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## **A Fluted Point from Nipomo, San Luis Obispo County, California**

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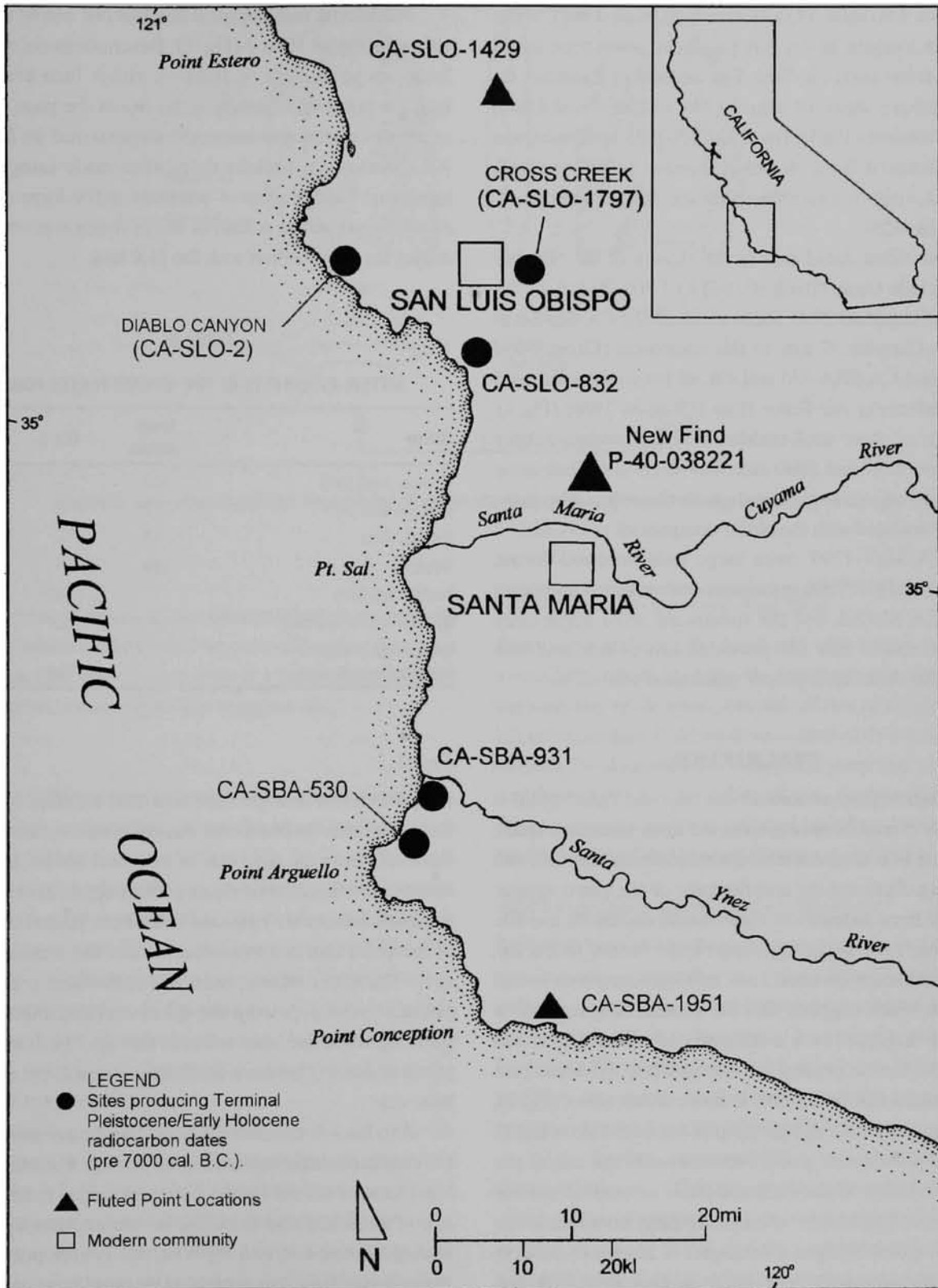
*An isolated fluted projectile point found in Nipomo (San Luis Obispo County, California) about 30 years ago was recently brought to the attention of the local archaeological community. Made from Monterey chert, the specimen exhibits single flute scars that extend about three quarters of the way up both faces, although it also shows clear evidence of blade and basal reworking. Attributes typical of fluted point technology—including heavy edge grinding/polishing on the lateral edge margins of the base, and a bi-concave basal cross-section—support a Paleoindian origin for the artifact.*

