .
Upper left: Scallop shell with drilled hole.
Upper Right: Quickly made cutting tool of felsite.

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The View from Otay Mesa: Calpine Site
Late Holocene 300 Years Ago

By 3,000 years ago, the climate at Otay Mesa was much like it is today, dry and warm. The warming conditions brought Yuman-speaking people into Southern California from the desert areas to the east. Some of them settled in Otay Mesa, founding a large village complex along the Otay River. The newcomers, the most recent ancestors of the Kumeyaay, brought new traditions and technologies with them.

Many springs had dried up, although the Otay and Tijuana rivers still flowed year round. Pronghorn antelope, bighorn sheep, deer and small game were still common. The sea provided fish, rays, otters and seals. An extensive range of plant foods were used, with the acorn becoming a staple.

Hand-held grinding stones

Grinding tools are very common in Late Holocene archaeological sites, indicating a reliance on seeds and acorns as an important food source.

The Otay River Valley was densely populated during the Late Holocene, with a handful of large year-round villages and smaller satellite camps. We know from Spanish records houses were made of bent poles tied at the top and covered with thatch and earth. Houses were arranged in family groups based on male lineage, with the father's sons clustered around him.

Villages were organized into bands of related family members, which controlled specific hunting and gathering areas. At the time of European contact there were believed to be 10,000 to 20,000 Kumeyaay in about 50 separate clans throughout the region.

New technologies are represented in the artifacts found at Late Holocene Sites. Pottery sherds by the millions were found. Pots were important for storing food, water and trade items. Tiny points made of quartz, chert and obsidian were hafted onto arrows and shot with a bow.

Pottery sherd with quartz arrowpoint.

The bow and arrow and pottery were important technological aspects of life during the Late Holocene.

Although most needs could be met on the mesa, rare items could be obtained by trade. Major trade routes existed between the Colorado River and the coast. Coastal products such as abalone, salt, dried greens and fish were traded inland for gourds, mesquite beans and agave. In addition to foodstuffs, steatite, obsidian, pigments, pottery, seashells, feathers, fur and dressed hides were traded along these routes.

The establishment of permanent Spanish settlements in San Diego would forever change life in the Otay River Valley. Many of the Indians were taken either willingly or forcibly to live at the mission and the village complex at Otay was abandoned shortly after the arrival of the Spanish. The village complex at Otay was abandoned shortly after the arrival of the Spanish, the only evidence of this contact period found consists of a few glass trade beads, no other artifacts of European origin were found within the site. Those who did not go to the mission most likely scattered into the countryside to live among their neighbors and families in the mountains.

Obsidian arrowpoints.

There is no source of obsidian in San Diego County . These points were made of obsidian brought from the Obsidian Butte formation near Salton Sea.

Bedrock milling feature
Bedrock milling features are common at Late Holocene sites because acorns were a staple food.

Excavation and curation of this Late Holocene site was part of the mitigation undertaken by **Calpine** during development of the **Otay Mesa Energy Generating Center**. The facility will provide power on a 24-hour a day basis to ensure maximum reliability and fuel efficiency.

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The View from Otay Mesa: Schott Homestead
Immigrant Family 1885 to 1925

Otay Mesa's lush environment had given way to chaparral and coastal sage scrub by the time white settlers entered the area. Water was becoming scarce, as the Otay and Tijuana rivers provided only seasonal flow.

The San Diego region experienced many changes after California became a state in 1850. Few of the Mexican ranchos remained intact due to economic and legal challenges, and the land was made available to Americans arriving from the East. Because of the lack of water, Otay Mesa was one of the last areas to be developed.

Land promotion poster

After the railroads reached California in the 1870s, land promoters wasted no time in encouraging immigrants to come to West. The city of San Diego was experiencing a population boom when the Schotts moved to the mesa in 1899. By the early 1890's, over 40,000 people lived in the City of San Diego. Within a decade, however, San Diego experienced a bust and the population fell to 16,000 in the city and 35,000 countywide. When the Schotts left the mesa in 1925, San Diego City had over 75,000 residents with 113,000 spread over the entire county.

Poster from *Pictorial History of California*, P.C. Johnson

In 1899, a homestead certificate was issued to Henry A. Schott, granting him 160 acres of land on Otay Mesa. Census records reveal that both Henry Schott and his wife Ella were born in Germany. Henry was 35 and Ella was 29 when they arrived on Otay Mesa with their only child, Lulu, to start a farm.

The Schott home was located on Otay Mesa near the Otay River Valley. Twenty-eight families lived on Otay Mesa then and many were immigrants from Germany and Italy.

From artifacts retrieved from the Schott Homestead Site, it appears that they were a practical people whose lives centered on the home and farm. They lived in a simple wood-frame house with a cellar for food storage. Three cisterns stored the precious commodity water. Cooking was done on a wood/coal-burning stove, in a house lit by kerosene lanterns. Carriages, wagons, and farm equipment were pulled by horses.

