

HEARING SUBMITTAL	
PROJECT NO./AGENDA NO.	REF ID: H1 #3
DATE RECEIVED	12/5/2018
SUBMITTED BY VIA	public hearing
DISTRIBUTION TO DATE	12/5/2018
DATE OF HEARING	12/5/2018

WHAT TO DO

The following actions must be taken immediately upon the discovery of human remains:

- a) Stop immediately and contact the County Coroner.
- b) The Coroner has two working days to examine human remains after being notified by the responsible person. If the remains are Native American, the Coroner has 24 hours to notify the Native American Heritage Commission.
- c) The Native American Heritage Commission will immediately notify the person it believes to be the most likely descendent of the deceased Native American.
- d) The most likely descendent has 24 hours to make recommendations to the owner, or representative, for the treatment or disposition, with proper dignity, of the human remains and grave goods.
- e) If the descendent does not make recommendations within 24 hours the owner shall reinter the remains in an area of the property secure from further disturbance, or:

If the owner does not accept the descendent's recommendations, the owner or the descendent may request remediation by the Native American Heritage Commission.

A RESOURCE GUIDE FOR:

CORONERS

NATIVE AMERICAN
MOST LIKELY DESCENDENTS

TRIBAL GOVERNMENTS

TRIBAL ORGANIZATIONS

ARCHEOLOGISTS

LAW ENFORCEMENT OFFICIALS

CITY AND COUNTY PLANNERS

PROPERTY OWNERS

DEVELOPERS

FOR ADDITIONAL INFORMATION CONTACT:

NATIVE AMERICAN HERITAGE COMMISSION

915 Capitol Mall, Room 364
Sacramento, CA 95814
(916) 653-4082
FAX (916) 657-5390



A PROFESSIONAL GUIDE

FOR THE PRESERVATION AND
PROTECTION OF NATIVE
AMERICAN HUMAN REMAINS
AND ASSOCIATED GRAVE GOODS



Published by the
California Native American
Heritage Commission
January 1994
PETE WILSON, Governor

The following excerpts from California law concerning Native American human remains are provided for your reference:

From Chapter 1492, Statutes of 1982, which added Section 7050.5 to the Health and Safety Code, amended Section 5097.94 of the Public Resources Code and added Sections 5097.98 and 5097.99 to the Public Resources Code:

(a) The Legislature finds as follows:

(1) Native American human burials and skeletal remains are subject to vandalism and inadvertent destruction at an increasing rate.

(2) State laws do not provide for the protection of these burials and remains from vandalism and destruction.

(3) There is no regular means at this time by which Native American descendants can make known their concerns regarding the treatment and disposition of Native American burials, skeletal remains, and items associated with Native American burials.

(b) The purpose of this act is:

(1) To provide protection to Native American human burials and skeletal remains from vandalism and inadvertent destruction.

(2) To provide a regular means by which Native American descendants can make known their concerns regarding the need for sensitive treatment and disposition of Native American burials, skeletal remains, and items associated with Native American burials.

From Section 7050.5 of the Health and Safety Code:

(b) In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code,

that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains.

(c) If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

From Section 5097.94 of the Public Resources Code:

The commission shall have the following powers and duties:

... (k) To mediate, upon application of either of the parties, disputes arising between landowners and known descendants relating to the treatment and disposition of Native American human burials, skeletal remains, and items associated with Native American burials.

The agreements shall provide protection to Native American human burials and skeletal remains from vandalism and inadvertent destruction and provide for sensitive treatment and disposition of Native American burials, skeletal remains, and associated grave goods consistent with the planned use of, or the approved project on, the land.

(l) To assist interested landowners in developing agreements with appropriate Native American groups for treating or disposing, with appropriate dignity, of the human remains and any items associated with Native American burials.

From Section 5097.98 of the Public Resources Code:

(a) Whenever the commission receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendation within 24 hours of their notification by the Native American Heritage Commission. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

(b) Whenever the commission is unable to identify a descendant, or the descendant identified fails to make a recommendation, or the landowner or his or her authorized representative rejects the recommendation of the descendant and the mediation provided for in subdivision (k) of Section 5097.94 fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance.

SB 447 (Chapter 404, Statutes of 1987):

On January 1, 1988, Senate Bill 447 went into effect. This legislation amended Section 5097.99 of the Public Resources Code, making it a felony to obtain or possess Native American remains or associated grave goods:

(a) No person shall obtain or possess any Native American artifacts or human remains which are taken from a Native American grave or cairn on or after January 1, 1984, except as otherwise provided by law or in accordance with an agreement reached pursuant to subdivision (l) of Section 5097.94 or pursuant to Section 5097.98.

(b) Any person who knowingly or willfully obtains or possesses any Native American artifacts or human remains which are taken from a Native American grave or cairn after January 1, 1988, except as otherwise provided by law or in accordance with an agreement reached pursuant to subdivision (l) of Section 5097.94 or pursuant to Section 5097.98, is guilty of a felony which is punishable by imprisonment in the state prison.

(c) Any person who removes, without authority of law, any Native American artifacts or human remains from a Native American grave or cairn with an intent to sell or dissect or with malice or wantonness is guilty of a felony which is punishable by imprisonment in the state prison.

Public Submittal
Planning Commission
Governor's Office of the Tribal Advisor 12/5/18
Agenda Item #3

2018 Directory of Tribal Governments, State Agencies, and
Federal Agencies

Order Form

Credit Card Payments:

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- Please call the State Lands Commission Cash Desk at 916-562-0026 and reference 2018 Tribal Directory

Check Payments:

- Payable to: Native American Heritage Commission
- Reference: 2018 Tribal Directory on the memo line
- Mailed to: State Lands Commission
100 Howe Avenue, Suite 100, South
Sacramento, California 95825-8202
Attn.: Accounting

To request a receipt, please email: nahc.ca.gov

You will receive your Directory orders upon payment confirmation

For any questions, please contact:

Nancy Gonzalez-Lopez
(916) 373 – 3710
Nancy.Gonzalez-Lopez@nahc.ca.gov

Governor's Office of the Tribal Advisor

2018 Directory of Tribal Governments, State Agencies, and Federal Agencies

Order Form

Tribe/ Agency:	
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Phone:	
Shipping Address:	
City, State, Zip:	

2018 Directory of Tribal Governments, State Agencies, and Federal Agencies

Quantity	@\$45.00 per copy (includes shipping and handling)	Total Amount Due:
		\$

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All Payments Must Be Made At The Time Of The Order

ITEM 3 REVISED - EXHIBIT A
LAND USE ENTITLEMENTS WITH BASEMENTS/SUBTERRANEAN GARAGES ON THE CARMEL PT.

Total Reports: 215

Positive Reports: 84, Negative Reports: 129, Inconclusive: 2

	Positive Reports	Negative Reports	***Inconclusive	Mitigation Applied?	Human Remains Found	Information Search/Walk Over (Phase I)	Phase II
Total Report: 215	84	129	2	Yes	5	117	35
*Projects with Basement/Subterranean Garage: 43	24	19		24	3 pos rpt. 1 neg rpt.	Yes	41
Projects without Basement: 118	46	72		46	**1 pos rpt.		
Total Reports Reviewed in Detail: 49	27	22		24	5	45	41
Total LUE not reviewed in detail: 54							

*With basement projects: 3 cases where mitigations were not applied and resources (bone fragments, fire-cracked cobbles) were found.

**No basement projects: Human Remains found with no mitigations applied.

***Inconclusive reports due to inaccessible information.

HEARING SUBMITTAL	12/15/2018
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The local and historic
Esselen Tribe of Monterey County
(Protecting sacred sites since 1856)

Public Submittal
Agenda. Item #3
12/5/18

Our Mission Statement:

To preserve and to protect our cultural heritage and ancestral sacred sites, namely of the Esselen, Rumsen, Chalone, Sureño and Guatcharrone people, which includes but is not limited to the villages of Achasta, Chalon, Echilat, Ensen, Excelen, Esslenajan, Ixchenta, Jojopan, Kuchen, Pachepas, Sargent-Ruc, and Soccoronda, located within sacred prehistoric and historic tribal lands of Monterey County, California.

November 14, 2017

Mr. Frank Leonard, Analyst for Monterey County California Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691

Dear Mr. Leonard,

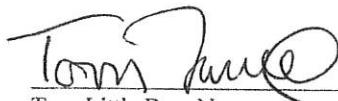
We are writing to you to update our tribal address. Please note that the mailing address has changed to PO Box 95, Carmel Valley, CA 93924. As well, please note we have a change in our tribal council (names and positions listed below).

Secondly, although Lorraine has confirmed (over the telephone) with Steven Quin, that Esselen Tribe of Monterey County is on the AB52 tribe list, we request that you, please, send us a letter which confirms we are on that list.

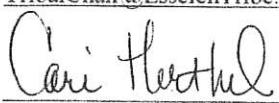
Lastly, our preferred contact for our tribe remains Chairman Tom Little Bear Nason. However, we acknowledge that we can designate another representative on a case by case basis, if it becomes necessary.

We look forward to a continued working relationship. As always, feel free to contact Chairman Nason if you have any questions or concerns.

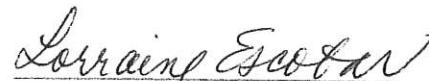
Sincerely,



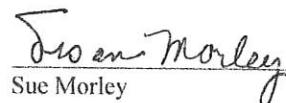
Tom Little Bear Nason
Tribal Chair
TribalChair@EsselenTribe.com



Cari Herthel
Tribal Steward
EsselenSpirit@EsselenTribe.com



Lorraine Escobar
Acting Vice-Chair
ViceChair@EsselenTribe.com



Sue Morley
Cultural Resources Specialist
Cultural-Resources@EsselenTribe.com

Esselen Tribe of Monterey County
PO Box 95, Carmel Valley, CA 93924
Office: (831) 659-2153 Fax: (831) 659-0111
Acting Tribal Chair, Tom Little Bear Nason - Cell: (831) 214-5345



Monterey County

Board Order

168 West Alisal Street,
1st Floor
Salinas, CA 93901
831.755.5066

Upon motion of Supervisor Potter, seconded by Supervisor Parker and carried by those members present, the Board of Supervisors hereby:

Public Hearing, continued from April 14, 2015, held.

- a. Found the ordinance described below categorically exempt under the California Environmental Quality Act; and
- b. Directed staff to return, on the Consent agenda with a final ordinance amending Section 21.66.050 (Archaeological Resources Standards) of Title 21 (non-coastal zoning) of the Monterey County Code to establish new policies and procedures for the protection of archaeological and tribal cultural resources, and amending Title 2 of the Monterey County Code to add Chapter 2.95 establishing a Native American and Archaeological Resources Technical Advisory Panel consistent with 2010 Monterey County General Plan Goals OS-6 and OS-8. (REF110065/Archaeological and Tribal Cultural Resources Ordinance)

PASSED AND ADOPTED on this 21st day of April 2015, by the following vote, to wit:

AYES: Supervisors Armenta, Phillips, Salinas, Parker and Potter

NOES: None

ABSENT: None

I, Gail T. Borkowski, Clerk of the Board of Supervisors of the County of Monterey, State of California, hereby certify that the foregoing is a true copy of an original order of said Board of Supervisors duly made and entered in the minutes thereof of Minute Book 78 for the meeting on April 21, 2015.

Dated: April 22, 2015
File ID: ORD 15-004

Gail T. Borkowski, Clerk of the Board of Supervisors
County of Monterey, State of California

By Denise Hancock
Deputy



The local and historic
Esselen Tribe of Monterey County
(Protecting sacred sites since 1856)

Public Submittal
Agenda Item # 3
12/5/18

Jacqueline R. Onciano
RMA Chief of Planning
Monterey County Resource Management Agency
1441 Shilling Place 2nd Floor
Salinas, CA 93901
December 2, 2017
DRAFT

Our Mission Statement:

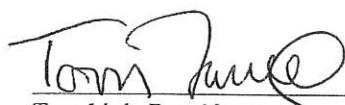
To preserve and to protect our cultural heritage and ancestral sacred sites, namely of the Esselen, Rumsen, Chalone, Sureño and Guatcharrone people, which includes but is not limited to the villages of Achasta, Chalon, Echilat, Ensen, Excelen, Esslenajan, Ixchenta, Jojopan, Kuchen, Pachepas, Sargent-Ruc, and Soccoronda, located within sacred pre-historic and historic tribal lands of Monterey County, California.

Dear Ms. Onciano,

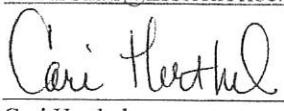
The Esselen Tribe of Monterey County whose current Chairperson is Tim Little Bear Nason, respectfully requests to be on your agency's list to be notified of a decision to undertake a project or determination that a project is complete (as per AB52). we request that we be notified of updates to Monterey County's General Plan which is the southern interior section as currently defined.

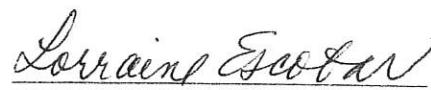
Please contact us at the email addresses below, as soon as you have more information on this change,

Sincerely,

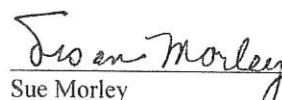

Tom Little Bear Nason

Tribal Chair
TribalChair@EsselenTribe.com


Cari Herthel
Tribal Steward
EsselenSpirit@EsselenTribe.com


Lorraine Escobar

Acting Vice-Chair
ViceChair@EsselenTribe.com


Sue Morley

Cultural Resources Specialist
Cultural-Resources@EsselenTribe.com

Esselen Tribe of Monterey County
PO Box 95, Carmel Valley, CA 93924
Office: (831) 659-2153 Fax: (831) 659-0111
Acting Tribal Chair, Tom Little Bear Nason - Cell: (831) 214-5345



From: Susan Morley mojo50@comcast.net
Subject: Re: Archaeology Monterey county
Date: October 11, 2017 at 10:51 AM
To: cari herthel esselenspirit@sbcglobal.net
Cc: Lorraine inammec@aol.com, tom@ventana.us



Good morning, Cari,

That doc you found from 2014 is the latest update I think. To be on the Native Advisory panel you need to be an archaeologist, an MLD or a member of a local tribe. Then you would write to the Secretary of the Planning Commission and provide that information in your application to be considered for the panel. I hope that helps.

Sue

2.95.030 – Members.

A. The Advisory Panel shall be comprised of up to fifteen members with a demonstrated interest in tribal cultural resource preservation. Members shall be appointed to the Advisory Panel by the Monterey County Planning Commission based on the criteria set forth in this section.

B. Advisory Panel members shall meet at least one of the following minimum qualifications:

1. An individual appointed by a California Native American Tribe to serve on the Advisory Panel;

2. A Most Likely Descendant for Monterey County on the list maintained by the California Native American Heritage Commission; or

3. A professional archaeologist familiar with Central Coast archaeology.

C. Interested individuals shall submit a written statement of interest to the Secretary of the Planning Commission. The written statement of interest shall include the person's qualifications to serve on the Advisory Panel and commitment to serve and attend meetings during the term of office.

D. The term of office for each member shall be two years. Members may serve more than one term.

E. Members shall receive no monetary compensation from the County for serving on the Advisory Panel.

On Oct 11, 2017, at 6:12 AM, cari herthel <esselenspirit@sbcglobal.net> wrote:

<http://ohp.parks.ca.gov/pages/1072/files/County%20of%20Monterey-Archaeology.pdf>

Hello.

I am doing a search online of
Monterey county planning department that maybe updates,
From the letter from 2014.

This maybe the results we are looking for?
Cari Herthel

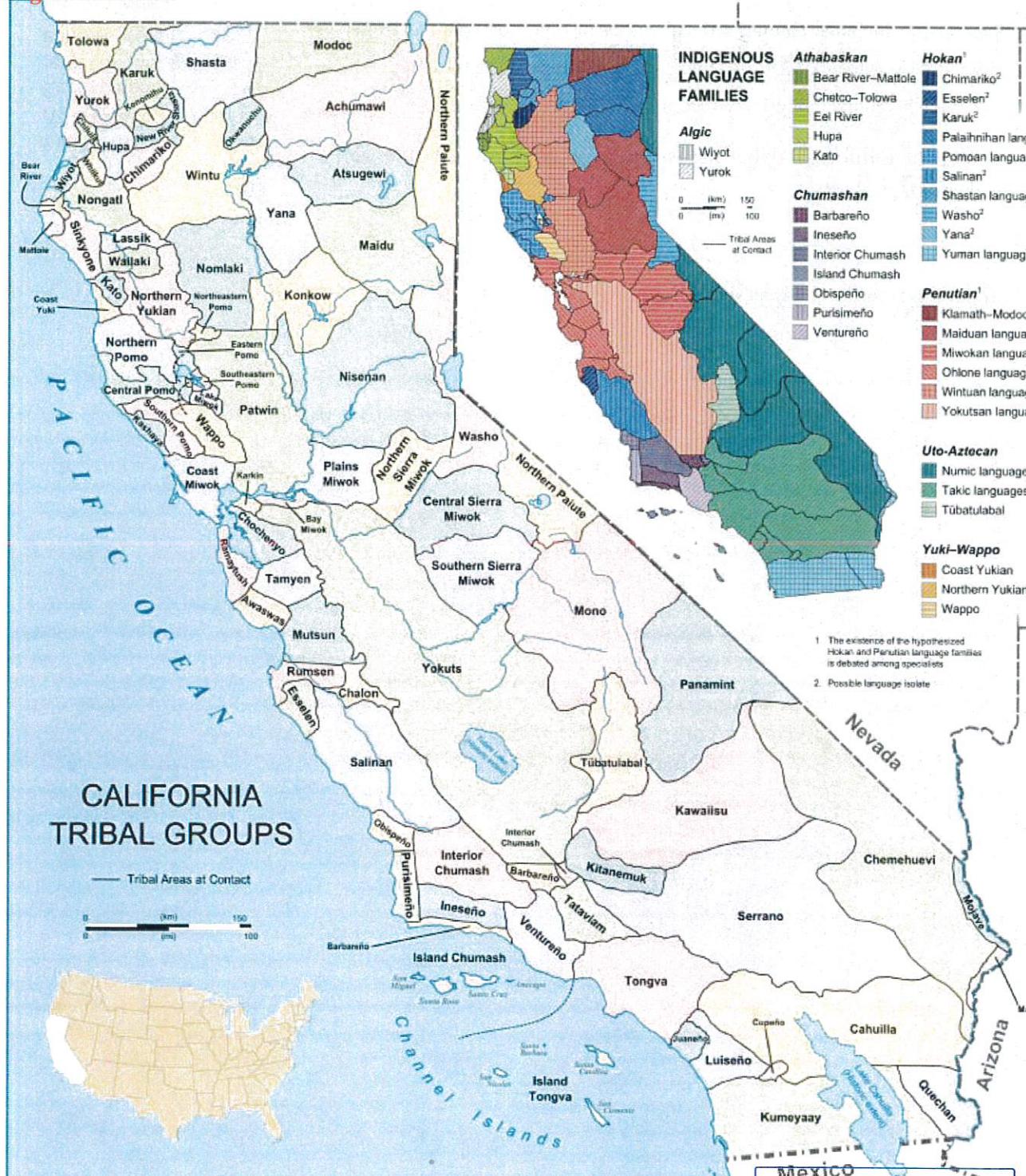
Sent from my iPhone

Public Submittal - Commission Getzelman

Agenda Item No. 3

December 5, 2018

Planning Commission



A map of California tribal groups and languages

Concerto - Own work **References:** Survey of California and OtherIndian Languages, University of California, Berkeley. See [Web site](#) andlanguage map. Golla, Victor (2011). *California Indian Languages*.

Berkeley, CA: University of California Press. [ISBN 978-0-520-26667-4](#).

This image includes elements that have been taken or adapted from this: [USA California location map.svg](#). This image includes elements that have been taken or adapted from this: [Blank US Map.svg](#).

A map of California tribal areas and languages at the time of European contact.

[CC BY-SA 3.0](#)

File: California tribes & languages at contact.png

Created: 20 August 2013

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MONTEREY COUNTY

OFFICE OF THE COUNTY COUNSEL
CHARLES J. MCKEE, COUNTY COUNSEL



MEMORANDUM

DATE: November 29, 2018

TO: Honorable Planning Commissioners

FROM: Michele R. Lyons, Deputy County Counsel

SUBJECT: Exhibits C through E for REF 180041 (Report on the Status of Archaeological Resources on the Carmel Point)

Enclosed are three archaeological reports that have been redacted to comply with law, removing "information about the location of archaeological sites and sacred lands or other information that is subject to disclosure restrictions." CEQA § 5120(d), referencing Gov't Code § 6254; see also Public Resources Code §§ 5097.9, 5097.993.