A fluted projectile point found in Nipomo, San Luis Obispo County, California, about 30 years ago was recently brought to the attention of the local archaeological community. The specimen was briefly noted by Bertrando (2004:101), but our paper provides more detailed information on the find and its context. The point remains in the private collection of one of its finders, Kay Volmer, who was kind enough to lend it to us for illustration and descriptive analysis. A cast and replica were made from the original; the replica is now curated at the San Luis Obispo County Archaeological Facility on the Cuesta College Campus in San Luis Obispo<sup>1</sup>. A primary record, detailing the location of the find, was filed at the South Central Information Center of the California Historic Resources Information System at U.C. Santa Barbara. Because a field survey of the find location showed that no other cultural materials were present on the surface, the specimen was considered an isolate and assigned Primary Number P-40-038221.

The point was found in a Nipomo bean field by two local rock collectors, Catherine Orin and Kay Vollmer, who clearly remembered the location of the discovery (Fig. 1) because of its proximity to a lone palm tree that still stands in a nearby field. The artifact remained in the possession of Mrs. Orin as she moved to various locations in the United States. After she died in 1997, her entire collection, including the fluted point, was acquired by Mrs. Vollmer, a long-time Nipomo resident. Mrs. Volmer loaned the point to the senior author and described the location where it was found.

Fluted points continue to be somewhat enigmatic artifacts in California. Recent reports suggest that over 400 specimens have been recovered from a wide range of settings, including the Central and North Coast ranges, the Central Valley, the northern interior, the Sierra Nevada Range, the southern deserts, and the coasts of northern and southern California (Dillon 2002). The vast majority of these have been isolated surface finds which are not suitable for dating, and have not allowed for definition of possible subtypes or identification of the broader assemblages associated with these points. Based on their well-established dating in the interior of North America (e.g., Blackwater Draw, New Mexico [Boldurian and Cotter 1999]), fluted points can be assumed to represent human occupations sometime during the terminal Pleistocene/early Holocene. Still, a precise definition of the temporal meaning of these artifacts remains elusive, and it seems important to report all finds in as much detail as possible in the hope that patterns in the cumulative data may eventually contribute to a resolution of some of these problems.

The Nipomo point is one of two fluted specimens that have been found in San Luis Obispo County. The other, a basal fragment, was discovered in the vicinity of Santa Margarita, at CA-SLO-1429 (Fig. 1). It was manufactured from a pale yellow Franciscan chert, which is a very common stone tool material throughout San Luis Obispo County. Several replicas of that specimen were made, but the original artifact was reburied (Gibson 1996). While it was recovered from a site context rather than simply as an isolate, other materials in the vicinity of the specimen were very limited. No faunal remains were evident, and no materials suitable for dating were recovered. Another fragmentary fluted point was reported from Santa Barbara County to the



**Figure 1. Location of the Nipomo fluted point find (P-40-038221) and other terminal Pleistocene/early Holocene sites in southern San Luis Obispo and Santa Barbara counties.**

south, at CA-SBA-1951 (Erlandson et al. 1987), while the San Joaquin Valley has produced numerous fluted points from both the Witt Site and other localities on the southern shore of Tulare Lake (Riddell and Olsen 1969; Rondeau 1985). The CA-SBA-1951 specimen was manufactured from an indeterminate, coarse-grained, opaque, cryptocrystalline silicate (Erlandson et al. 1987:124–125).