The Schotts were resilient, resourceful and lived simply—a successful farming family. A few creature comforts were permitted: a bicycle for Lulu and Ella had lovely dishes for the table. Much like the earliest residents of Otay Mesa, the Schotts did have to leave the mesa for some material goods made elsewhere.

A farming family's luxury goods

Left: Ella Schott set her table with flow blue dishes in the Davenport design made in England by Wood & Son, c. 1907.
Right: Donkey charm, doll tea set saucer and bicycle pedal. The Schott's only child Lulu probably had farming chores, but also had toys to play with.

Dr. Fahrney & Sons Alpenkräuter-Blutbeleber, 1906-1930

This patent medicine "Blood Panacea" was made in the United States, but sold under different names printed in other languanges to be marketed to immigrant populations. The German translation indicates it is made from Alpine herbs for blood "animation."

Agriculture implements were purchased from a catalog or bought in a neighboring city. The Levi Strauss jeans Mr. Schott wore (archaeologists found the rivets) would have been purchased on trips to town. It took nearly fours hours to travel Otay Valley Road down the mesa to San Diego.

Farmers, such as the Schotts, located in rural Otay Mesa were instrumental in the development of San Diego County. They provided food crops to feed a growing population and business for local markets. Dry farming techniques produced wheat, barley, corn, peaches, apricots, grapes, potatoes, beans and peas. The Schotts owned cattle and chickens, perhaps to provide a little extra income from the sale of eggs and milk.

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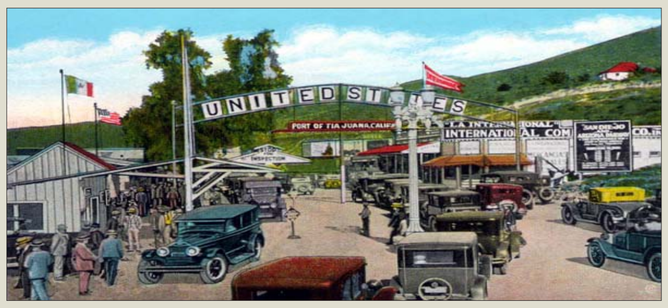
The View from Otay Mesa: McCool-Lohman Site
Border Issues 1890 to 1950

The McCool-Lohman Site is located on Otay Mesa south of Johnson Canyon, near the Baja California border. William and Katherine Lohman bought the property in 1902, which had previously been farmed by the McCool Family. The Lohmans had come west from Minnesota. The purchase of surrounding property brought the Lohman holdings on the mesa to 880 acres. In addition to food crops, the Lohmans planted eucalyptus, palm, olive and pepper trees. Families on the mesa were encouraged to plant trees on their farmsteads to delineate property lines, provide windbreaks and secure more land through the Timber Act.

Chaparral and coastal sage scrub dominated the remaining uncultivated landscape of Otay Mesa at the turn of the Century. Standing on Otay Mesa, one could easily see the Mexican city of Tijuana, founded in 1917.



Vintage postcard of the San Diego-Tijuana Border c. 1920.

Dr. Hood's Sarsaparilla c. 1900

Tonics made from the sarsaparilla vine (a member of the lily family) were a popular patent remedy for skin diseases, rheumatism, syphilis and blood fortification. Usually mixed with alcohol, its effectiveness was probably questionable. Tonics made with alcohol were popular during Prohibition because they were lega. Just to clear up any confusion, *sasparilla* (a member of the ginseng family) is used to flavor the more harmless rootbeer.

During the late 1880's San Diego experienced a great influx of people. Some were illegal immigrants seeking economic relief from the poverty of Mexico, Asia and Southern Europe.

During Teddy Roosevelt's presidency, "mounted inspectors" were hired to protect the boarder with Mexico. Initially, only 75 men were hired, but the number was increased in response to the Mexican Civil War 1910-1920. With the passage of Prohibition, the San Diego-Tijuana border became an easy way to smuggle liquor into the US. On May 28, 1924, an act established the Federal Services Prohibition Detail, which later became the United States Border Patrol in 1936.

Arnie and Annetta Lohman had enough income to afford luxuries like this cameo glass candy dish and a turquoise pressed glass vase in the shape of a swan.

The first Border Patrol agents were selected from sheriffs departments and civil service registers. There were no uniforms, officers were expected to wear civilian clothing for the first couple of months. Arnie Lohman, the youngest son of the Lohman's signed up. Arnie road the border on horseback, looking for liquor smugglers.
In 19--- Arnie married Annetta Waldrip, who had been raised in Baja, California and spoke Spanish. From 1957 to 1974, Annetta served as a part-time Customs Inspector at the Tijuana and San Ysdiro border.