CHARLES J. MCKEE, County Counsel

By A handwritten signature in blue ink, appearing to read "Phil Lyons".
Michele R. Lyons
Deputy County Counsel

MRL:ge

Enclosures (3; Exhibits C-E)

cc: Jacqueline Onciano, RMA Chief of Planning
John Dugan, Deputy Director of Land Use and Community Development
Brandon Swanson, RMA Services Manager
Christina McGinnis, RMA Services Manager

CONFIDENTIAL REPORT

**DO NOT
RELEASE TO
PUBLIC**

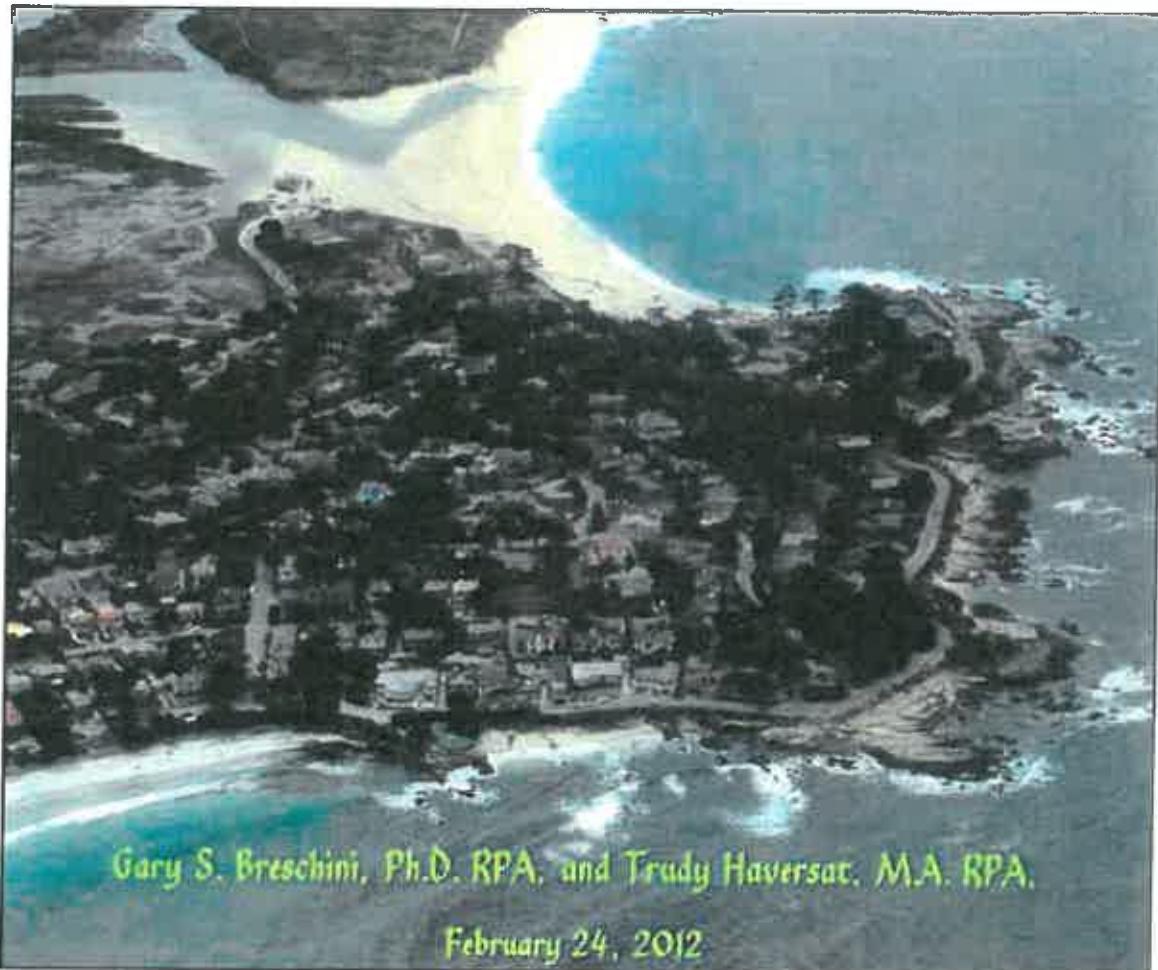
Exhibit C

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ARCHAEOLOGICAL CONSULTING

P.O. BOX 5577
SALINAS, CA 93912
(831) 422-4912

OVERVIEW OF ARCHAEOLOGICAL INVESTIGATIONS AND SUMMARY OF FINDINGS FOR CA-MNT-17, CARMEL, MONTEREY COUNTY, CALIFORNIA



Gary S. Breschini, Ph.D. RPA, and Trudy Haversat, M.A. RPA.

February 24, 2012

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INTRODUCTION

This report summarizes the results of several investigations conducted by Archaeological Consulting and other archaeologists over a period of decades within site CA-MNT-17,¹ located on Carmel Point, in Carmel, Monterey County, California (see Figures 1 and 2).

This large, multi-component deposit is situated within an older residential neighborhood. Many of the residences are now undergoing foundation work, additions, or other improvements—or even complete replacement—resulting in a variety of small projects within the boundaries of the archaeological site.

Because of the nature of the projects, small and scattered, there has not been an overall synthesis of the data from the various projects.

We are integrating the results of these projects into a single brief overview so that the nature and significance of this archaeological resource can be explored in more detail than is often possible in a more limited project-specific report.

As we write this, CA-MNT-17 is the oldest archaeological site in Monterey County, and among the oldest on the central California coast. The earliest radiocarbon date from the site is in excess of 9,400 years in age. It is likely that additional dates obtained from that same general area would extend this age even farther into the past.

We have divided CA-MNT-17 into three subareas, designated A, B, and C (see Figure 4). This reflects overall differences among the archaeological deposits in these three areas, but for convenience the subarea boundaries are based on streets, so these subdivisions are not like-

ly to correspond precisely with prehistoric subsistence and settlement patterns. The settlement and subsistence patterns in the Carmel Point area, in fact, almost certainly changed through time.

Projects conducted within the boundaries of CA-MNT-17 are listed in Figure 4. It is possible that additional projects have been conducted of which we are not aware.

In the following report these projects are discussed by the three site subdivisions, beginning with CA-MNT-17A. Additional information is included where necessary in order to better explain the data, and to place the findings from CA-MNT-17 within a wider context.

We hope that this summary overview of CA-MNT-17 will lead to better archaeological research in the future. This site has been found to contain significant information which can be used to answer important research questions. As such, it meets the criteria for significance under both state and federal laws.

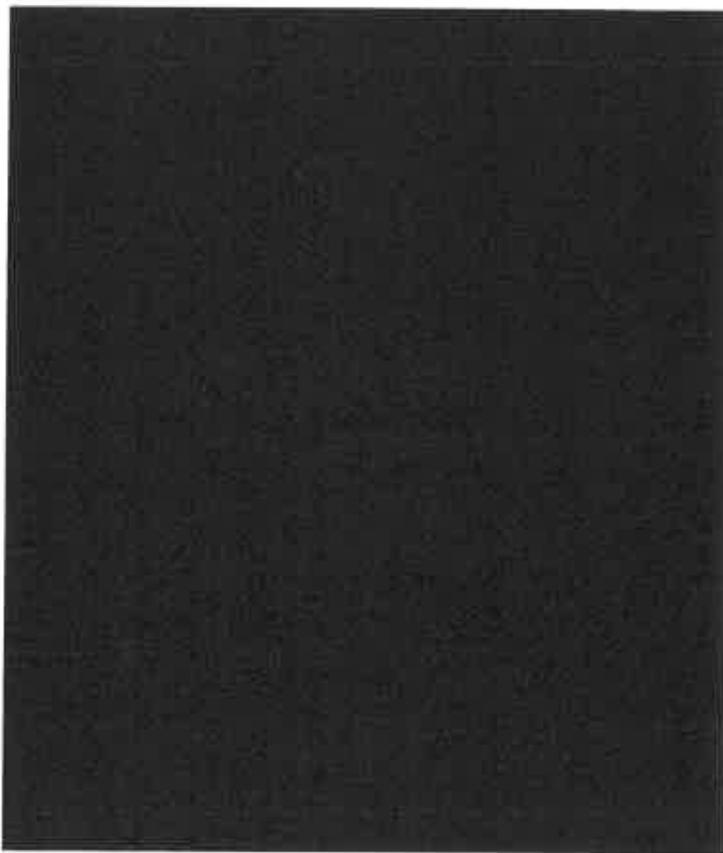


Figure 1. Location of CA-MNT-17.

¹ Cultural resources which have been formally recorded with the Regional Information Center of the California Historic Resources Information System are referenced by trinomial designations. The trinomials take the form "CA-MNT-1060," where the first two letters designate the state and the next three the county. The numbers are sequential and represent the order in which the site was recorded within each county.

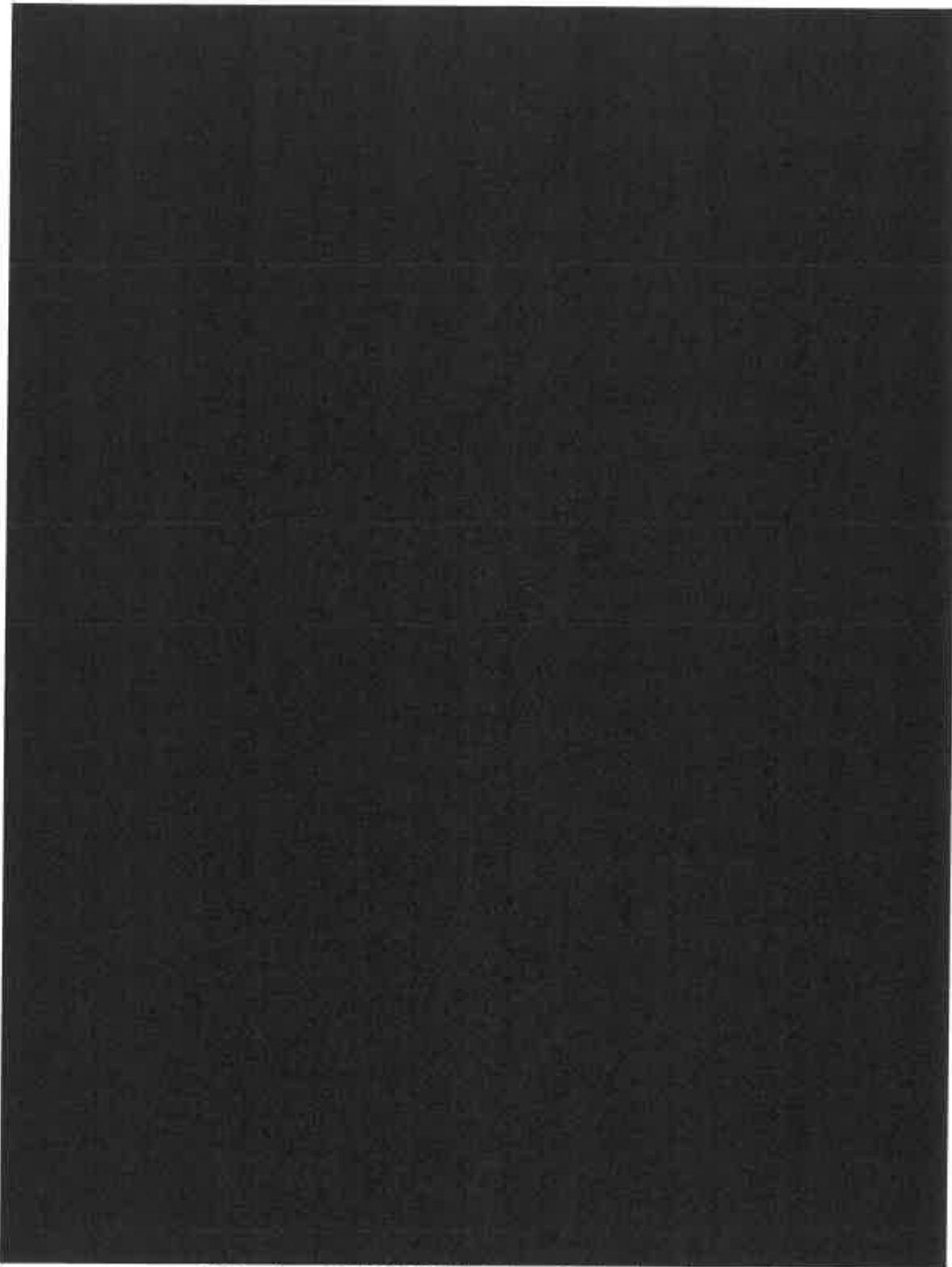


Figure 2. Boundary of CA-MNT-17. (This boundary is arbitrarily assigned.)



Figure 3. View from Carmel Point toward the south. In the foreground is Carmel River State Beach and the mouth of the Carmel River. In the distance is Monastery Beach on the left and Pt. Lobos on the right. This photograph was taken from near our project AC 2932.

BACKGROUND

CA-MNT-17 is located on the north bank of the Carmel River. It was formally recorded by Arnold Pilling in 1949, based on notes from earlier surveys by Wood and Fisher. The initial site record was limited to the area on the southwestern side of Carmel Point, but based on our research we have expanded the boundaries of the site to include the entire southern half of Carmel Point (Figures 2 and 4), and established three subdivisions within the site (Figure 4).

The western and southwestern portions of the site, which we have designated CA-MNT-17A, are adjacent to the rocky coast north of Carmel River State Beach. The central part of the site, which overlooks Carmel River State Beach, has been designated CA-MNT-17B (Figure 3), while the southeastern portion of the site, overlooking both Carmel River State Beach and the Carmel River Lagoon, is CA-MNT-17C. These three areas have each produced different

archaeological findings. The earliest dates have so far all been recovered from CA-MNT-17C.

The archaeological projects in this area have almost always been small and mostly limited to single-family dwellings. Accordingly, most projects have been modest in scope, have obtained few radiocarbon dates, and have conducted only limited analytical studies. Further, most of these projects have not been able to support the levels of research needed to properly analyze the previous investigations and correlate the scattered information in order to more fully understand this site. As a result, building up a body of knowledge concerning this site has been difficult, and very slow in coming.

This is unfortunate as CA-MNT-17 is a multi-component site spanning almost all of the prehistoric occupation of the Monterey Peninsula. Based on the radiocarbon dates obtained from CA-MNT-17 (see Table 5) it is clear that the site was occupied, at least

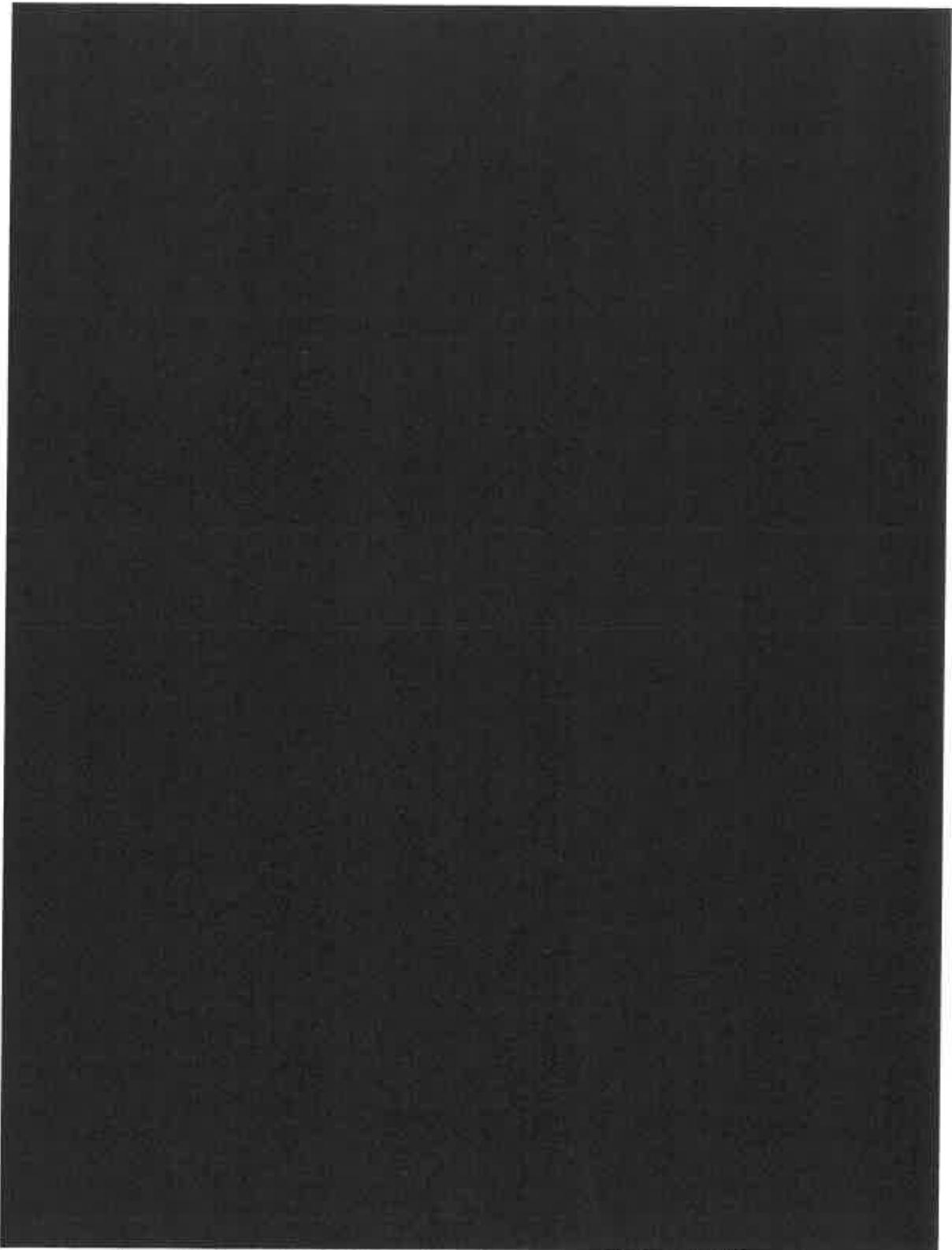


Figure 4. Subareas of CA-MNT-17, along with project areas discussed in this report.



Figure 5. Abalone feature exposed in a shovel test unit at CA-MNT-17A (AC 49).

intermittently, for well over 9,000 years. There is evidence of activity during the Middle Period, which is scarce on the Monterey Peninsula, as well as evidence of some activity during a mysterious gap spanning about a thousand years. Finally, there is evidence from the early Archaic, which is extremely rare along the central California coast. These topics are discussed in more detail in subsequent sections.

CA-MNT-17A

This was the first part of CA-MNT-17 to be discovered and recorded. Wood (1930) and Fisher (1935) noted an abalone-rich deposit along the rocky coast north of Carmel River State Beach and, based on their notes, the site was formally recorded in 1949 by Arnold Pilling. No significant investigations were conducted in this area until the late 1970s.

AC-49

The first examination of CA-MNT-17A of which we are aware took place in 1979 (AC 49 in Figure 4). It was a small test excavation which produced only four artifacts (see the Artifact Catalogue, included as Appendix 1). The investigations identi-

fied an abalone feature which was found in all test units, and presumably extended over much or all of the project parcel.

During a subsequent mitigation phase we obtained seven radiocarbon dates (see Table 5), and these have helped to establish the age of the features which subsequently became known as "abalone pavements." A view of one of these features in a 50 x 50 cm unit is shown in Figure 5. A larger view of an abalone pavement from a site located a couple of miles to the north of Carmel Point is shown in Figure 6.

The midden consisted of a surface layer about 25 cm thick containing historical materials, lightly scattered shellfish remains, occasional fragments of chert, and some rock. Below that was a layer of red abalone shells (*Haliotis rufescens*) some 30 cm in thickness (see Figure 5). Below the abalone layer was a layer of black sand with very sparse shellfish remains, including nearly equal amounts of abalone and mussel shell, occasional chert flakes, and artifacts, including a chert biface base. Virtually no bone was found during the investigation.

The six radiocarbon dates obtained from single abalone shells produced calibrated dates ranging from



Figure 6. "Abalone pavement" from CA-MNT-1084. Five of these shells were radiocarbon dated, and returned calibrated ages ranging from A.D. 974 to A.D. 1277. (See Figure 9 for approximate site locations.)

A.D. 1159 to A.D. 1807. Five of these are within the Late Period, while the most recent is in the Historic era.

The oldest of these dates came from the 60-70 cm level of Unit 4. One additional date was obtained from carbon-rich black sandy soil from that same provenience. It returned a calibrated date of A.D. 370, nearly 800 years older than the abalone shell from the same provenience, and within the Middle Period. The dark soil extended as deep as the shovel test unit could reach, some 85 cm.

From these dates it is clear that this portion of CA-MNT-17A contains a Late Period deposit of the kind often called "abalone pavement" relatively near the surface.

This type of deposit has been described as a Late Period Abalone Processing Site by Breschini and Haversat (1991b:33).

Characteristics of this type of site were defined as follows:

- A dominance (>90% of the shell by weight) of red abalone shell (*Haliotis rufescens*) in relatively thin and shallow layers, with only small quantities of mussel (*Mytilus* sp.) and other shellfish species;
- Proximity to the Pacific Ocean (generally no more than 50 m from the shoreline);
- Generally sparse quantities of vertebrate remains and lithic materials; vertebrate remains are dominated by marine species;
- A limited temporal range restricted to Late Period ...; and
- Few formal artifacts other than pounding or battering tools.

There is also evidence of an earlier component of a completely different type relating to the Middle Period. All that we recovered from this, however, were a few chert flakes, a fragment of a chert biface, an andesite core, and a battered granite cobble.

AC-901

This was a small monitoring project on the parcel immediately south of the project described above (see Figure 4).

The same abalone feature encountered during the previous project was also encountered during this project, and two additional radiocarbon dates were obtained. The age range was A.D. 1277 to A.D. 1691. These dates are in close agreement with the six obtained from the previous project on the same abalone feature.

These dates suggest that this part of the site was used during much of the Late Period on a periodic or sporadic basis for gathering and processing abalone shells. The site may also have been used as a temporary camping site.

A likely scenario would be for the occupants to come to the site from a residential base located elsewhere, build a fire and then proceed to gather abalone from the adjacent coast. When they returned to the site they could warm themselves after exposure to the cold water and process the abalone. The meat was removed from the shell, probably pounded, and the shell was left behind when they returned to their residential base.

Based on our experience during the previous project we excavated an auger unit and recovered a sample of the dark sandy midden soil from a depth of 140-170 cm. This returned a calibrated radiocarbon date of 3121 years, within the Early Period.

This confirmed the limited information from the previous project suggesting an earlier component, but with no artifacts or other cultural materials there is little that could be made of this.

However, any future projects in this area should be aware that there is the potential for encountering Middle and Early Period materials, and should include provisions for dealing with older, sparse deposits in their research designs.

AC 2870

This section of CA-MNT-17A is situated about 200 meters inland from the coast, in an area that was probably sheltered by dunes and perhaps by trees.