The oldest dated sites in the vicinity of the Nipomo find include Cross Creek (CA-SLO-1797), 20 km. to the north (Fitzgerald 2000; Jones et al. 2002); CA-SLO-2 at Diablo Canyon, 37 km. to the northwest (Greenwood 1972); and CA-SBA-530 and 931, 40 km to the southwest on Vandenberg Air Force Base (Glassow 1996) (Fig. 1). All four of these shell-midden deposits produced dates between 7000 and 8000 calendar years B.C., but none produced unequivocal fluted projectile points. The point types associated with the oldest occupations at CA-SLO-2 and CA-SLO-1797 were large side-notched forms. Greenwood (1972:89) mentioned finding fluted fragments from CA-SLO-2, but the specimens were apparently so incomplete that she provided few details and was uncertain about their proper typological affiliation.

### DESCRIPTION

Although heavily reworked, the Nipomo fluted point is a nearly complete specimen made from Monterey chert. Its color is a semi-translucent reddish-brown with tan mottling. Both the tip and the base of the point appear to have been extensively rejuvenated during its use-life, including several damage and repair events to the tip. The flute scars on each face lack the narrower initial portion, which suggests that the current concave base is not the original, but is a refabricated element that was created after the original base snapped off. One basal ear of the point was broken off in more recent times (Fig. 2), showing a fresher, lighter colored surface. The material used to produce the point, Monterey chert, is one of the most common stone tool materials in central coastal California, and source outcrops are fairly common in the Central Coast Ranges. One source is known to exist 45 km. to the northwest in Montaña de Oro State Park, but it is likely that other undiscovered sources occur closer to the location of the find, since very little survey has been carried out in the hills adjacent to Nipomo.

Additional technological descriptions below refer to either Face 1 or Face 2 (Fig. 2). Descriptions referencing locations to the left or right on either face are made with the point tip oriented to the top of the page. Metric attributes of the specimen are summarized in Table 1. All observations of flake scars were made using a 16X hand lens. No evidence of use wear in the form of edge rounding, striations, polish, or sickle sheen was observed during the examination with the 16X lens.

**Table 1.**

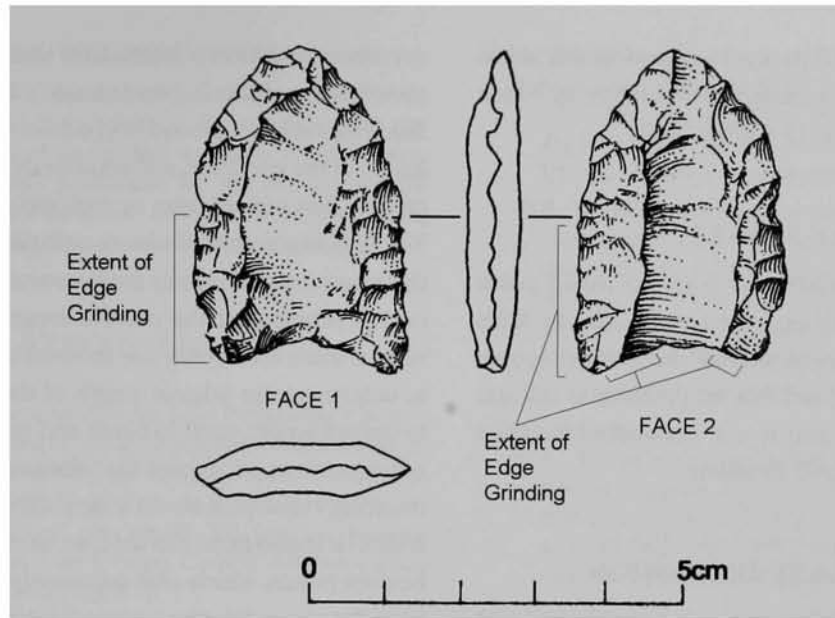
#### METRIC ATTRIBUTES OF THE NIPOMO FLUTED POINT

