



Santa Susana Field Laboratory

Archaeological Resources Survey

This is a description of the survey conducted to identify and evaluate archaeological resources in the portions of the Santa Susana Field Laboratory (SSFL) that are administered by NASA.

Engines tested by NASA at the Santa Susana Field Laboratory (SSFL) were the engines used in rockets that landed modern man on the surface of the moon - the same moon ancient cultures had looked upon for thousands of years. Just as modern man left footprints on the moon's surface, ancient cultures left behind cave paintings, tools and other proof of their presence long ago in the Simi Hills of Southern California. NASA recognizes the importance of the historic resources and culture of the people who called the rocky terrain "home" in a place known today as the SSFL.

NASA's Archaeological Survey

A site-wide Cultural Resources Inventory of federally-owned Areas I and II was completed in April 2008. The goals of this survey were twofold: to determine whether there were any previously unrecorded cultural resources on the lands administered by NASA, and to better understand the nature and extent of the previously recorded Burro Flats Painted Cave site (see page 3). This effort assists NASA in complying with Section 110 of the National Historic Preservation Act (NHPA), which directs Federal agencies to identify historic properties, including archaeological resources. Having this comprehensive inventory enables NASA to better manage these resources.

Archival Search and Field Investigation

A CHRIS (California Historical Resources Information System) search was conducted by archaeological professionals as part of NASA's survey. This involved reviewing all previously recorded archaeological sites on federally-owned land in Areas I and II, and the cultural resources reports already on file. Next, a thorough field investigation was performed. Archaeologists conducted a systematic survey on federally-owned land in Areas I and II from June 2007 to February 2008. This was conducted as an intensive pedestrian survey, with archaeological staff walking at distances of 30 meters apart along long sampling tracts. Entry was prevented into some areas because rocky terrain was too steep to access or there were high concentrations of poison oak. In these, and in the areas of developed land, a visual inspection was performed. Archaeologists were able to evaluate approximately 80 percent of the acreage in NASA's Area I and 40 percent of Area II.



This photograph shows a flat rock surface into which a round hole called a bedrock milling feature has been formed.

for your information

Prehistory of the SSFL

SSFL is located in southeastern Ventura County near the crest of the Simi Hills that are part of the Santa Monica Mountains running east-west across Southern California. These mountains consist of sedimentary rocks estimated to be 8 to 70 million years old. The diverse terrain consists of ridges, canyons and sandstone rock outcrops.

The scenic, rocky areas surrounding the SSFL have a rich cultural history ranging from ancient villages and Native American cave paintings to legends of bandits and buried treasure, train robberies, and perilous stage rides. The diverse topography and geology reflect many distinct

habitats, each with its own suite of natural resources. Because of this environmental diversity, the region was intensively

occupied by Native Americans from the earliest Chumash, Tongva and Tataviam cultures. As such, the SSFL contains native pictographs and other sites with significant archaeological resources, both in terms of science and culture.

The initial occupation of Southern California took place during the Early Man horizon. Artifact assemblages (collections) dating to this horizon contain large projectile points and scrapers providing evidence that the earliest inhabitants probably hunted and gathered for subsistence and lived in small nomadic groups.

Assemblages from the Milling Stone horizon, the earliest documented cultural period in Ventura County, include hand stones and milling stones, which indicate a diet based on plant foods. Artifacts include choppers and scrapers, but few projectile points. Archaeological sites from this horizon suggest that groups were semi-sedentary and occupied base camps for a portion of the year.

The prehistory of Southern California can be divided into four main horizons, or “cultural periods” - Early Man, Milling Stone, Intermediate and Late Prehistoric.

Early Man End of Ice Age to 6000 B.C.

Milling Stone 6000 B.C. to 1000 B.C.
(earliest documented in Ventura County)

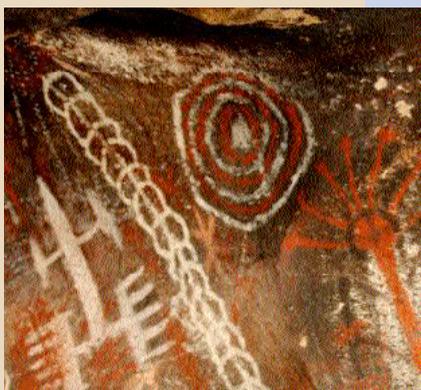
Intermediate 1000 B.C. to A.D. 750

Late Prehistoric A.D. 750 to 1769

There are few archaeological data for the Intermediate horizon period, particularly for the inland regions of Southern California. It is a period similar to the Milling Stone, but assemblages include large stemmed or notched projectile points and mortars and pestles. The presence of projectile points indicates an increased emphasis on hunting, while the mortars and pestles indicate that the people harvested and processed acorns.

An increase in population and a transition to a more semi-sedentary lifestyle occurred during the Late Prehistoric horizon. Archaeological assemblages include small projectile points, which indicate the use of the bow and arrow, as well as stealite bowls, asphaltum (used to waterproof canoes), grave goods and shell ornaments. Bedrock milling stations, such as those at the Burro Flats Painted Cave site, were common.

The areas surrounding Ventura County and the Simi Hills have been identified as a transition zone between the territories of the Ventureño/Chumash, the Gabrielino/Tongva and the Fernandeño/Tataviam. Most groups were organized in hunter/gatherer societies that were semi-nomadic throughout the region. Often they did not establish permanent villages; instead they occupied various regions and set up camp seasonally. ■



Red, white, and black figures and shapes make up this pictograph painted on a cave wall.



This large rock feature has a series of small cup-shaped holes, such as cups at the base of an acorn, carved into its surface. These are called bedrock cupules.

Burro Flats Painted Cave

The Burro Flats Painted Cave is a prehistoric archaeological site located in Area II, and is most notable for the many pictographs (rock art paintings) and petroglyphs (rock art that has been scored or cut into the rock surface). The site is listed on the National Registry of Historic Places (NRHP) and the California Register of Historic Places (CRHP). The bedrock milling features and mortars and pestles found at the site are evidence that food was processed there. The presence of stone cores (holes bored in the rock surface) and artifacts suggest tool-making activities. Fire pits and middens (refuse heaps) scattered throughout the site are further evidence of permanent human habitation. The pictographs have been interpreted as evidence of prehistoric people occupying the site.

Survey Results

The Cultural Resources Inventory recommended two archaeological sites as eligible for listing in the National Registry of Historic Places and the California Registry of Historic Places. The first site, Burro Flats Painted Cave, was already listed. NASA's survey examined all recorded studies of the Burro Flats Painted Cave and incorporated the 25 identified features into one report. The site boundary was re-drawn to encompass the locations of all features of the site and the artifacts. The total area of the site on federal property is approximately 10 acres.

A second site was reported as eligible for listing. The California State Historic Preservation Officer (SHPO) did not concur with eligibility because of the lack of artifacts that would substantiate the site. SHPO requested that NASA treat the site as eligible for listing in the California Registry and re-evaluate the site later should there be a proposed project with a potential to cause disturbance. Survey results consistent with the SHPO comments were finalized and sent to the California State University at Fullerton for archival purposes.

Having completed the archaeological resources survey, NASA now has an inventory of the historic and prehistoric resources located on federal lands in Areas I and II. (A separate information sheet describing NASA's Historic Resources Survey is available.) This inventory provides NASA with the location and details necessary to develop ways to protect and manage these treasured resources. ■

For further information, please contact

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