The project included a test excavation unit and a mitigation unit for a garage expansion project. These units were adjacent to one another in order to examine a possible rock feature found during the test exca-

vation. It was determined that the rock feature was a possible hearth (see Figure 7).

An abalone layer was encountered between 30 and 50 cm in both units. As is often the case for sites of this type, almost no other midden constituents were present. From both units, the amount of fish bone was under 0.5 g, non-fish bone was under 2.1 g, obsidian was at 0.1 g, and chert at 15.6 g. A shell count below the abalone shell layer showed 98.92% of the shell by weight was abalone, with traces of barnacle, *Tequila*, and mussel.

Three radiocarbon dates were obtained from abalone shells in the shell feature. The calibrated range for these dates was A.D. 1453 to A.D. 1631. Again, these dates are within the range of previous dates obtained from CA-MNT-17A.

The artifacts included various hattering stones, as well as quartzite and chert modified flakes, and a slightly grooved piece of shale.

This investigation showed that the abalone feature associated with CA-MNT-17A extends farther inland than is the case for other sites of this type that we have examined. This may have been due to the presence of sand dunes which would have provided shelter from coastal winds.

AC 4019

This parcel appears also to contain the same abalone feature encountered in other parts of CA-MNT-17A. During a reconnaissance a battered and pitted stone was recovered and recommendations were made for a test excavation, but to date that does not appear to have been conducted.

Summary, CA-MNT-17A

The primary characteristic of CA-MNT-17A is the "abalone pavement" feature. We have classified these abalone pavements as Coastal Shellfish Gathering and Processing sites, of which abalone features belong to the Abalone subtype.

Radiocarbon dates for CA-MNT-17A are shown in Figure 8. The Late Period dates fall within the last 800 years, and all were obtained from single pieces of red abalone shell from what appears to be an extensive abalone feature.

Based on a number of reconnaissance projects, however, the abalone feature appears to be intermittent. This is most likely related to the prehistoric topography. Sites of this type would not tend to be found on the tops of dunes, for example. Subsequent changes due to a century of construction most likely altered the topography as well. Some sites may have been buried while others may have been destroyed by earth moving.

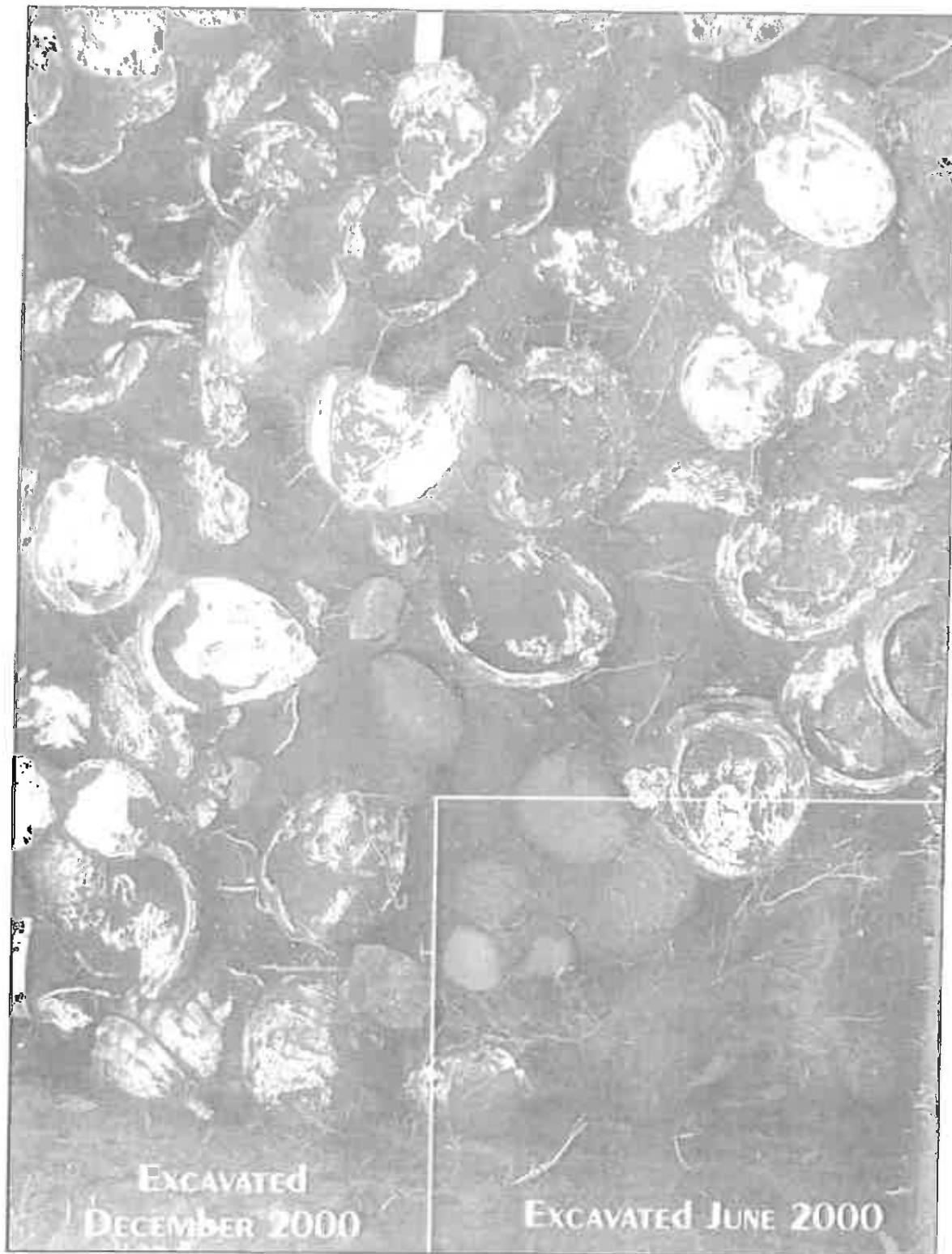


Figure 7. "Abalone pavement" from CA-MNT-17A. In the lower center is a possible hearth.

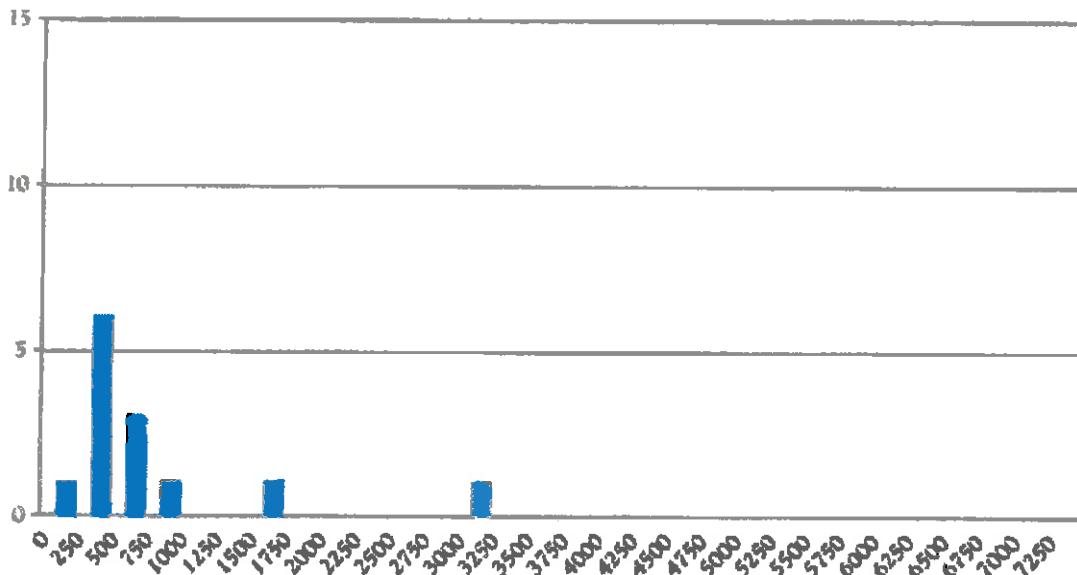


Figure 8. Radiocarbon dates from CA-MNT-17A.

The two earlier dates from CA-MNT-17A were both obtained from carbon-rich soil. As these were not obtained from single-piece samples, the results may be somewhat averaged. However, in both cases there is evidence of components previous to the Late Period, and if the opportunity arises to explore these components in more detail we suggest large-scale screening might be productive for gathering a sample sufficiently large to provide adequate component definition.

CA-MNT-17B

CA-MNT-17B fills a gap between the coastal strip, characterized by an extensive abalone feature and the lagoon-oriented midden sites designated CA-MNT-17C. It is generally sparse, but has been reported to have produced at least one burial during sewer line installation many decades ago. However, the location of this reported burial has never been determined.

So far the radiocarbon dates from this section of the site have all been Late Period, but no attempts have been made to date carbon-rich soil.

Cartier (1977)

Cartier conducted a subsurface test on this parcel in 1977. He excavated two 1 x 1 meter units and found dark soil containing "a fairly consistent scattering of lithic material without any clear pattern as to stratification of the soil or the cultural materials." "Black midden sand" was reported as deep as 180+ cm. This most likely is the same as the deep midden

sand found at CA-MNT-17A. Based on our observations it is likely that this dark sand is found in many areas of CA-MNT-17.

The only other constituents reported were two *Haliotis r.* shells and a few *Haliotis* fragments.

Cartier (1979)

This project included trench excavation mitigation and construction monitoring.

The 60 cm wide utility trench was excavated to a depth of 70 cm and the soils were screened through 1/8 inch mesh. *Haliotis r.* was the dominant shellfish recovered, followed by *Mytilus c.* Several other species were present in smaller quantities. Two pieces of bone thought to be prehistoric in origin (deer and rabbit) were also recovered. Artifacts included five utilized chert flakes, along with miscellaneous debitage. Four battered granitic stones made up the balance of the artifacts. No radiocarbon dating was conducted.

AC 593

This was a multi-phase project, conducted over a period of several years as a parcel was subdivided into nine smaller parcels and several of those were built upon. At the beginning of the project a single 1 x 2 m unit and several test trenches were excavated with a small backhoe to explore the nature and distribution of the cultural resource.

This portion of CA-MNT-17B exhibited relatively sparse midden, but the large-scale construction

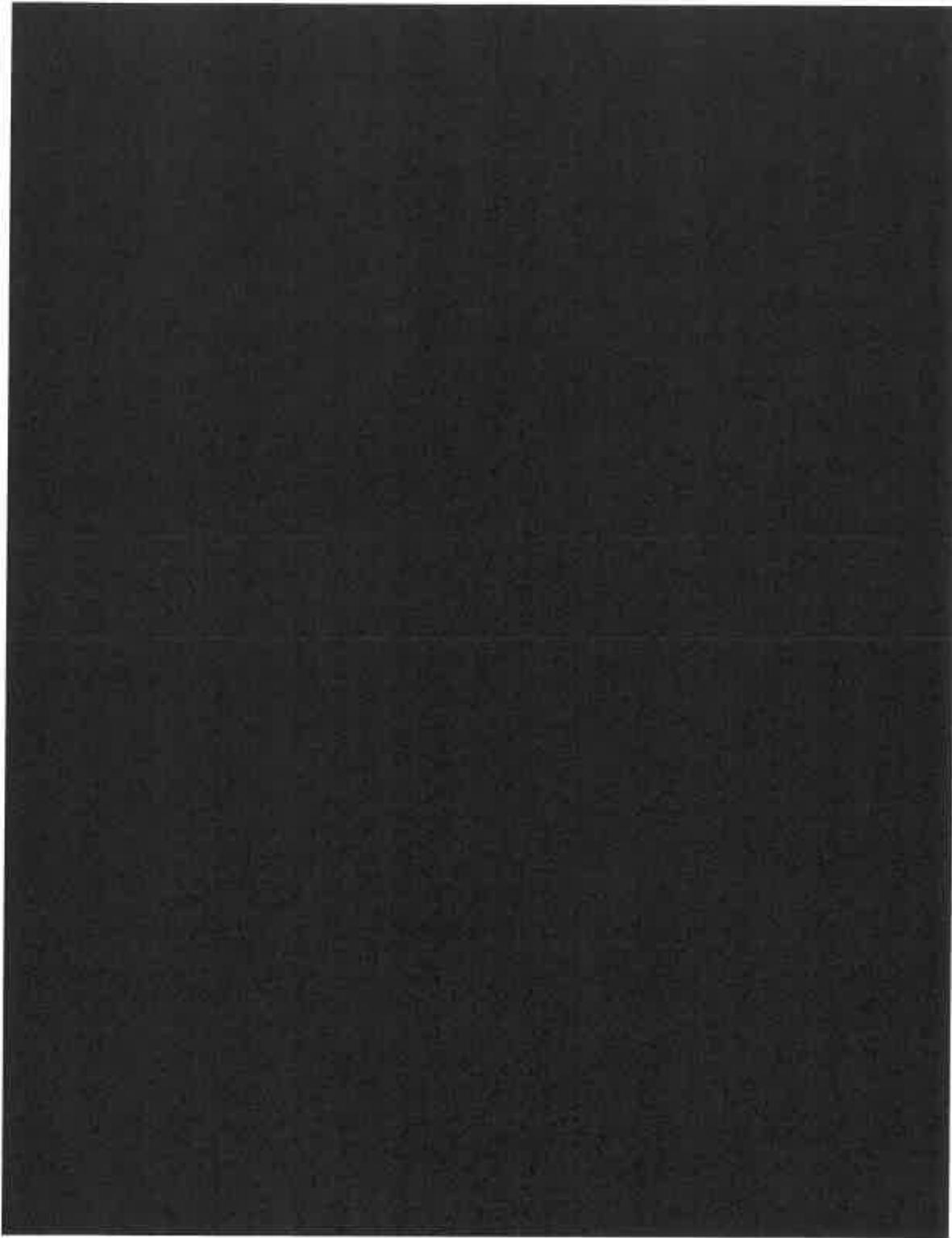


Figure 9. Selected archaeological sites in the Monterey Peninsula area.

excavations and careful monitoring produced a number of artifacts.

AC 593B & C

Two test trenches were excavated to ascertain the nature of the midden deposit, and to help locate the test unit.

The 1 x 2 unit was excavated to a depth of 200 cm using 1/8 inch mesh. As shown by Figure 10, this portion of the site was characterized by a disturbed upper layer (ca. 80 cm in thickness), followed by a relatively thin layer with sparse scattered abalone shells or shell fragments (from ca. 80-110 cm). Below this the midden contained relatively little shell, bone or lithics. This lower layer was not as black as had been found at CA-MNT-17A, to the west.

Only eleven artifacts were recovered during this phase of the project, and only seven of these were in the unit. As is normally the case, battered granitic stones were the most frequent artifact. However, three of the artifacts functioned as pestles, with one being both well-formed and covered with a tan ochre on the tip (Figure 11). The rest of the collection included an *Olivella* spire-looped bead and four lithic artifacts. One of these was a nearly complete chert projectile

point (Figure 12). The style of this point, most likely a contracting stem, spans several thousand years and is not very temporally diagnostic.

Three pieces of obsidian debitage were subjected to source and hydration analysis. Two were from Napa (hydration range 1.8-2.6, average 2.3 microns) and one was from Casa Diablo (hydration 2.8 microns).

The lowest component appears characteristic of an Early Period or Archaic deposit, but the presence of a finely-formed pestle with ochre on the tip at a depth of 163 cm would seem out of place for that time period.

To illustrate the sparse nature of this portion of the site, a typical lower level of the unit (140-150 cm) produced 3.0 g of chert, less than 0.1 g of obsidian, 1.3 g of abalone and 0.9 g of mussel shell, and 1.6 g of small bone fragments.

Subsequent monitoring of a small parcel produced a series of granitic artifacts, with battered and slightly pitted stones being the most frequent.

AC 593E

This project consisted of monitoring construction of a house with a full basement. Because of the larger volume of soil excavated we were able to recover 52

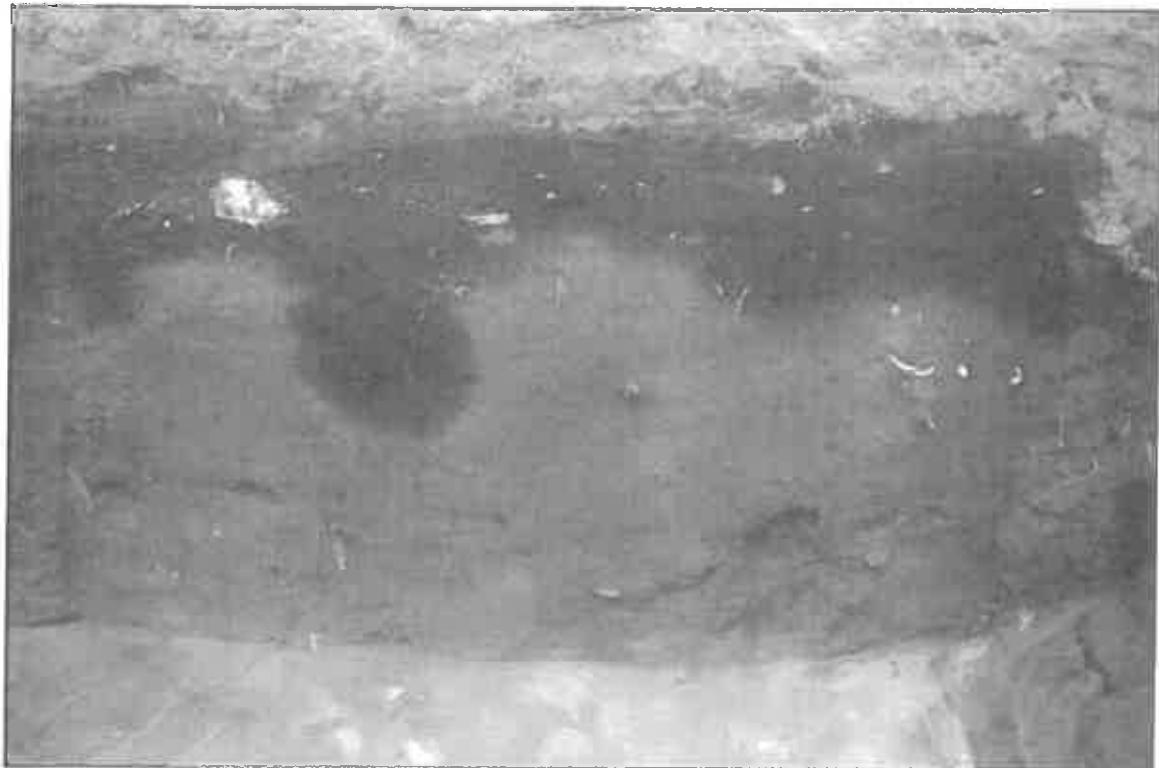


Figure 10. Sidewall of a test trench, CA-MNT-17B (AC 593B).



Figure 11. Granitic pestle with ochre on the tip (cat. no. 17-B08) from CA-MNT-17B (AC 593B). Scale is in centimeters.

artifacts. As no screening was conducted these were larger artifacts, virtually all granitic cobbles with one or more forms of modification.

Of the 52 artifacts, 44 were battered in some manner. This included end- and edge-battering. Fourteen of the artifacts were also pitted or bipitted (including a number of artifacts which also exhibited battering; see Figure 14). One andesitic core, one end-battered pestle, and three faceted handstones (see Figures 15 through 17) were also recovered.

The faceted handstones found on the Monterey Peninsula are an unusual artifact, and apparently are not commonly found in other areas of California.

This artifact type was defined when 140 of these artifacts were recovered from CA-MNT-831 (see Breschini and Havensat 2008). We took samples to the annual meetings of the Society for California Archaeology in both 2005 and 2006, but our colleagues were not aware of any other similar collections of these artifacts in central California. The vast majority of these artifacts have been recovered from a section of the coast around and west of Lovers Point, in Pacific Grove (between sites CA-MNT-2106 and CA-MNT-127). Examination of archived collections has identified a small number of additional faceted handstones from other sites, including three from CA-MNT-17B and four from CA-MNT-17C.

One radiocarbon date was obtained from a depth of approximately 40 cm. The calibrated intercept for this 446.5 g piece of red abalone shell was A.D. 1480.

AC 4005

This investigation consisted of monitoring while foundation trenches were excavated for an addition and remodeling project.



Figure 12. Chert projectile point fragment (cat. no. 17-B10) from CA-MNT-17B (AC 593B). Scale is in centimeters.