Attribute	Overall specimen	Face 1	Face 2
Maximum length (mm)	43.8	-	-
Maximum width (mm)	28.0	-	-
Thickness (mm)	7.3	-	-
Weight (g)	10.8	-	-
Length of flute (mm)	-	34.6	31.1
Maximum width of flute (mm)	-	12.4	13.1
Extent of edge grinding from base toward tip (mm)	-	23.8	27.4

#### Face 1

Face 1 exhibits a single flute scar that extends 34.6 mm from the base. Its distal end was truncated by a pressure flake scar from the right side of the point tip that appears to have been created during the repair. Horizontal pressure-flake scars emanate from both lateral margins of the point and are more recent than the channel flute scar. The right lateral margin (below the area with pressure scars repairing the tip element) exhibits edge grinding from the base towards the tip. The horizontal pressure flake scars from this margin overlie the channel flute scar.

The base is concave (Fig. 2). The center portion of the concave margin retains recent damage. Pressure-flake scars located on the lateral flute scar ridges indicate the use of pressure end thinning in conjunction with the fluting. To the left and right of this center portion of the concave base are remnants of basal edge grinding. This grinding extends onto the margin of the right basal ear of the point. The left basal ear is missing due to recent damage to the left lateral margin of the point.



**Figure 2.** Line drawing of the Nipomo fluted projectile point showing extent of edge grinding/polishing.

The consistent width of the channel flute scar along its length indicates that this face was either the first face fluted or that this concave base is a repair, created after the original concave base was snapped off.

#### *Face 2*

Face 2 exhibits a single channel flute scar that ends in a mild hinge termination below the pressure-flake scars created during tip rejuvenation (Fig. 2). The left lateral margin retains edge grinding, and the right lateral margin retains an edge remnant that shows edge grinding. It is important to note that the flute scar on Face 2, like that on Face 1, lacks any indication of the narrower initial “bottleneck” portion of the flute scar. Because both flute scars have lost their proximal end, it appears that the current point base is the result of repair rather than the original manufacture.

The sides of the concave base on Face 2 retain the same remnants of edge grinding noted on the other face. The left portion of the concave base margin has micro step scars emanating from under the edge grinding; pressure scars are also present. One pressure scar runs up the left flute-scar ridge and another overlaps the flute scar. A remnant of basal grinding on the right portion of the basal margin overlies micro step scars and earlier pressure scars.

#### *Observations from a Basal-End View*

When observed from the basal end, with Face 1 oriented towards the top of the page, the flute scars run parallel to the long axis of the point, but are off center, closer to the left lateral margin. Even so, from a basal-end view, the base exhibits the diagnostic bi-concave cross-section of points that have been fluted on both faces. A very similar bi-concave cross-section was reported on a fluted point from the Mendocino County coast (Simons et. al 1985: Fig. 3).

#### *Additional Observations on the Flute Scars*

Both flute scars were observed to be as wide at the basal margin as they are at the mid-point of their lengths. This indicates a very high probability that the current concave base is probably not the original base of the point. It is likely that the original base was lost due to a lateral snap and that the specimen was subsequently repaired to produce its current concave base morphology.

Only the flute scar on Face 1 was truncated by a pressure flake scar. This apparently occurred during the rejuvenation of the point tip. Because this pressure scar appears to be the result of a later rejuvenation activity, rather than a part of the original manufacture of the point, its overlap of the flute scar is thought to be unintentional. Therefore, the scar does not appear to indicate that intentional pressure flaking (designed to remove a step or



hinge termination of the flute scar) was performed, as has been suggested for some specimens elsewhere in North America (Bradley 1982, 1993; Collins 2002).