Otay Mesa suffered from severe drought during the first two decades of the 20th Century. Dams built on the upper and lower Otay lakes did not help with situation. The drought prompted city fathers to hire a rainmaker, the infamous Charles Hatfield. He may or may not have caused the following deluge that caused the Lower Otay Dam to overflow and burst, wiping out the town of Otay, killing 26 people and destroying the railroad. These hardships drove most of the farm families off the mesa, and the rural communities on Otay Mesa disappeared.

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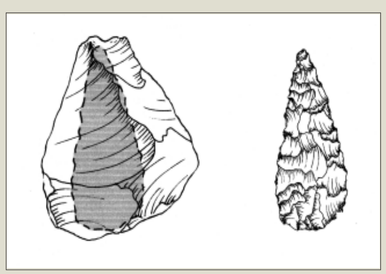
The View from Otay Mesa
Stone Tools: A Timeless Technology

Stone Toolmaking on Otay Mesa
The American Indian residents of Otay Mesa made sophisticated stone tools. It may be difficult for us today to think of a rock as a cutting tool, but stone was the hardest substance known to them. Stone tools start out as a core, a lump of raw material that looks like it might flake or chip well. The qualities the toolmakers looked for in a core were size and a smooth texture. A rock with inclusions or an uneven texture would not break where desired.

Most stone tools from this region are made by chipping a large flake off of a core and then modifying the flake to the desired shape and sharpness. Sometimes a flake could be used as-is for a quick cutting job and then discarded. Flaking usually started with a stone hammer-stone, then finer implements: bone, horn, wood and even fingernails for tiny serrations along the edge.



From flake to point

Stone tools started with a flake of raw material, further reduced to the desired shape.

Drawing: Tracy Stropes, Gallegos & Associates

Santiago Peak metavolcanic stone was used by toolmakers extensively in the San Diego Region. It was relatively plentiful, flaked predictably and was very hard. Archaeologists find evidence of all stages of tool production from cores, test flakes, finished tools and *debitage* or waste flakes. Preforms, or tool blanks were made at quarry sites and taken back to the village to be finished later. Unfinished tools sometimes broke in unexpected ways, and one can almost feel the frustration of the toolmaker as the pieces were flung away.

Obsidian: Trade and Travel
Obsidian is a naturally occurring volcanic glass. It was highly prized by ancient toolmakers for its ability to hold a very sharp edge. There is no known source of obsidian in San Diego County, but obsidian flakes and tools were found on Otay Mesa. Where did it come from?

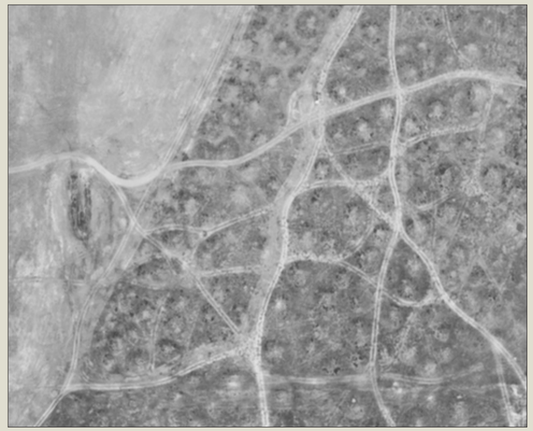
Obsidian has a unique molecular signature that can be matched with known sources using x-ray spectrometry. Archaeologists discovered that the obsidian found in Early and Middle Holocene sites on Otay Mesa was from the Coso Range, over 300 miles away. Obsidian found in later sites was of a lesser quality and was from Obsidian Butte in Salton Sea. Olivella shell beads may have been traded for obsidian cores with Indians to the northeast.

Colors of Santiago Peak metavolcanic stone

Santiago Peak metavolcanic stone is a felsite that is plentiful on Otay Mesa. The color ranges from pale sage green to almost black. It was popular as a raw material for stone tools because of its chipping qualities and ability to hold a sharp edge.

Broken spear point, Early Holocene

This incomplete spear point broke during manufacture and was found several feet apart at an archaeological site. It may have been thrown away in frustration.



Mima mounds on Otay Mesa c. 1920s, disturbed by agriculture and trails

The residents of Otay Mesa must have wondered about the mysterious mounds dotting the landscape. Called mima mounds, after the Mima Prairie in Washington State, they are low-lying mounds 10-20 feet across. Vernal pools formed between the mounds during the wet months, allowing specialized species of plants and animals to flourish. Archaeologists, as well as geologists, have put forth numerous explanations for the presence of these mounds. Ancient trees, seismic activity, even industrious gophers have been given credit for the formations. Whatever the origin, the mima mounds provided yet another water resource on the mesa for plants, animals and perhaps the earliest inhabitants of this area.

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