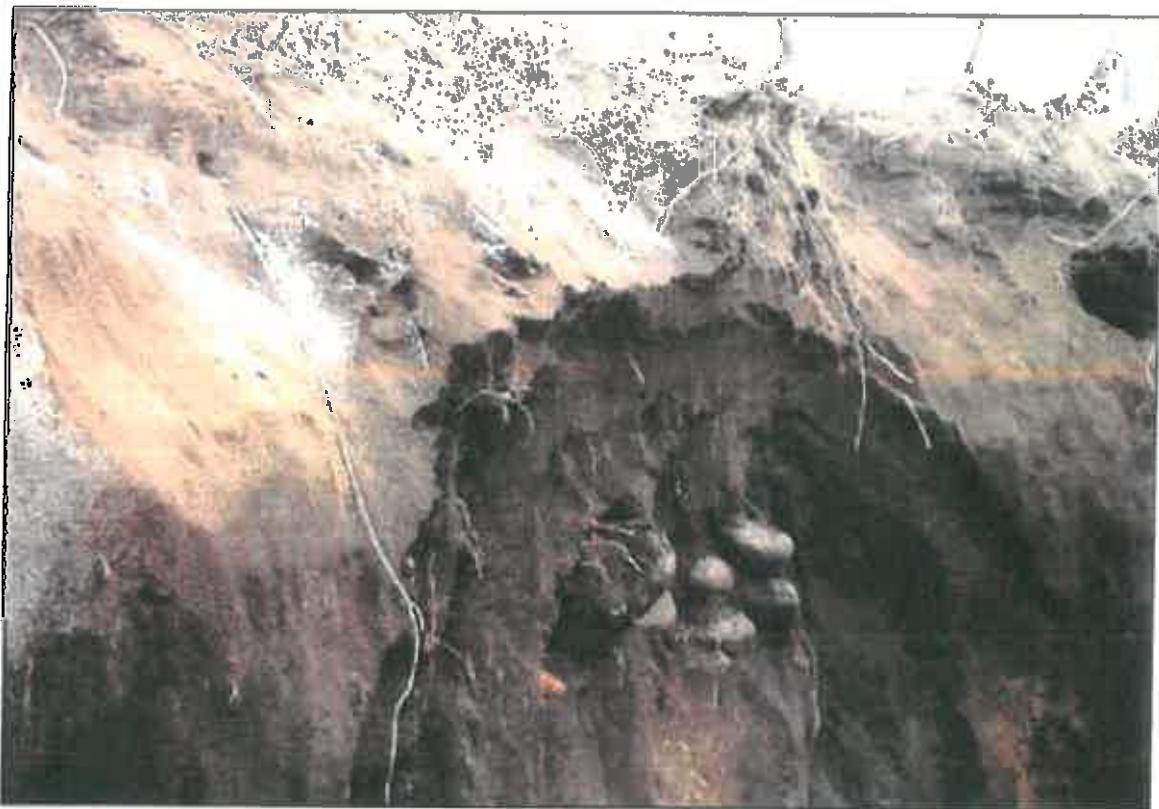


Figure 13. Rock cache from CA-MNT-17B (AC 593E). The cache measured approximately 50 to 60 cm in thickness with dimensions of about 40 by 50 cm. These artifacts were catalogued as numbers 17-137 through 17-152.

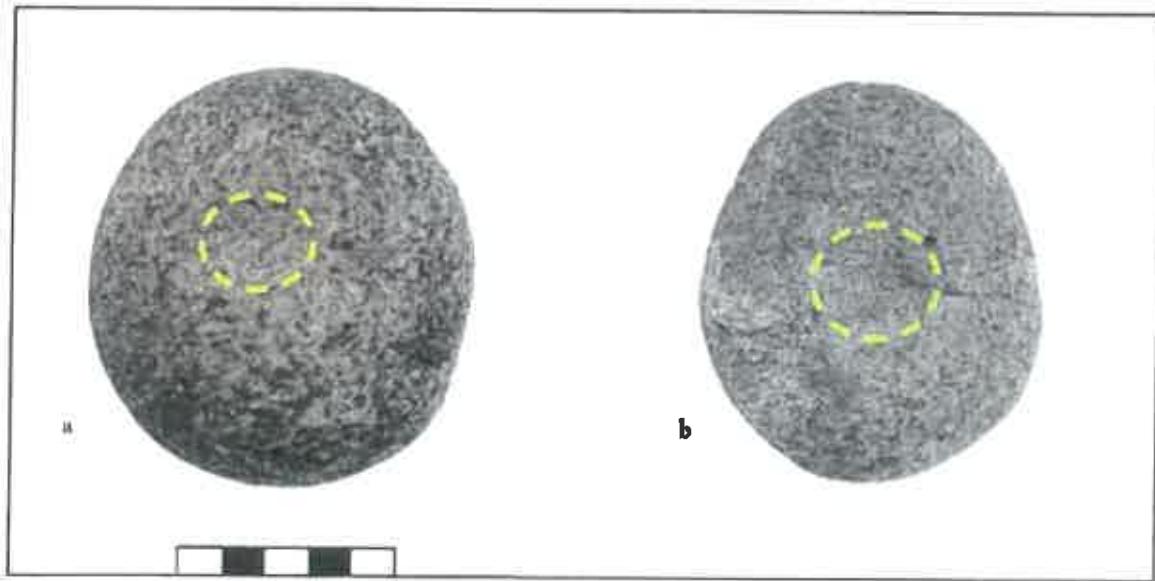


Figure 14. Two granite pitted and end-battered cobbles from CA-MNT-17B (AC 593E). A: cat. no. 17-147; B: cat. no. 17-106. Scale is in centimeters.

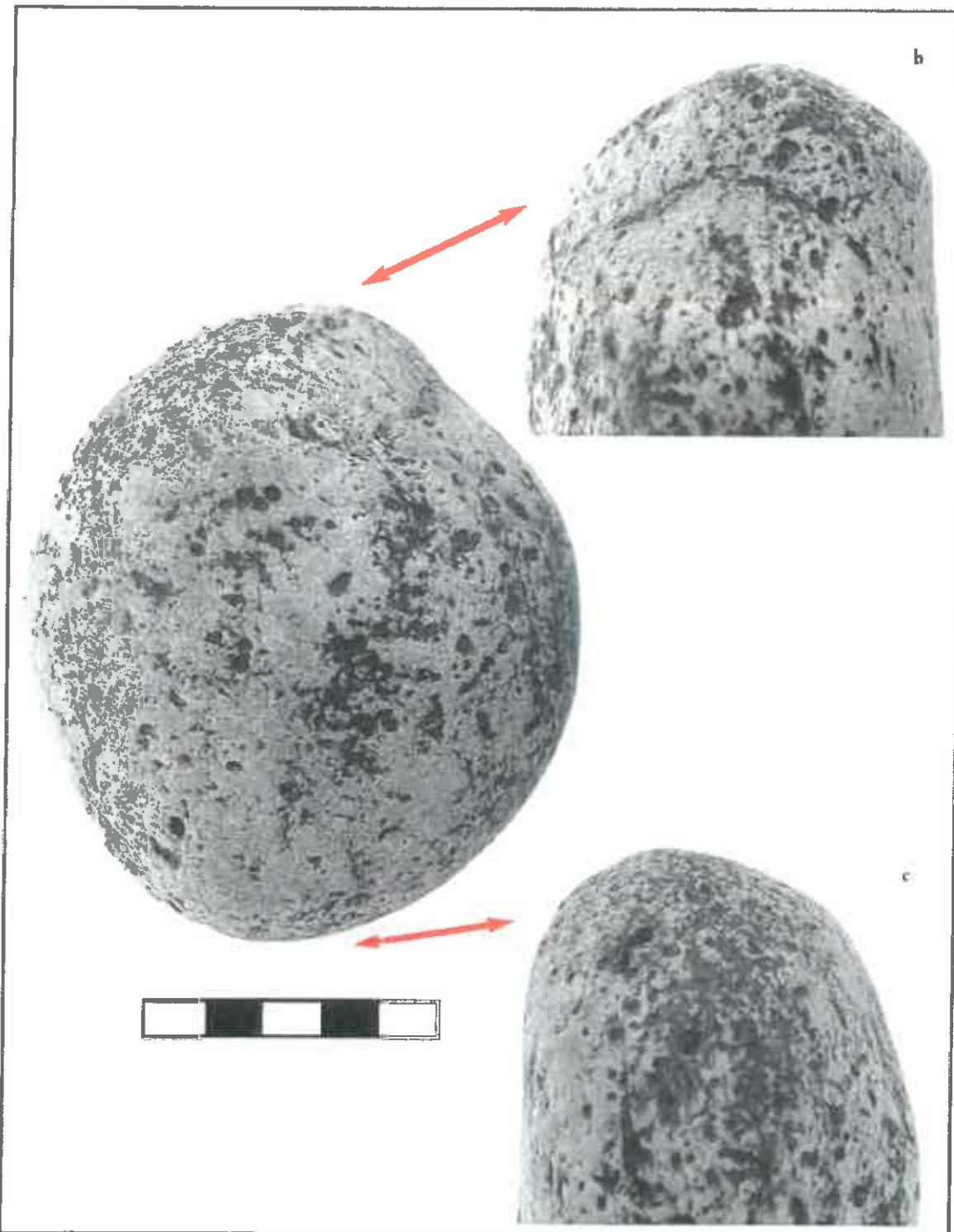


Figure 15. Porphyritic multi-faceted hammerstone (cat. no. 17-107) from CA-MNT-17B (AC 593E). This specimen has two clearly-defined facets on each end. Scale is in centimeters. B: Oblique view of the upper end. C: Oblique view of the lower end.

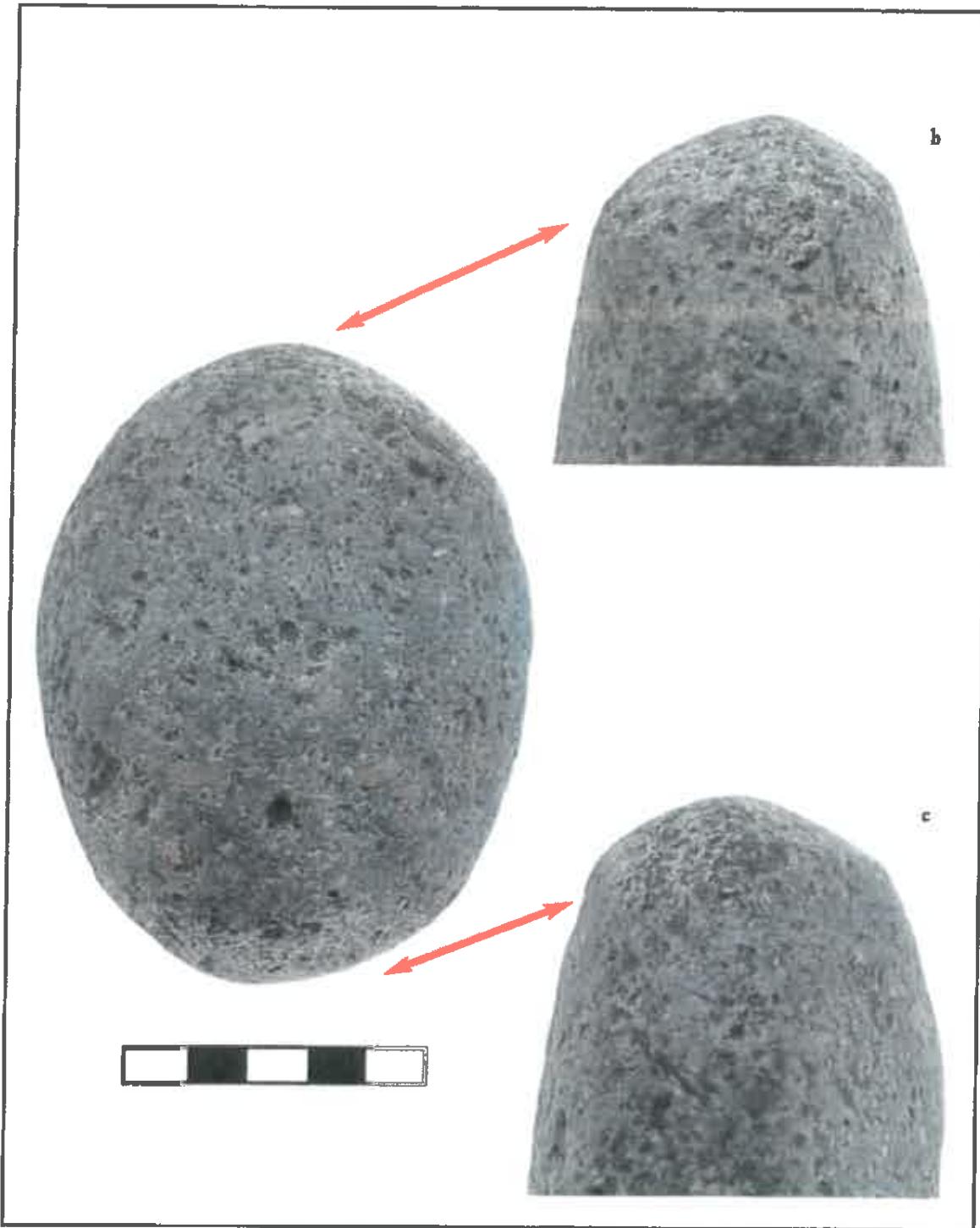


Figure 16. Conglomerate multi-faceted hammerstone (cat. no. 17-101) from CA-MNT-17B (AC 593E). This specimen has two clearly-defined facets on the upper end and three on the lower end. Scale is in centimeters. B: Oblique view of the upper end. C: Oblique view of the lower end. See Figure 17 for an additional view of the lower end.

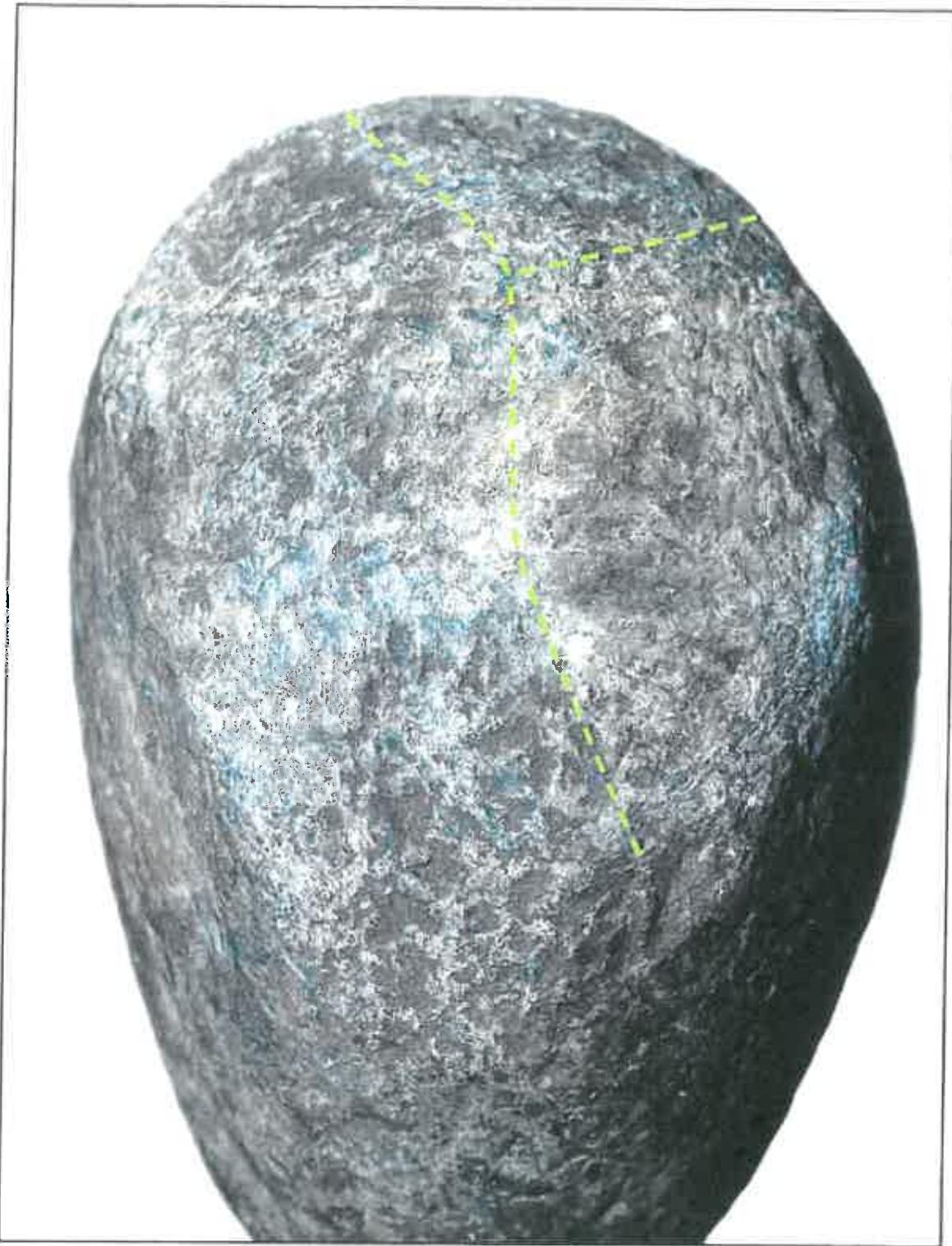


Figure 17. View of the lower end of conglomerate multi-faceted hammerstone shown in Figure 16 (cat. no. 17-101). The approximate locations of the three facets are outlined.

Abalone shell fragments and a few whole shells suggested the presence of an abalone pavement type of deposit in this area. The lower portions of the site consisted of dark gray sandy midden. A small abalone feature was encountered at a depth of about 75-100 cm in one corner of the foundation. The only other cultural materials recovered were fire-affected rock, chert debitage, and two battered stone artifacts, one granitic and one of sandstone.

Two radiocarbon dates were obtained from the abalone feature at about 100 cm. The calibrated intercept for a 0.4 g piece of mussel shell was A.D. 1400 (see Figure 18) while a piece of abalone shell weighing 65.8 g dated to A.D. 1320. These dates are within the range of previous dates obtained from both CA-MNT-17A and CA-MNT-17B.

AC 4310

This project involved monitoring excavations for construction of a new house with a large basement. No screening was done during the project.

Most of the 27 artifacts recovered were granitic stones with a variety of end- and edge-battering. Also recovered were one granitic pestle, one granitic mano fragment, and seven ground stone artifacts, most of which appeared to be grinding slabs or slab fragments (see Figure 19). Two of the battered stones were also pitted. Finally, several andesitic artifacts were found, including three which may have functioned as choppers.



Figure 18. Fragment of mussel shell used for sample Beta-265691, from CA-MNT-17B (AC 4005). This sample weighed 0.4 g. Scale is in centimeters.

Other midden constituents were extremely scarce; one piece of large mammal bone and one chert flake were all that were noted. Finally, since no shell was recovered, no radiocarbon dating was performed.

This area of CA-MNT-17 has some of the characteristics of what we are beginning to recognize as an old use or habitation area of some kind. These are often found to have little or no shell or bone. This area of the site could easily be Early Period or Archaic in age.



Figure 19. Granitic grinding slab fragment (cat. no. 17-S23) from CA-MNT-17B (AC 4310). Scale is in centimeters.

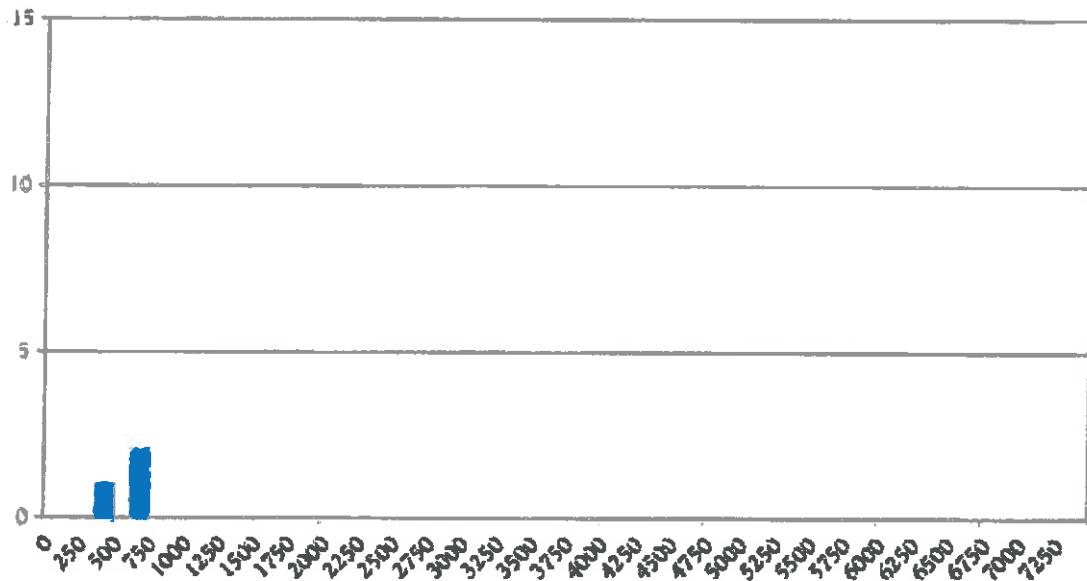


Figure 20. Radiocarbon dates from CA-MNT-17B.

Summary, CA-MNT-17B

Less is known about CA-MNT-17B because the deposit in that area is sparse, and fewer projects have been conducted.

In general, it appears that the deposit on the western side of CA-MNT-17B resembles that to the west, designated CA-MNT-17A. It is characterized primarily by an abalone pavement, which becomes increasingly sparse with distance from the coast.

However, the deposit on the eastern side, east of Isabella Avenue, and particularly the northeastern portion, may contain Early Period or even Archaic components. The site appears to grade into CA-MNT-1286 with no definite boundaries.

CA-MNT-17C

Although the last area of CA-MNT-17 to be recorded and investigated, CA-MNT-17C appears to be the most significant. It is currently the oldest site in Monterey County, and among the oldest on the central California coast.

When the individual projects are examined and synthesized, we find that this portion of the site has produced considerable information. Unfortunately, because it is covered with single-family dwellings the projects have been small and scattered, and no site-wide synthesis of the information has been prepared until now.

AC 899

The first subsurface investigation to deal with CA-MNT-17C was a small two-unit excavation conducted in 1987 for a house demolition and rebuild project. Two 1 x 2 meter units reached depths of 180 and 160 cm, and two small backhoe trenches were excavated to sample other areas of the property.

The investigations recovered 35 artifacts. This excavation was unusual in that 17 of the artifacts (about 49%) were shell. These included 16 *Olivella* shell beads, four of which are illustrated in Figure 22, and one *Haliotis* pendant blank (Figure 21b).

Battered or abraded stones, normally the most frequent artifacts, numbered only 7. One of these was also pitted. Other artifacts included 3 points or bifaces, 1 intact (Figure 23b) and 2 fragmentary, 1 drill (Figure 23a), 3 utilized flakes, 2 mortar fragments, 1 grinding slab/anvil fragment, and 1 notched bone tool tip (Figure 21a).

The bone included both fish and non-fish species. The budget did not permit analysis of the fish bone when the project was conducted, but that collection has since been analyzed and will be included in a forthcoming Ph.D. dissertation from U.C. Santa Cruz.