### FIELD SURVEY

A survey of the area where the Nipomo fluted point was discovered was made on February 15, 2004 by Mills and Jones. Several pieces of natural, unmodified, brown Monterey chert were noted, but no prehistoric cultural materials were found, and it was concluded that the specimen is best considered an isolate.

### SUMMARY AND DISCUSSION

The Nipomo point exhibits a range of technological and morphological attributes typical of fluted points from California. The clear presence of channel flute scars, a bi-concave cross-section, edge grinding/polish<sup>2</sup> on the lateral and basal margins, and the concave base are all diagnostic attributes that support a Paleoindian origin for the artifact.

The repair of this fluted point also fits with other examples from California. Multiple impact damage events and interim repair of the point tip are also found on a fluted specimen from the Skyrocket site in Calaveras County (Rondeau 1998b). A refabrication of the concave base has also been observed in both California (Rondeau 1998a, 2001) and Oregon (Ozbun and Fagan 1996). This reworking of the basal morphology seems to have been most feasible when the lower section of the base was broken off by a lateral snap. A partial fluted point from the Ione site in Calaveras County (Rondeau 1998c) was broken in a way that may have left the rest of the point sufficiently intact to allow basal refabrication. The generally “whittled down” condition of the Nipomo point is similar to that of a specimen from Thomes Creek in Tehama County (Dillon 2002; Dillon and Murphy 1994).

Assessing the age and possible subtype of the Nipomo specimen is complicated by the lack of supporting chronological evidence for any of the fluted points from California, and longstanding uncertainty about their precise typological affiliation. Recent recalibrations of seminal radiocarbon dates from elsewhere in the country further suggest that fluted point cultures may be older than previously thought in calendric time (Fiedel 1999). Evidence for blade and basal reworking on the present

specimen also make evaluation and exact typological classification difficult. Most classic Clovis points exhibit flutes that seldom extend beyond one half the maximum length of the specimen, and commonly show robust fluting on one face with shorter or multiple flutes on the other. The Nipomo specimen shows a single flute on each face that covers approximately three-quarters of the specimen’s overall length, but the present length almost certainly reflects some shortening due to reworking. It is impossible to determine the original length of the flute scar relative to overall length prior to blade and basal reworking. The specimen does not exhibit the “alternating opposed biface thinning” that is seen on many Clovis points (Justice 2002:67). It also lacks the delicate workmanship of classic Folsom points, which also commonly exhibit extremely large flute scars relative to overall point length and width. This specimen is certainly not a Folsom point, but as a typical California fluted point, it does not provide a perfect match with classic Clovis either. Its age can only be approximated as being somewhere within the overall period generally assigned to fluted points in western North America: ca. 13,500–10,000 calendric years B.P. The specimen is yet another example in a growing body of evidence that suggests a significant human presence in the south-central area of coastal California during the terminal Pleistocene/early Holocene (Erlandson 1994; Fitzgerald 2004; Glassow 1996; Jones et al. 2002).

### NOTES

<sup>1</sup>The fact that this important artifact rests in a private collection and was for many years unavailable to the scientific community is unfortunate. There are also widespread rumors of other fluted points in San Luis Obispo County in private collections. Hope exists that better education and public involvement in the local area will lead to greater cooperation in the future and more significant discoveries.

<sup>2</sup>The use here of the “grinding/polish” attribute as opposed to simple “basal edge grinding” should be explained. It appears that this attribute is more pronounced on fluted projectile points than on other types in California. It is not just that the basal margins were edge ground; they have been worn down further to create polished, rounded edges. Heavy edge grinding by itself will tend, in many cases, to create a flat, planed-off edge, rather than that which would be created by the application of some gentler and presumably more persistent technique (Rondeau 1982). The recognition of this distinctive edge modification on fluted points elsewhere in North America has been discussed at length by Titmus and Woods (1987), who hypothesized that it was actually intended as an edge-strengthening measure.

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