The non-fish bone consisted almost entirely of very small fragments (see Figure 26). Only one bone, the right femur of a juvenile sea otter, was whole. Because of its fragmentary nature, no analysis was attempted with this collection.

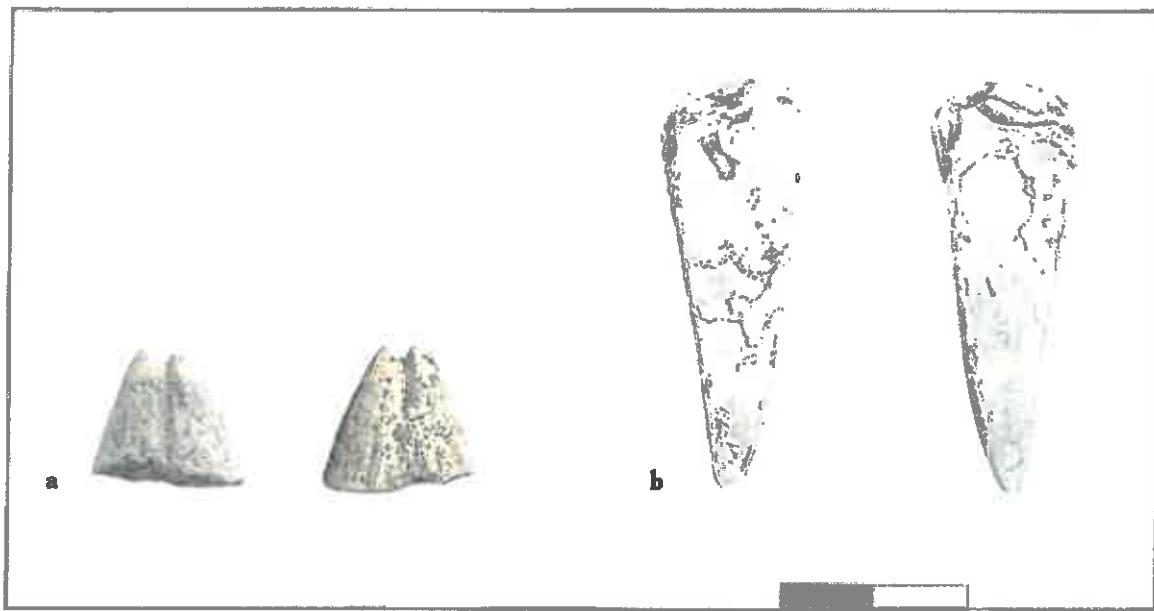


Figure 21. Artifacts from CA-MNT-17C (AC 899B). A: Notched bone tool tip fragment (cat. no. 17-899B-006). B: *Haliotis* pendant blank (cat. no. 17-899B-019). Scale is in centimeters.

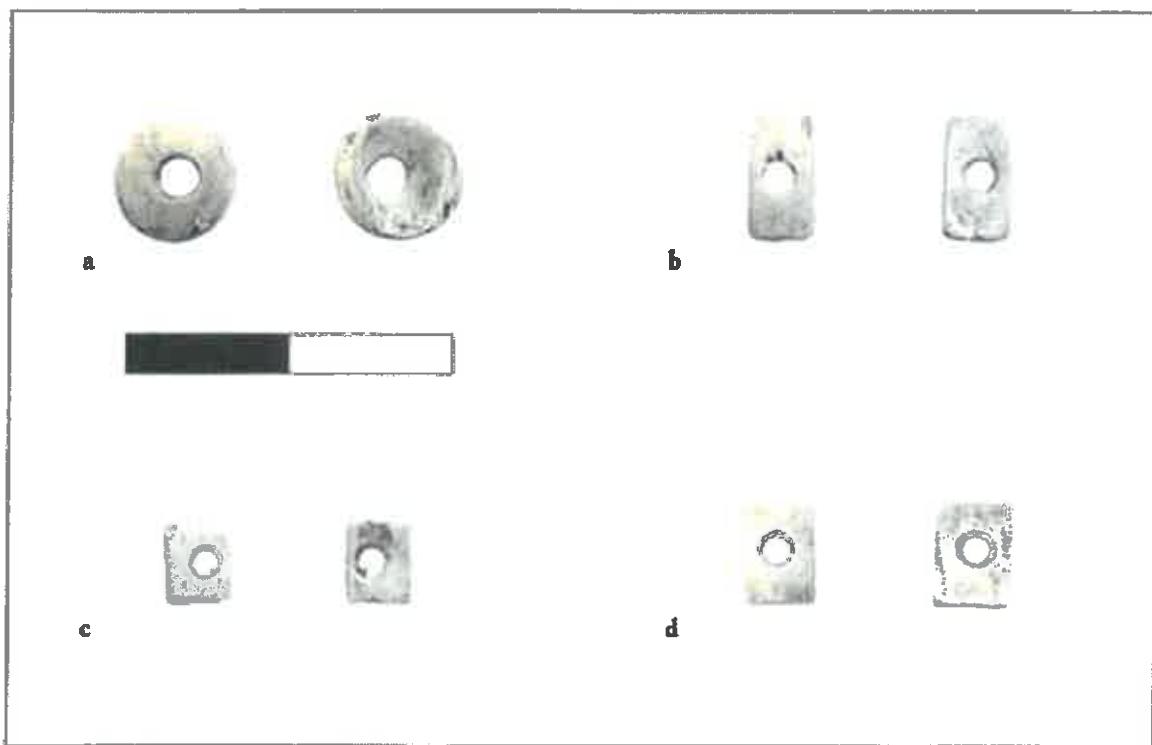


Figure 22. Shell beads from CA-MNT-17C (AC 899B). A: Olivella E2b bead (cat. no. 17-899B-014). B: Olivella M1a? bead (cat. no. 17-899B-030). C: Olivella L2b bead (cat. no. 17-899B-031). D: Olivella L2b bead (cat. no. 17-899B-032). Scale is in centimeters.

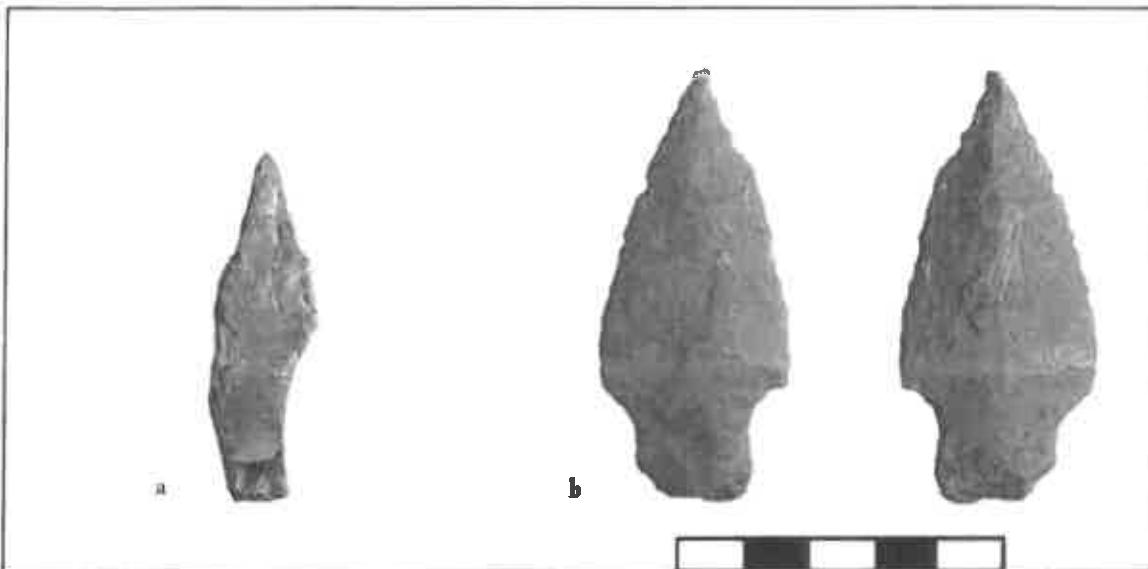


Figure 23. Flaked stone artifacts from CA-MNT-17C (AC 899B). A: Chert drill (cat. no. 17-899B-021). B: Rossi square-stemmed chert point with traces of asphaltum on the base (cat. no. 17-899B-034). Scale is in centimeters.



Figure 24. Grinding slab/anvil (cat. no. 17-899B-042) from CA-MNT-17C (AC 899B). This granitic stone appears to have served as a grinding slab until it was broken, after which this fragment was used as an anvil stone. Scale is in centimeters.

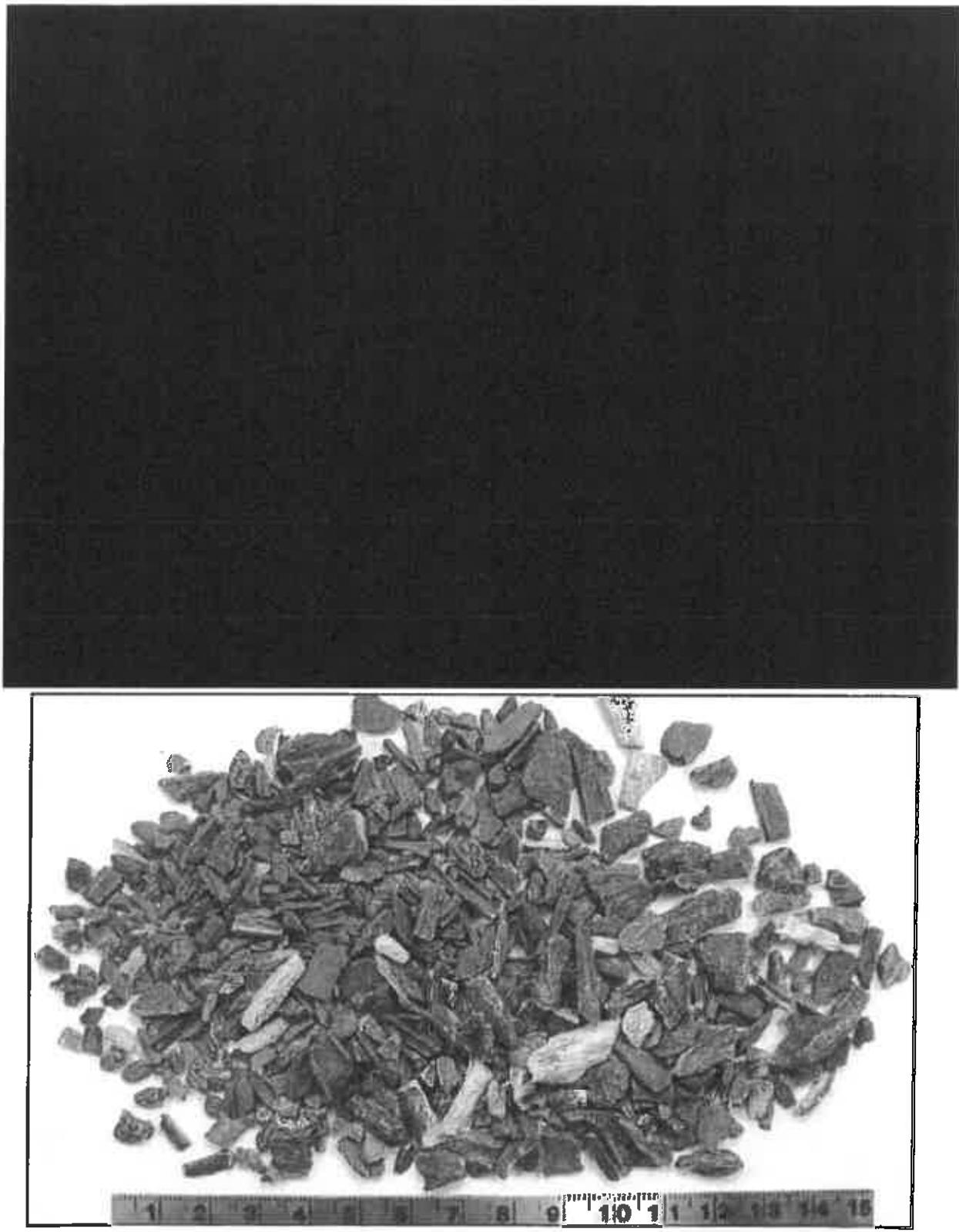


Figure 26. Non-fish bone from Unit 2, 60-70 cm at CA-MNT-17C (AC 899B). Scale is in centimeters.

Table 1. Fish species recovered from CA-MNT-17C (identification by Cristie Boone).

Taxon	Common name	NISP (AC #)				
		899	2400	2512	2563	2932
Actinopterygii	Ray-finned fishes	721	353	91	102	167
<i>Archoplites interruptus</i>	Sacramento perch	1				
Atherinopsidae	Silversides	9	2		1	5
Carangidae	Scad, yellowtail, jackmackerel			2		
Clupeidae	Sardine and herring	55	24	24	69	129
Cottidae	Sculpin	11				
<i>Embiotoca jacksoni</i>	Black surfperch					2
<i>Embiotoca</i> sp.	Black or striped surfperch	1				
Embiotocidae	Surfperches	48	22	3	3	8
<i>Gibbonsia metzi</i>	Striped kelpfish	1				
<i>Gibbonsia</i> sp.	Kelpfish	1				
Hexagrammidae	Greenlings	10	1	1		
<i>Hexagrammos</i> sp.	Kelp or rock greenling	20	16	6	6	2
<i>Merluccius productus</i>	Pacific hake				5	3
<i>Oncorhynchus</i> sp.	Salmon and trout	17	1		4	
<i>Ophiodon elongatus</i>	Lingcod	9	34	3	1	
Pleuronectiformes	Flatfishes	1	1			
<i>Porichthys notatus</i>	Plainfin midshipman	7	3		2	11
<i>Rhaebohlius vacca</i>	Pile surfperch	7	5	5		1
<i>Sardinops sagax</i>	Pacific sardine	10			1	9
<i>Scomber japonicus</i>	Pacific/Chub mackerel	1				
<i>Scorpaenichthys marmoratus</i>	Cabezon	63	71	10	8	3
<i>Sebastes</i> sp.	Rockfish	285	179	35	48	37
Stichaeidae	Prickelbacks	86	18	8	12	12

The fish bone has recently been identified by Cristie Boone, a doctoral student at U.C. Santa Cruz, as part of her dissertation research. The basic results are shown in Table 1.

Mussel shell was the dominant species in this portion of the site, but no shell counts were done.

Nine pieces of obsidian debitage were subjected to source and hydration analysis. Four were from Napa (hydration range 3.1-5.9, average 4.4 microns) and five were from Casa Diablo (hydration range 3.1-5.5, average 4.2 microns).

Four radiocarbon dates were obtained from this investigation. The first, on a single piece of red abalone shell, produced a calibrated date of about AD 1300. This documented the presence of a Late Period deposit in this area.

The other three dates were on multiple pieces of mussel shell. In 1987, when this project was conducted, the radiocarbon laboratory we were using request-

ed 50 grams of shell for their samples, and it is very difficult to find such large pieces of mussel shell. Accordingly, multiple-piece samples were often used instead.

Unfortunately, when these multiple-shell samples are used to date a site that has had extensive bioturbation they tend to produce "homogenized" or "averaged" dates. We demonstrated this at CA-MNT-103, in the Cannery Row area, where a portion of the site known to have only Early and Late Period components was dated using a handful of small pieces of mussel shell. They returned a Middle Period date, the one component that was not actually present at that site (Breschini and Haversat 2002b, 2005a).

The three dates on multiple pieces of mussel shell from CA-MNT-17C produced calibrated dates of about 1500, 1900, and 2150 BC. As mixing normally produces averaged dates, these three results suggested that the portion of the site being tested probably

extended back at minimum some 5,000 years, to near the beginnings of the Early Period.

The Rossi square-stemmed point agreed with this general Early Period age assessment (cf. Jones and Hylkema 1988; Jones 2003:160; Jones and Klar 2007:136), while the shell beads were of types associated with the Early and the Late Periods.

AC 2400

The next subsurface investigation at CA-MNT-17C consisted of a single excavation unit followed by monitoring with data recovery. These were conducted in 1996 and 1997 in association with a residential teardown and rebuild project.

The unit was 125 x 122 cm in size because of the need for shoring (using 4-ft. plywood sections). It reached a depth of 240 cm. Field screening was done using 1/8 inch mesh, followed by laboratory washing and sorting of all materials remaining in the screens.

A radiocarbon date was obtained from a single piece of red abalone shell from the 180-190 cm level. The calibrated age was about 2270 B.C.

As the proposed residence included a deep basement, the recommendation was made for

monitoring and data recovery through extensive screening of the excavated soils.

The dominant shellfish in the unit was *Mytilus c.*, which averaged about 90% by weight of all shell recovered in the 1/8 inch mesh screens. The actual figures for the three levels for which shell counts were done were as follows: 70-80 cm — 92.2%; 150-160 cm — 82.3%; and 200-210 cm — 93.0%. The balance of the species included *Tegula*, abalone, barnacle, chiton, etc., all in small quantities.

Based on the radiocarbon date and the level records, the higher percentages of abalone shell were found in strata most likely dating at or less than about 4,400 years ago. The lowest levels of the unit produced smaller quantities of abalone shell. This matches results from other sites, such as CA-MNT-391 (see Figure 28). At that site, 6 out of 8 radiocarbon dates obtained from abalone shell ranged between 3,200 and 4,400 BP.

The artifact inventory was significantly different from the previous project described (AC 899; see Table 2), although the two parcels examined are in close proximity—just across the street from one another.



Figure 27. Non-fish bone from monitoring at CA-MNT-17C (2400). Scale is in centimeters.

First, 16 (49%) of the artifacts from AC 899 were shell, while 12 (7%) of the artifacts from AC 2400 were shell. Given the Late Period age of the cut shell beads from the AC 899 project, this might suggest that the area examined for AC 2400 either had that component scraped away when the original house was built, or that a Late Period component was not present at that location.

Two large side-notched point fragments from AC 2400 (Figure 29a, b) suggest both a considerable antiquity and perhaps trade or influence from the south where they are more frequent. These appear to associate with the Hunting Culture (Jones and Klar 2007:136) or the Hunting Period (Moratto 1984:138). Very few points of this type have been found locally.



Table 2. Artifacts recovered from AC 2400, by attribute.

Artifact or Attribute	Number	%
Bone artifacts	3	1.5
Chipped or flaked stone	33	17.0
Shell artifacts	12	6.2
Anvil stone	1	0.5
Pitted stone	16	8.2
Abraded or ground	16	8.2
Grinding slab	6	3.1
Battered	90	46.4
Faceted handstone	2	1.0
Hammerstone	5	2.6
Mortar	0	0.0
Pestle	3	1.5
Mano	6	3.1
Grooved/incised	1	0.5
TOTAL	194	100.0

Note: the total number of artifacts is 170; a number of artifacts exhibited two or more forms of modification, and those attributes are tallied here separately.

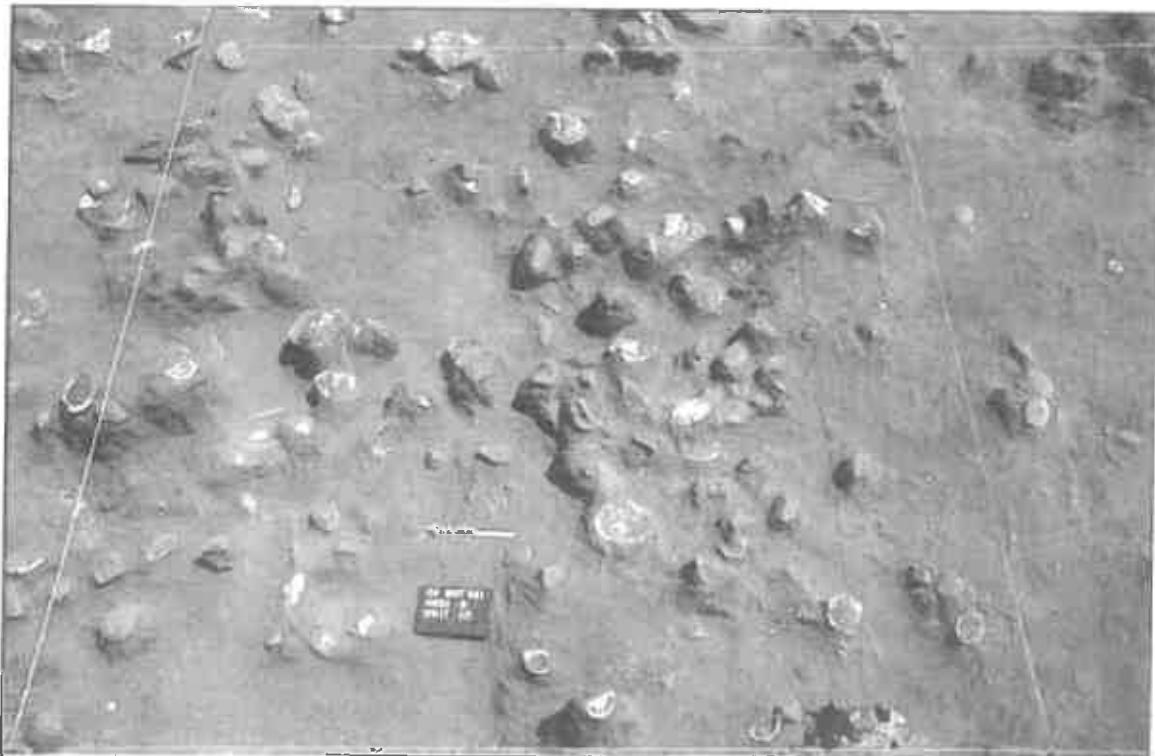


Figure 28. Example of abalone shells in an Early Period deposit (CA-MNT-391). These shells typically do not constitute a contemporaneous layer, but usually span more than a thousand years

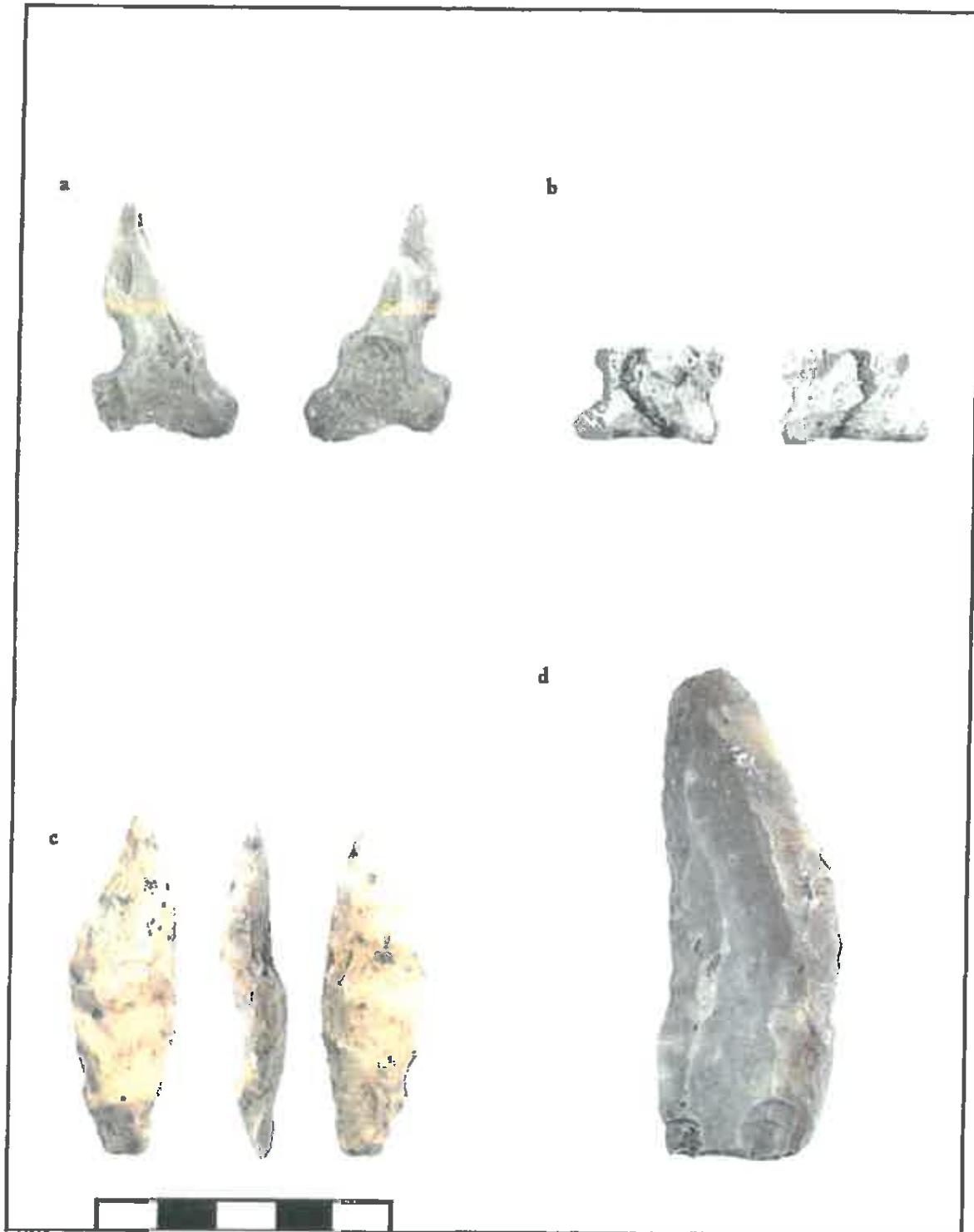


Figure 29. Flaked stone artifacts from CA-MNT-17C (AC 2400). A: Large side-notched chert point fragment (cat. no. 17-2400-146). B: Large side-notched chert point fragment (cat. no. 17-2400-145). C: Chert point (cat. no. 17-2400-148). D: Chert flake scraper (cat. no. 17-2400-155). Scale is in centimeters.

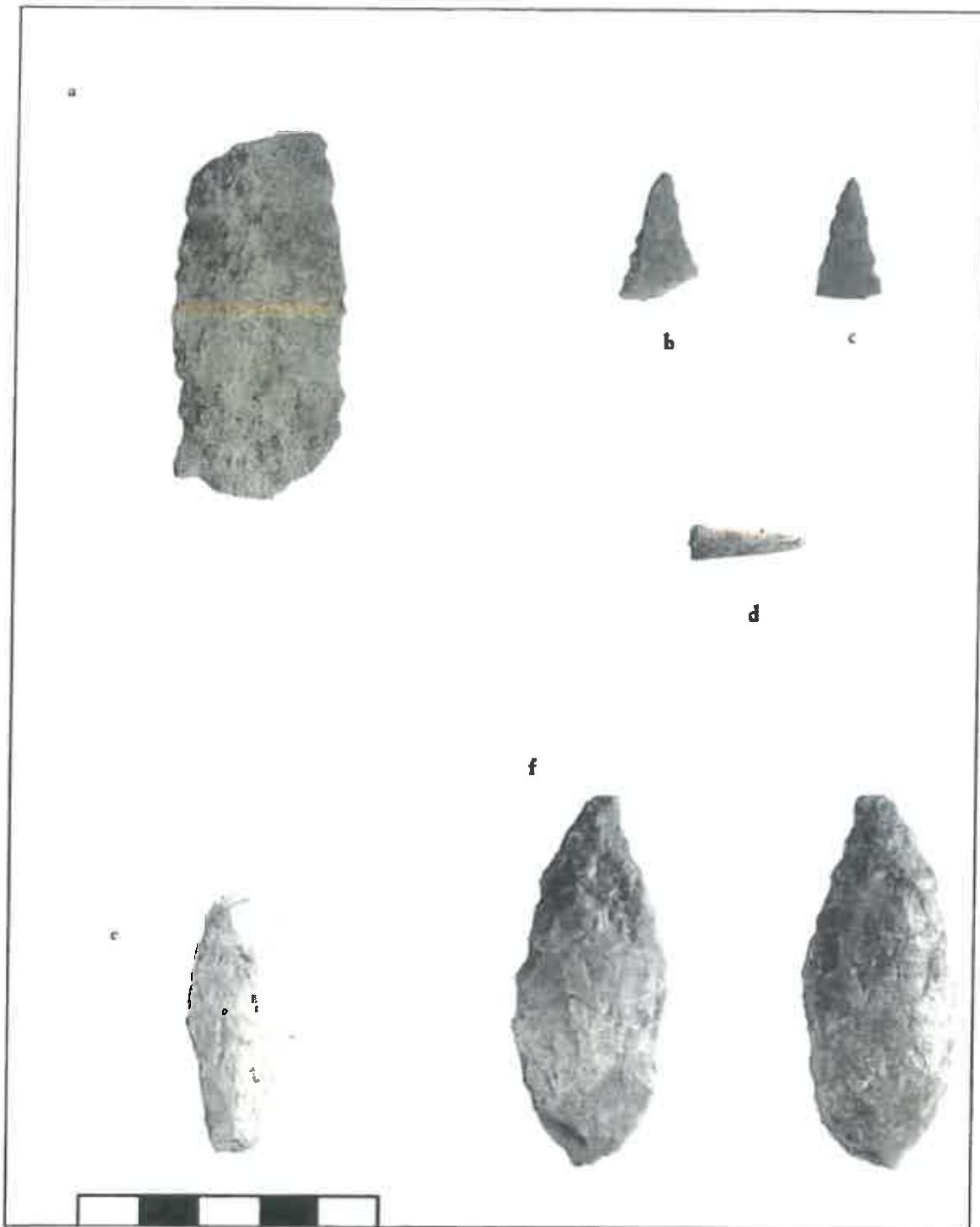


Figure 30. Artifacts from CA-MNT-17C (AC 2400). A: Mudstone point fragment (cat. no. 17-2400-X03). B: Chert point fragment (cat. no. 17-2400-X01). C: Chert point fragment (cat. no. 17-2400-143). D: Bone awl tip (cat. no. 17-2400-133). E: Chert point fragment (cat. no. 17-2400-134). F: Chert point (cat. no. 17-2400-139). Scale is in centimeters.

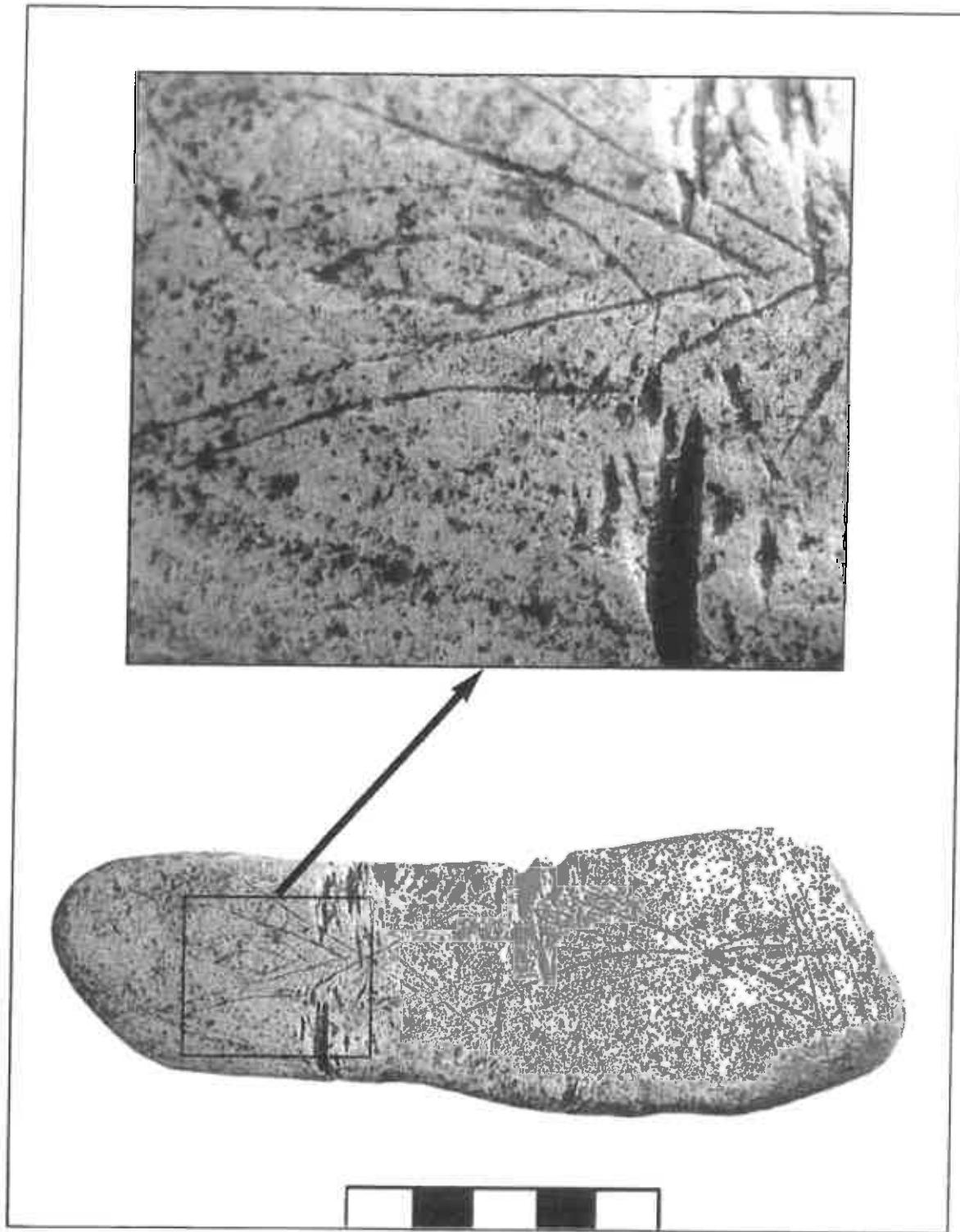


Figure 31. Incised tabular siltstone (cat. no. 17-2400-120) from CA-MNT-17C (AC 2400). Scale is in centimeters.

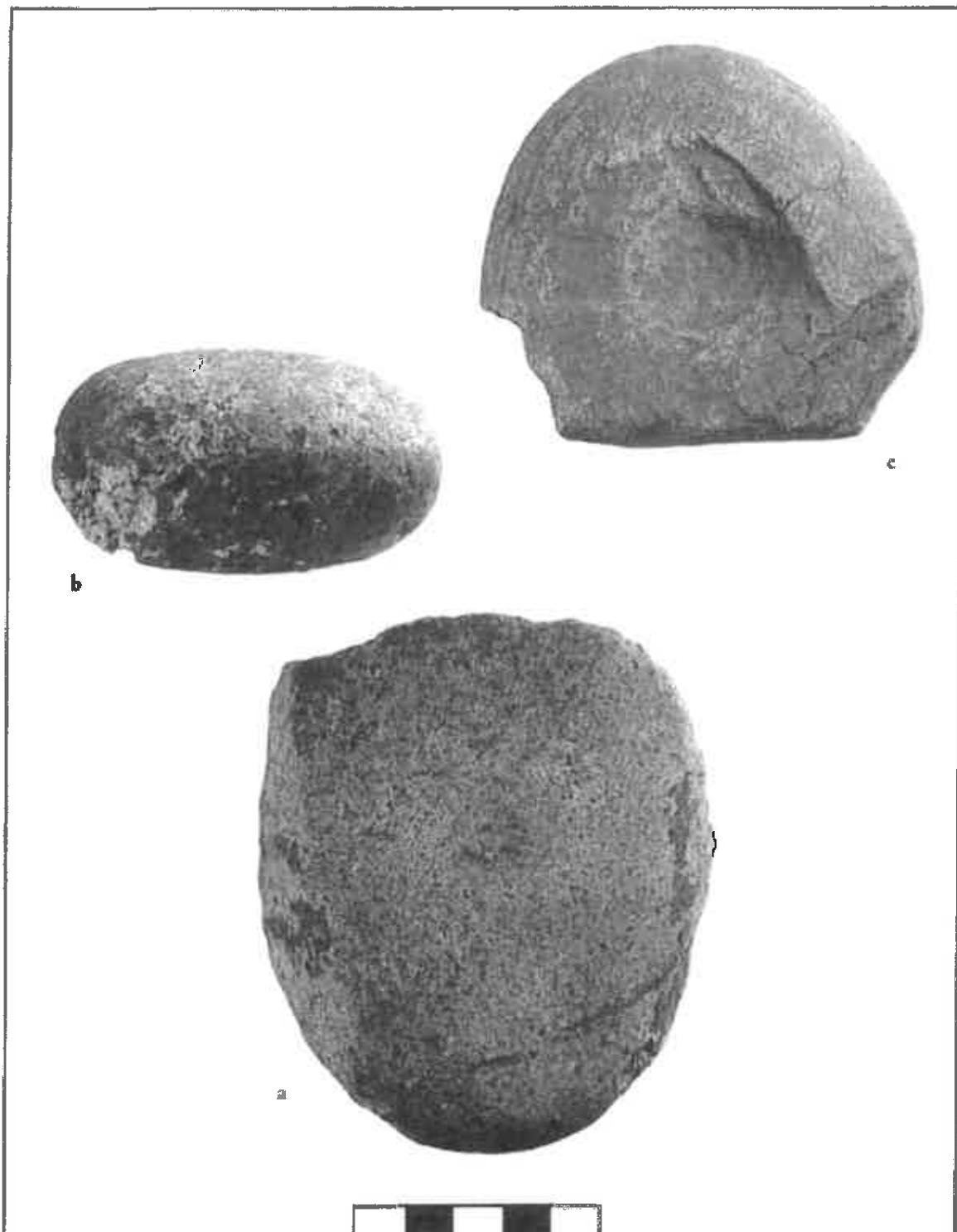


Figure 32. Ground and battered stone artifacts from CA-MNT-17C (AC 2400). A: Granitic bipitted mano (cat. no. 17-2400-194). B: Granitic mano (cat. no. 17-2400-078). C: Edge battered bipitted cobble fragment (cat. no. 17-2400-193). Scale is in centimeters.

Another possible difference between these two portions of CA-MNT-17C is the non-fish bone. As noted above, the units excavated for project AC 899 produced only small fragments of bone (Figure 26), while AC 2400 across the street produced many larger pieces (Figure 27). This may be due in part to the different sampling methods used, but it does appear that large mammal bone was present in higher quantities in the latter project. The large mammals included both elk and sea mammals.

The fish bone from this investigation has been identified. The basic results are shown in Table 1.

Eleven pieces of obsidian debitage were subjected to source and hydration analysis. Eight were from Napa (hydration range 2.4-6.3, average 4.0 microns) and three were from Casa Diablo (hydration range 3.4-4.0, average 3.6 microns).

AC 2512

The archaeological investigations associated with this project consisted of excavation of a single 125 x 122 cm unit followed by monitoring. All investigations were conducted during 1998 in association with a residential teardown and rebuild project.

The unit was excavated in 10 cm vertical increments with the exception that the uppermost levels, consisting of dense lawn and a massive root base, was excavated as 0-20 cm and discarded.

A shell count was conducted at the 120-130 and 130-140 cm levels. These two levels had an unusual

number of abalone shells. If this part of the site is similar to other nearby areas, it is most likely that these abalone shells date somewhere around 3,500-4,500 years in age. Since this layer was considerably above the bottom of the site this seems reasonable. In spite of the presence of several large abalone shells, mussel shell amounted to about 54.9% by weight, abalone shell about 40.6% by weight, with chiton, barnacle, *Tegula* and other species making up the balance.

The bone was similar to that illustrated in Figure 26. With the exception of an intact sea mammal canine tooth, virtually all the non-fish bone was extremely fragmentary. The fish bone from this investigation has been identified, and the results are shown in Table 1.

Only four artifacts were recovered from the test unit. Of these, two were catalogued as *Olivella* spire-locked beads, but more recent studies suggest that these could just as easily have been eroded naturally by sand and wave action. For an excellent discussion of artifactual vs. natural *Olivella* shells see Mikkelsen et al (2004:184-189).

The other two artifacts were a projectile point base and a hammerstone. The projectile point (Figure 33) is most likely a contracting stem, which has a fairly wide temporal span and which is commonly found in Early Period contexts on the Monterey Peninsula. The narrowness of the stem does appear atypical.

Little information was obtained from this project, and the lower reaches of the midden deposit were not reached. We estimate that excavation in the unit was stopped at least a meter from the bottom of the deposit, and subsequent construction work was limited to the upper portions of the midden by the mitigation plan so as to reduce the adverse impacts to the site.

AC 2563

This was another small project conducted in association with the teardown and rebuilding of a residence.

A single test unit, excavated in 1997, extended to a depth of 210 cm. The cultural deposit appeared to consist of two separate cultural components. The dividing line between these suspected components could not be determined in the sidewall of the unit, but constituents appeared to change at about the 80-90 cm level.



Figure 34. Projectile point base (cat. no. 17-2512-001) from CA-MNT-17C (AC 2512). Scale is in centimeters.

The uppermost component included a diffuse feature of rocks and two abalone shells in the 40-50 cm level and several intact abalone shells in the 60-70 cm level. This is most likely associated with the Late Period, and may represent a gathering site rather than a village site. Beginning in the 80-90 cm level there was an increase in mussel shell and a decrease in abalone shell. This is tentatively interpreted as the dividing line between the two components.

The lower component was characterized by an overall decrease in midden constituents and a change from abalone to mussel as the primary shellfish species. A second rock feature at the 120-130 cm level included a small cluster of approximately three abalone shells. The abalone shells continued into the 130-140 cm level. This is most likely an Early Period deposit, and probably represents the same feature seen elsewhere in CA-MNT-17C and thought to date to approximately 3,500-4,500 BP.

The bone was extremely fragmentary, as is often the case for CA-MNT-17C. One larger fragment, however, appears to represent a long bone from a large mammal such as elk. The fish bone from this investigation has been identified, and the results are shown in Table 1.

Only eight artifacts were found during the investigations. These included two *Olivella* spire-locked beads (which as noted above could be naturally occurring), two very small biface fragments and a scraper fashioned from chert, and three battered or otherwise modified stones. One of these was a multi-faceted handstone that was subsequently battered (Figure 35). These appear to be found most commonly in the Early Period or perhaps late Archaic deposits.

The information from this project suggests that the deposit in this area of CA-MNT-17C contains less

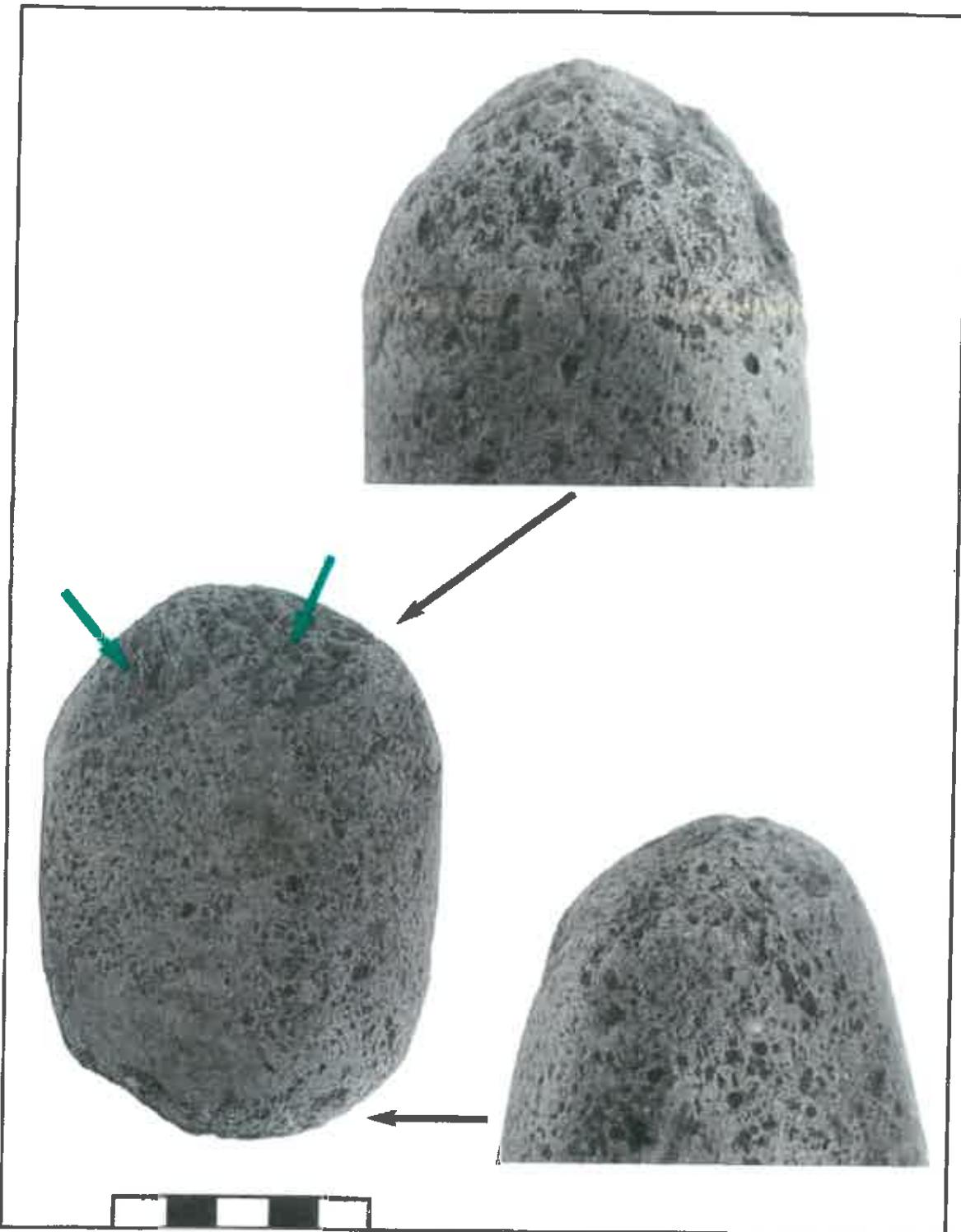


Figure 35. Multi-faceted and battered quartzite handstone (cat. no. 17-2563-009) from CA-MNT-17C (AC 2563). There appear to have been two to three facets worn on each end of the stone. The green arrows show two of the flake scars added sometime after the facets were created. Scale is in centimeters.

material than areas farther to the east and closer to the marsh and lagoon.

AC 2932/Busby (2003B)

Investigations on this parcel began in 2000 when we prepared an archaeological survey report for a proposed gate house with lower level garage, as well as an addition to the existing residence. Because of the known sensitivity of the area we recommended a test excavation. The project was subsequently redesigned to remove the lower level garage and to employ shallow foundations. Accordingly we recommended the project proceed with only a monitor as the information we had at that time suggested that the cultural deposit was buried beneath several feet of sterile dune sands.

When we began monitoring in 2003 the project had been redesigned again, without our knowledge, and in addition to the shallow foundations it also employed caisson foundations. These were to be 18 inches in diameter and 10 or more feet in depth.

The first three caissons produced dark midden soil at a depth of about five feet, and this continued to at least the bottom of the caissons. Shell, bone, fire altered rock, and other cultural materials were noted in the recovered soils.

However, when two or more auger holes were excavated in close proximity the sidewalls collapsed. The first time caissons were placed close together they collapsed into one another, eventually growing into a single hole about 8.5 feet in diameter (Figure 36). This one hole alone resulted in the disturbance of about 12.5 cubic meters of intact archaeological deposit.

When the holes started to collapse the resulting damage to the archaeological site was judged to be excessive and the Monterey County Planning and Building Department was notified. They issued a stop work order and a Senior Planner (Lynne Munday) visited the site. At his request, mitigation recommendations were formulated and submitted to the County

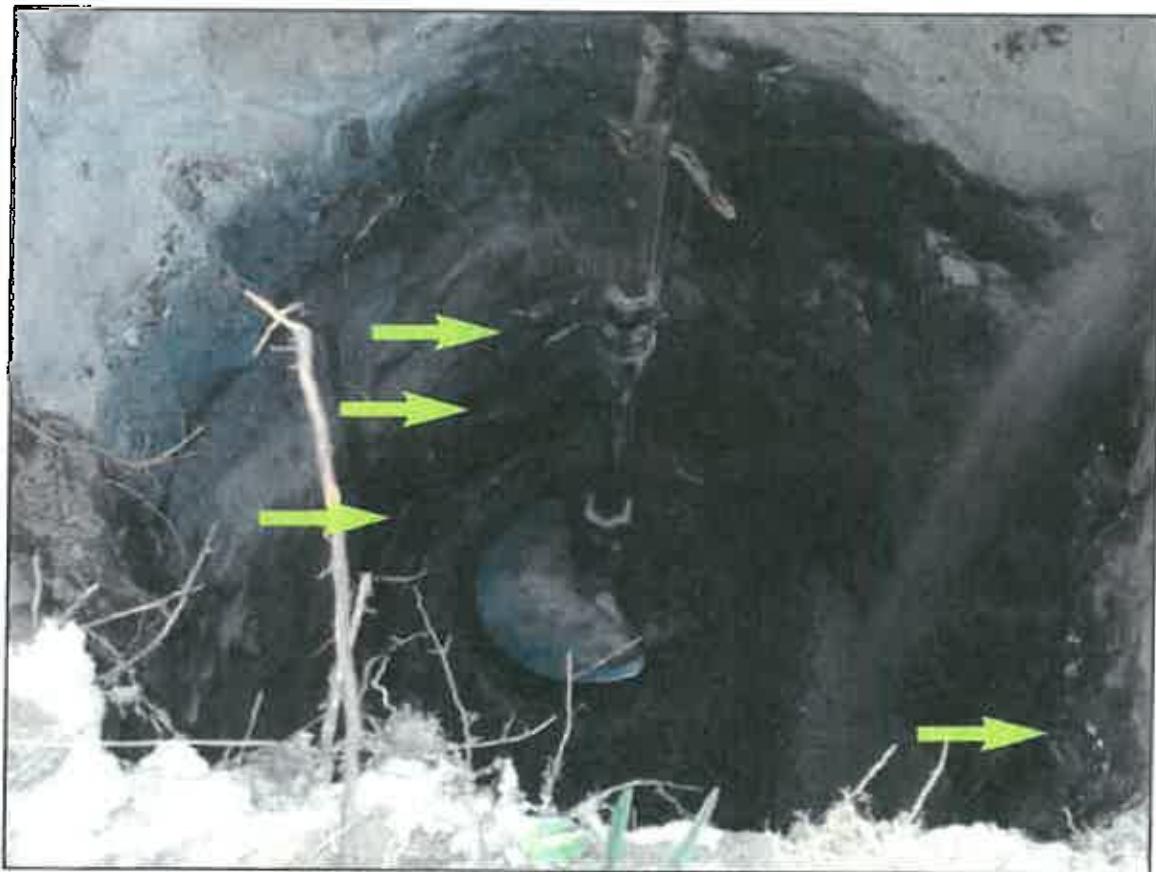


Figure 36. Caisson holes number 5 and 6 collapsed, creating one large hole. Note the dark midden in the lower sidewalls. Some of the many shellfish remains are marked by arrows. In spite of the depth, the bottom of the deposit was not reached.



Figure 37. Another view of the sidewall of caisson holes number 5 and 6. Some of the many shellfish remains are marked by arrows. These abalone shells appear to have constituted a feature such as noted elsewhere in CA-MNT-17C.

Planning department and the property owner for approval.

Screening of the disturbed soils was also conducted to recover cultural materials.

The recommended mitigation measures, approved by the County Planning Department, included screening of disturbed soils, analysis of recovered materials, approximately 20 radiocarbon dates, and preparation of a final technical report containing the scientific findings.

At this point another archaeological firm was hired to continue the project. To date we have seen no evidence that any of these specific recommendations, approved by the County Planning Department, were fulfilled.

Monitoring was conducted for the remaining portions of the project, and a report was produced (Busby 2003b).

This subsequent monitoring project apparently produced only one artifact, a mortar with asphaltum on the rim.

The report noted that the monitor inspected a test trench at the location proposed for a second residence and the lower level garage, which would require excavation to 18-20 feet below existing grade. The report states:

This trench was initially 12 feet long, two feet wide, but collapsed due to the unstable sandy soil. It was widened an additional three feet to reach a maximum depth of approximately six feet. The characteristic light gray soil transitioned abruptly to a black color at approximately six feet below the present surface—a depth noted elsewhere on the property. Shell flecks were also observed at this depth. However, no prehistoric artifacts or

ecofacts or other definitive evidence of prehistoric occupation were observed as a result of the trench excavations [Busby 2003b:12].

We have not yet seen a report on monitoring of this residence and lower level garage, and it is possible that it was never built or that no monitoring took place.

A subsequent report on an adjacent parcel refers back to this project (Reynolds), and notes:

The results suggest a low sensitivity for exposing significant prehistoric archaeological resources within the cultural deposit present between 5.5 and 7.4 feet below the surface and adjacent to the southern property line. The cultural sediment yielded no artifacts and/or features and ecofactual material. This layer appears to extend to the south to the adjacent Reynolds' property. It was exposed on this property in 2003 during the extensive grading and excavation associated with a house addition and sewer/utility installation. Archaeological monitoring of the subsurface construction from the surface to depths of 8-10 feet did not yield any archaeological materials or features further suggesting the sediments have a low sensitivity for cultural resources [Bushy 2010:3-4].

From these two reports we find no evidence that any significant data recovery, radiocarbon dating, or archaeological analysis took place for this project. Rather, it was concluded that no archaeological materials or features were likely to be found as there was "a low sensitivity for cultural resources."

Unfortunately, this conclusion was incorrect.

From our monitoring, and the limited screening and data recovery we conducted before we were removed from the project, we recovered six artifacts and noted the presence of a cultural feature in one of the caissons (Figure 37).

The artifacts included three battered stones, a hammerstone, a fishhook fragment (Figure 38a) and the tip of a chert projectile point (Figure 38b). The fishhook fragment suggests a Middle or Late Period date, as five radiocarbon dates obtained on fishhook fragments found elsewhere on the Monterey Peninsula have returned a calibrated range of about 850-2100 BP. The projectile point tip is non-diagnostic.

The feature is a cluster of abalone shells exposed in caissons 5 and 6 (Figure 37). Given its position in the caisson, and based on other information from CA-MNT-17C, it is likely that this feature dates to somewhere around 3,500-4,500 years BP.



Figure 38. Two artifacts recovered from CA-MNT-17C (AC 2932). A: Mussel shell fishhook fragment (cat. no. 17-R-03). B: projectile point tip fragment (cat. no. 17-R-07). Scale is in centimeters.



Figure 39. Fragment of mussel shell used for dating CA-MNT-17C (AC 2932). This sample weighed 19.3 g, and was designated Beta-207174. Scale is in centimeters.

The non-fish bone included over 300 g of material. We noted the presence of deer and elk, as well as birds and smaller species, but no formal analysis could be conducted.

The fish bone from this investigation has been identified, and the results are shown in Table 1. A total of 730 individual bones were identified to at least the family level. Cabezon, lingcod and other rockfish were the dominant species, although smaller species such as sardine and herring were also present.

Finally, because no radiocarbon dating had been done for this project, we subsequently submitted one of the nearly 75 shell samples we had recovered during our portion of the project (Figure 39). It returned a calibrated age in excess of 6,300 years in age. At the time it was obtained, it was the second oldest radiocarbon date from the Monterey Peninsula.

All of this information, obtained during a very limited monitoring project that was terminated early, suggest that this portion of CA-MNT-17C is both important for addressing regional research questions and significant/unique under California state law. It also calls into question the methods employed and findings produced by Busby's (2003b) project.

AC 3242/Busby (2003A)

These projects, conducted during 2002 and 2003 consisted of three parts: a preliminary reconnaissance, a plan review and cultural resources mitigation plan, and finally a monitoring report. The construction project was the demolition and rebuilding of a residence.

Our preliminary reconnaissance, which included subsurface augering, found midden soil to a depth of at least one meter. The upper portions of the site had been disturbed to about 24 inches. We recommended that project impacts be limited to that disturbed area, and that a final plan review be conducted. The decision to try to limit impacts was due in part to the presence of human remains on two adjacent parcels.

The final plan review found that foundations would have to extend deeper than 28 inches, and would thus impact undisturbed archaeological materials. We made a series of recommendations designed to recover archaeological data, including screening of previously undisturbed soils, recovery and analysis of cultural materials, 10-12 radiocarbon dates, and preparation of a final technical report. These recommendations were subsequently incorporated as permit conditions.

The monitoring report (Busby 2003a) found that:

No prehistoric or significant historic era archaeological material was exposed during

either demolition of the former residence at 26439 Carmelo Street or subsurface grading and trench excavation for the new residence. In addition, no samples suitable for standard and AMS radiocarbon dating (Condition 9.D.1) were present [Busby 2003a: 2].

Additionally, it was noted elsewhere in the report that:

No cultural materials exposed during construction [Busby 2003a: 4].

In spite of the permit conditions, which required the recovery and analysis cultural materials sufficient to reduce construction impacts to a less than significant level, the monitoring report (Busby 2003a) produced almost no archaeological data and no radiocarbon dates. The excuses given were that "no prehistoric or significant historic era archaeological material was exposed..." and "there was a "lack of suitable material for dating."

However, the monitoring report details finding abalone and mussel shell, cobbles, a possible prehistoric feature, and one piece of bone which was not identified to species. One of the photographs attached to the report, Photo 10 (see Figure 40 of this report), appears to show intact archaeological deposits and a feature, and soil samples from the area contained 1-2% shell by weight. This is far more than the "shell flecks" mentioned in the report. And this is far different from "no prehistoric...archaeological material was exposed" and "lack of suitable material for dating."

This information in the report raises serious questions about the methods employed during this monitoring project, the interpretations applied to the materials observed, as well as the conclusions.

Interestingly, the geotechnical report showed black soil and shell fragments to a depth of ten feet. These, of course, are characteristic of prehistoric occupation.

Morley (2006)

This project was small, and consisted of replacement of a collapsed retaining wall at the rear of this parcel. Susan Morley completed a preliminary reconnaissance, conducted monitoring, and prepared a monitoring report during 2006.

In a small footing for the foundation of the wall Morley noted:

When the wall was removed, it immediately was evident that this was indeed a site as the soils were exactly what we expect for shell middens in this region. The shell deposit contained the expected species—*Haliotis* spp. and

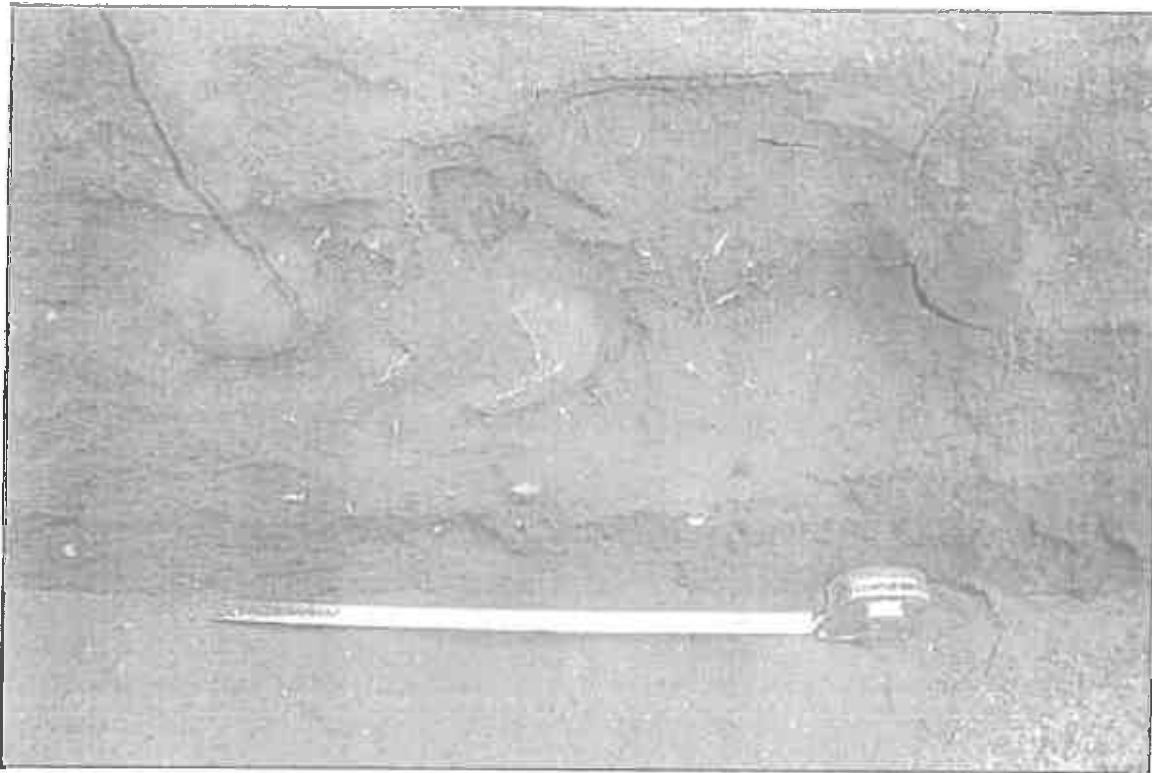


Figure 40. "Photo 10: Abalone Shell and Cobbles (South Wall)" from Busby (2003a). This photograph appears to show intact archaeological materials consistent with a prehistoric feature. It also appears to show dark midden soil with shellfish remains, typically found in this area.

Mytilus spp. incorporated into the dark, greasy, sandy soil [Morley 2006: 5].

Midden soils reached a depth of over 200 centimeters and consisted of sand, shell fragments, and burnt rocks. ...At the bottom of the trench for the new retaining wall the author augered one hole to a depth of approximately two meters and did not reach sterile soils [Morley 2006: 27].

Morley obtained three radiocarbon dates as partial mitigation for the project. These samples, on single pieces of shell, included one Late Period date (ca. AD 1570, or 370 BP) and two Middle Period dates (ca. AD 20 and 125, or 1930 and 1825 BP). The depths of these samples ranged from 40 to 78 cm below grade, so the lowermost portions of the site were not sampled.

For such a small project, the three radiocarbon dates and the descriptions of the site deposit were important contributions.

AC 3998

Prior to our involvement with this project, Susan Morley conducted a preliminary reconnaissance in 2006 by. Because of the possible presence of cultural materials she recommended an archaeological monitor be present during construction.

We were contacted after the basement excavations were completed to assess whether any cultural resources had been impacted by the excavations. No monitor apparently was present during the excavations.

It was apparent from the sidewalls that approximately one meter of dark gray sandy midden soil had been present. At the base of this midden a thin layer of mixed shell fragments, several fire affected cobble, possible groundstone fragments, and a chert point were noted. Our monitor recovered two arti-



Figure 41. Projectile point fragment (cat. no. 17-3998-02) from CA-MNT-17C (AC 3998). From the side view it can be seen that this specimen is unusually thick. Scale is in centimeters.

facts, including one projectile point fragment (Figure 41).

It was agreed among all parties, and approved by the Monterey County Planning Department, that one radiocarbon date would be done as mitigation for the damage.

A single piece of mussel shell from this lower layer was submitted to Beta Analytic, and returned a calibrated date of 402-171 BC, with an intercept of 345 BC or 2294 BP.

This is one of the few radiocarbon dates from the “gap” between 1200-200 BC (3150-2150 BP) that we have identified for the greater Monterey Peninsula area (see Monterey Peninsula Area Culture Sequence, above). Out of a current total of 597 single-specimen radiocarbon dates, only a small number fall within that range. The reason for this gap is unclear, although we do have some thoughts on the matter.

Busby (2010)

This project was another teardown/rebuild. After a preliminary reconnaissance in 2009 by Susan Morley, in 2010 Basin Research Associates conducted a coring program and subsequently observed and collected samples from a test trench.

Busby (2010) reports on the mechanical excavation of a 3 x 8 foot trench to a depth of about 10 feet, which supplemented the previous coring project. Bus-

by notes that a midden layer was encountered between 5.5 and 7.4 feet below the surface. Busby notes:

The screening of roughly 25-30 gallons of sand yielded less than 32 ounces of shell (dry measure) [2010:3].

The results suggest a low sensitivity for exposing significant prehistoric archaeological resources within the cultural deposit present between 5.5 and 7.4 feet below the surface and adjacent to the southern property line. The cultural sediment yielded no artifacts and/or features and ecofactual material. This layer appears to extend to the south to the adjacent Reynolds property [AC 2932/Busby (2003b), described above]. It was exposed on this property in 2003 during the extensive grading and excavation associated with a house addition and sewer/utility installation. Archaeological monitoring of the subsurface construction from the surface to depths of 8-10 feet did not yield any archaeological materials or features further suggesting the sediments have a low sensitivity for cultural resources [Busby 2010:3-4].

Based on these results, Busby recommended an archaeological monitor during construction.

The subsequent permit issued by Monterey County Planning Commission included mitigation conditions, but also included the puzzling statements that:

Midden is not generally considered to be a significant archaeological resource in itself [Monterey County Planning Commission Resolution 11-018, April 27, 2011, page 3].

No significant cultural resources were discovered during the borings or trench excavation however the potential for significant cultural resources on the parcel exists [Monterey County Planning Commission Resolution 11-018, April 27, 2011, page 7].

We are unaware if the planned demolition/reconstruction project has been completed, or whether any monitoring has been conducted.

Cartier (2010)/AC 4235B

This project was still another teardown/rebuild. It occurred on the same parcel where Morley (2006) monitored the replacement of a collapsed wall and obtained three radiocarbon dates. Her project is described above.

We were subsequently hired in 2008 to conduct a preliminary reconnaissance for the teardown/rebuild,

which included a full basement. After conducting augering and recovering cultural materials to a depth of 160-170 cm (the full length of the auger) we recommended that a subsurface test excavation be conducted. We recommended that a minimum of one unit should be excavated using $\frac{1}{4}$ inch mesh screen with laboratory sorting, and that a minimum of four single-specimen radiocarbon dates should be obtained. We also recommended professional analyses of the various materials recovered. This subsurface excavation was to lead to the preparation of a mitigation plan.

Initially the property owner attempted to convince the County Planning Department that simple monitoring would be sufficient, and submitted a proposal to this effect (Busby 2009). After a meeting on the property among the owner, archaeologists, Native Americans, and the Monterey County Planning Department staff, it was determined that a test excavation would be required.

The test excavation was subsequently conducted in late 2009 by Cartier (2010).

Cartier excavated a single 1 x 1 m unit in 20 cm levels and screened the recovered soils using $\frac{1}{4}$ inch mesh, along with field sorting. The unit reached a depth of 180 cm. Cartier also obtained three radiocarbon dates using mixed shell samples, which are known to produce misleading results in these circumstances.

The excavation produced little in the way of formal artifacts, and the faunal remains were described in a very cursory manner. Overall the report generated little useful scientific information.

Cartier recommended monitoring by both archaeologists and a Native American monitor. He specifically recommended that:

In the event that significant subsurface archaeological materials or features are exposed during excavation, the field archaeologist will have authority to temporarily halt construction to allow these materials to be identified and recovered [Cartier 2010: 16].

During the monitoring, additional artifacts, faunal remains, and other archaeological materials will likely be exposed during the construction and demolition excavation. It is recommended that these materials be recovered for analysis and presented in a final report [Cartier 2010: 16].

A final report of all materials found during monitoring will be written to include description and analysis of all significant artifacts and other data. The completed archaeological report should be submitted to the Planning

Department as a requirement of completing the permit conditions [Cartier 2010: 17].

Monitoring as recommended by Cartier began in early May, 2011 and continued through the end of June. The monitoring was directed by Lynne Munday, assisted by Gary S. Breschini, with Linda Yamane serving as the lead Native American monitor (Breschini, Haversat and Munday 2012a, 2012b).

Below the debris associated with the previous house and its demolition we encountered intact midden extending to a depth about 2.5-3.0 meters on the southwestern (uphill) end of the property. Exact midden depth was difficult to determine because of changes to the original surface which resulted from the previous as well as the current construction.

Initial excavation was at the uphill end of the property, adjacent to the wall monitored by Morley in 2006.

It was quickly evident that throughout the southwestern half of the parcel there was an irregular, but almost continuous layer of cobbles, mixed with abalone shells and a few large mussel shells at about 80-120 cm in depth. We initially recorded portions of this layer as features (Figures 42 and 43), but when it became obvious that it spanned much of the parcel we stopped doing so.

It appears, however, that this layer was an activity surface. Two radiocarbon dates on large pieces of mussel shell returned calibrated ages of about 3650-3700 BP. This agrees with findings in other parts of CA-MNT-17C.

A count of shellfish species was obtained from a soil sample along the rear wall of the property, at a depth of 70-110 cm below the base of the wall monitored by Morley (Figure 44). The results of this count showed about 94% of the shellfish remains, by weight, were mussel shell. This agrees with the results from three auger tests conducted during the preliminary reconnaissance in 2008, which ranged from 94% to 97% (see Table 3).

We have found that mussel shell generally dominates in residential sites on the Monterey Peninsula during all time periods. On the Monterey Peninsula it is rare to find any temporal component in a residential site where mussel shell falls below about 75%, and figures around 90-95% are most common.

Screening, using $\frac{1}{4}$ inch mesh, was also conducted as a part of the monitoring; 52 artifacts and a considerable collection of faunal remains was recovered.

The artifacts, by attribute, are listed in Table 4. In addition to the usual battered, abraded and pitted stones, there was also one faceted handstone. Three projectile points were recovered, one of which is a

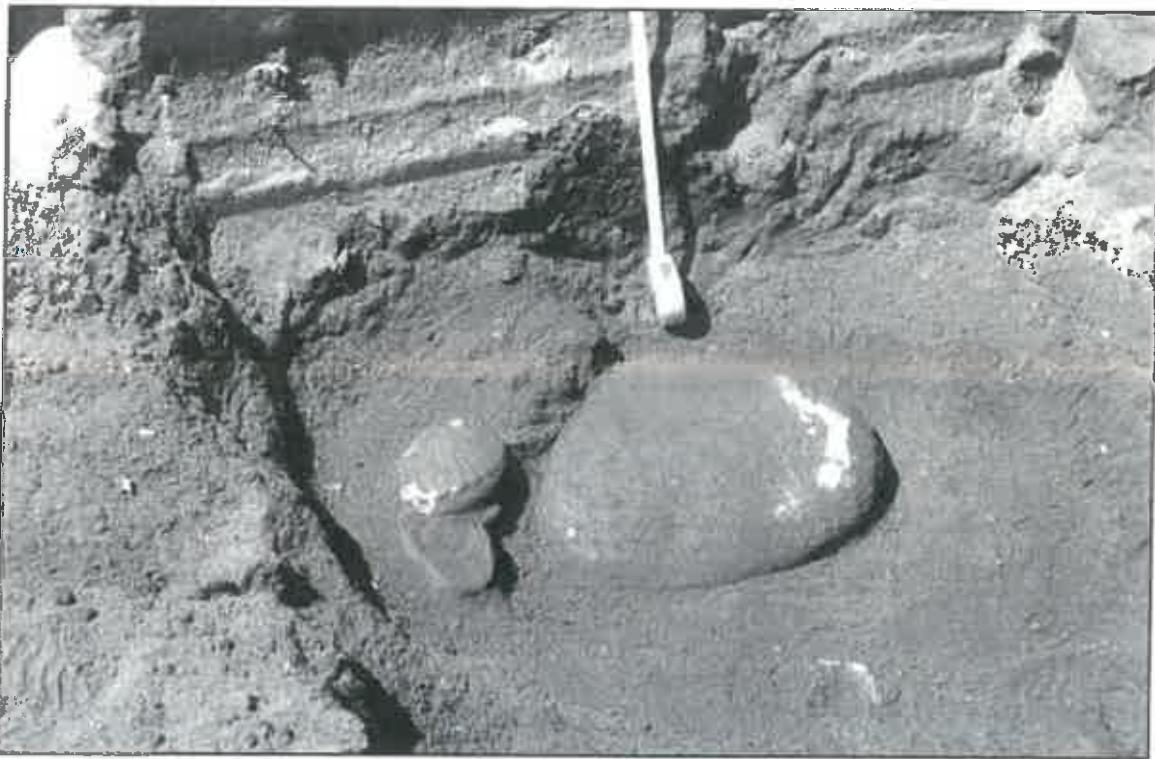


Figure 42. One of the features encountered during the monitoring. These were found generally in the 80-120 cm levels.



Figure 43. Another view of the rock and abalone shell feature which spanned much of the western portion of the site. Two radiocarbon dates provide a date of ca. 3650-3700 BP for at least portions of this feature.



Figure 44. Back wall of construction project, at and beneath the wall monitored by Morley in 2006. The location of the soil sample, 70-110 cm below the base of the wall, is indicated by the oval. Some of the rocks and abalone shells encountered throughout much of the site at that same level can also be seen.

Table 3. Shellfish remains recovered from the project area (depths in cm).

Shellfish	Back wall, 70-110		Auger 1, 60-70		Auger 1, 90-105		Auger 2, 160-170	
	Weight (g)	%	Weight (g)	%	Weight (g)	%	Weight (g)	%
<i>Mytilus</i>	266.5	94.3	83.5	97.4	116.6	97.1	237.4	94.2
Barnacle	6.2	2.2	1.5	1.8	1.3	1.1	6.1	2.4
<i>Tegula</i>	3.8	1.3	0.2	0.2	1.3	1.1	2.7	1.1
<i>Pollicipes</i> sp.	2.6	0.9	0.1	0.1	0.4	0.3	2.0	0.8
Urchin	1.7	0.6	0.1	0.1	0.3	0.2	1.3	0.5
<i>Cryptochiton</i>	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.4
Limpet	0.6	0.2	0.0	0.0	0.0	0.0	0.1	0.1
<i>Haliotis r.</i>	0.4	0.1	0.1	0.1	0.0	0.0	0.1	0.0
Crab	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1
Chiton	0.4	0.1	0.2	0.2	0.1	0.0	1.0	0.4
Periwinkle	0.3	0.1	0.0	0.0	0.1	0.0	0.1	0.0
TOTAL	282.5	100.0	85.7	100.0	120.1	100.0	252.1	100.0

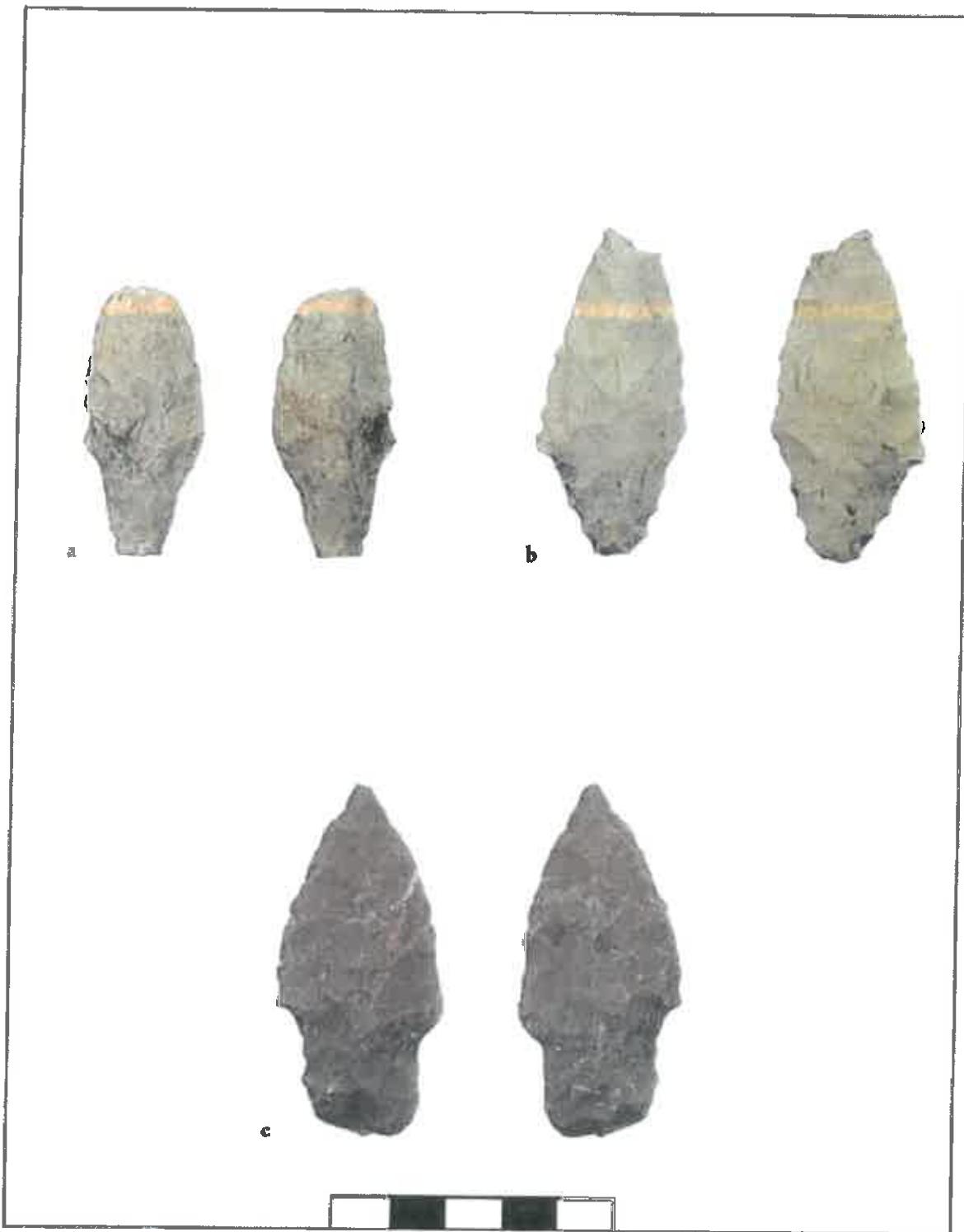


Figure 45. Flaked stone artifacts. A: Contracting stem siliceous mudstone point (cat. no. 17-204). B: Contracting stem chert point (cat. no. 17-210). C: Rossi square-stemmed chert point (cat. no. 17-209). Scale is in centimeters.

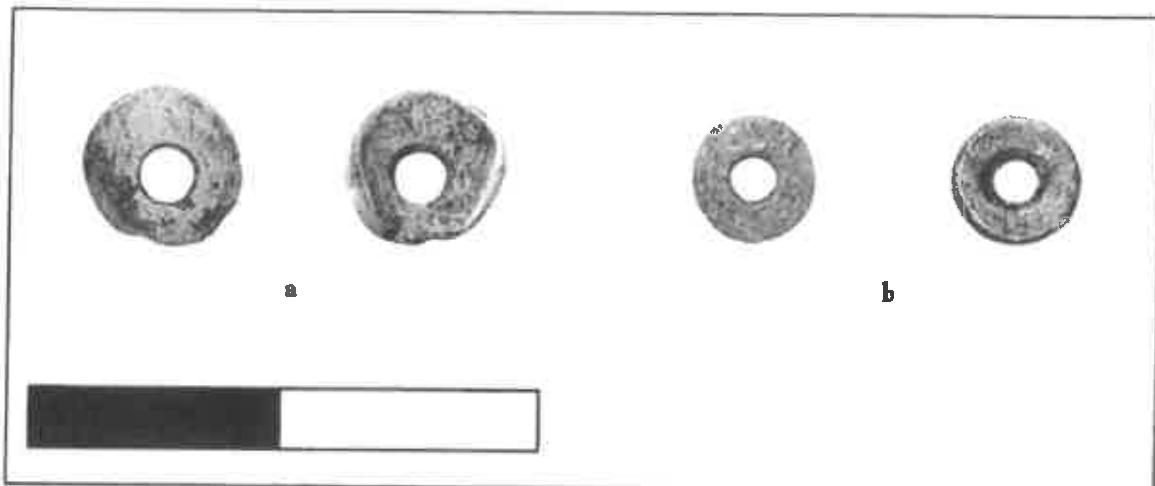


Figure 46. Shell beads. A: Olivella G6b bead (cat. no. 17-217). B: Olivella G1 bead (cat. no. 17-218). Scale is in centimeters.

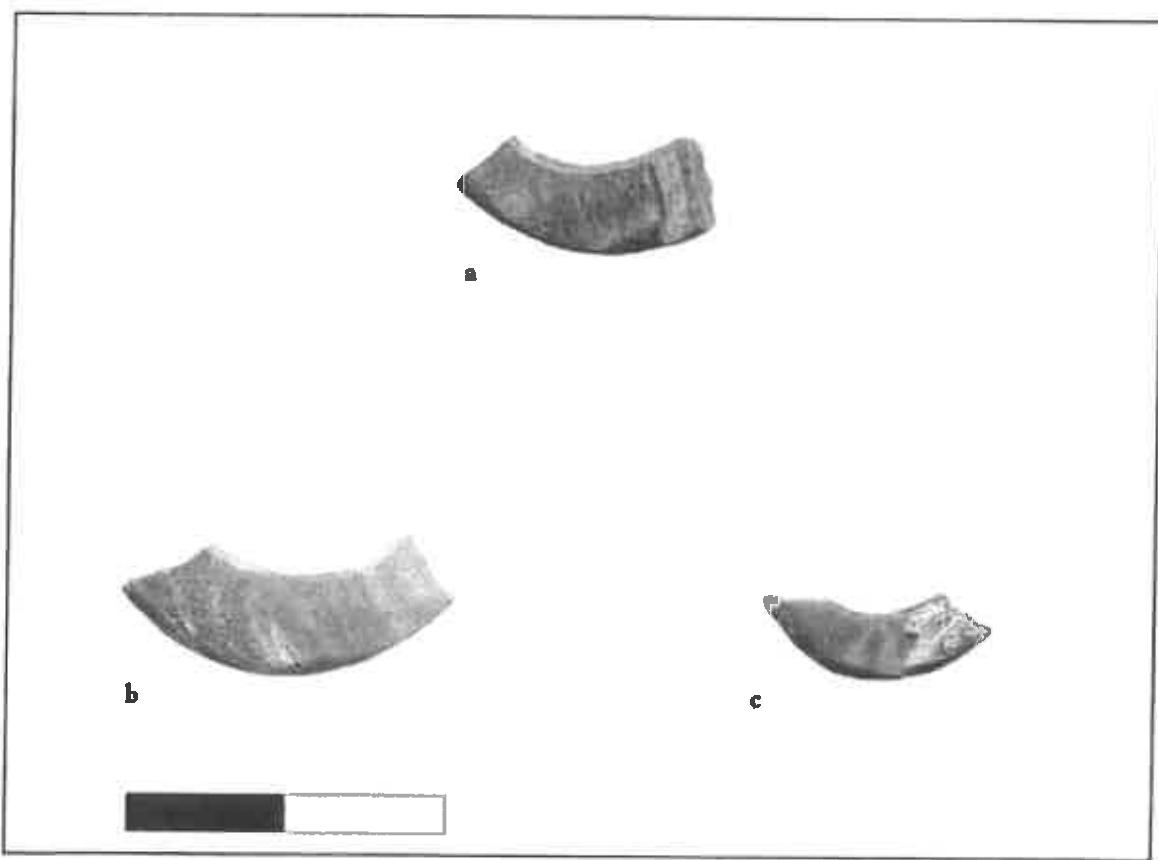


Figure 47. Mussel shell fishhook fragments. A: Cat. no. 17-220. B: Cat. no. 17-211. C: Cat. no. 17-215. Scale is in centimeters.

Rossi square-stemmed point most likely dating to the Early Period (Figure 45). Two shell beads dated to the Late and Middle periods (Figure 46), and three mussel shell fishhook fragments could date to either the Late or to the Middle period (Figure 47). Bone tools, as well as mortars and pestles were also found.

Vertebrate remains included both land and sea mammals, birds, and fish. Because of project limitations we were unable to obtain an analysis of these remains.



Seven shell samples were submitted for radiocarbon dating during this project (Figure 48). Three additional dates had been previously obtained by Morley during her 2006 project on this parcel.

Currently the total number of radiocarbon dates obtained for all areas of CA-MNT-17 is 36. Unfortunately, eight of these dates were obtained using bulk soil or multiple pieces of shell that are likely to have produced misleading results.

Prior to about 1990 bulk shell samples were used because radiocarbon laboratories needed larger quantities of shell. Since the AMS technique has become available, even tiny pieces of shell can be dated.

A single piece of shell in a midden represents a single event—at some time in the past a person journeyed to the coast and returned with one or more marine shells. Dating that piece of shell can date that event no matter where the shell happens to be situated in the midden. The problem with dating bulk shell is that due to rodents and other causes, these pieces of shell can be moved from their original locations. Dating a handful of those shells will produce an “average” date. This is not necessarily a major problem with single component sites having a narrow time span, but with complex multi-component sites it is a significant problem and must be avoided.

Our first submission of four samples took place shortly after the fieldwork ended. The first two of these (Beta-307543 and Beta-307544; see Figure 48) were very large mussel shells from the rock and abalone layer that extended across about half of the parcel. These samples were chosen to provide an age estimate for what is thought to be an activity or living surface that probably was used for a considerable period. These samples returned nearly identical dates between ca. 3650-3700 years BP.

Table 4. Artifacts recovered from AC 4235B, by attribute.

Artifact or Attribute	Number	%
Bone artifacts	4	7.4
Shell artifacts	12	22.2
Chipped or flaked stone	8	14.8
Pitted stone	2	3.7
Abraded or ground	2	3.7
Grinding slab	1	1.9
Battered	15	27.8
Faceted handstone	1	1.9
Mortar	5	9.3
Pestle	4	7.4
TOTAL	54	100.0

Note: the total number of artifacts is 52; two artifacts exhibited two forms of modification, and those attributes are tallied here separately.

One other date from CA-MNT-17C (from the parcel identified as AC 2400 in Figure 4) also came from a sparse rock and abalone shell layer. That date was 4420 BP. From the unit level records of that test it appears that higher percentages of abalone shell were found in strata most likely dating at or less than about 4,400 years ago. The lowest levels of that unit produced smaller quantities of abalone shell. This is similar to results from other sites, such as CA-MNT-391 (see Figure 28). At that site, six out of eight radiocarbon dates obtained from abalone shell ranged between 3,200 and 4,400 BP.

These two dates from the current project supplement those from several other projects, providing additional information on the activities during this period. There appears to have been an increase in activity on the Monterey Peninsula beginning some time after about 4,800 BP and intensifying after about 4,400 BP. Rock and abalone features are one characteristic of this general time period. During this time period we see the introduction of the Rossi square-stemmed points. By 4,100 BP the first cut beads, the Olivella L2 types, appear in middens. During this general time period several sites on the Monterey Peninsula appear to have been occupied for the first time, suggesting an overall population increase.

The second pair of samples that were submitted with the first batch were chosen to explore the lowest levels of the site. The three dates obtained by Morley (2006) had provided Late and Middle Period dates. Several of the artifacts suggested these time periods as

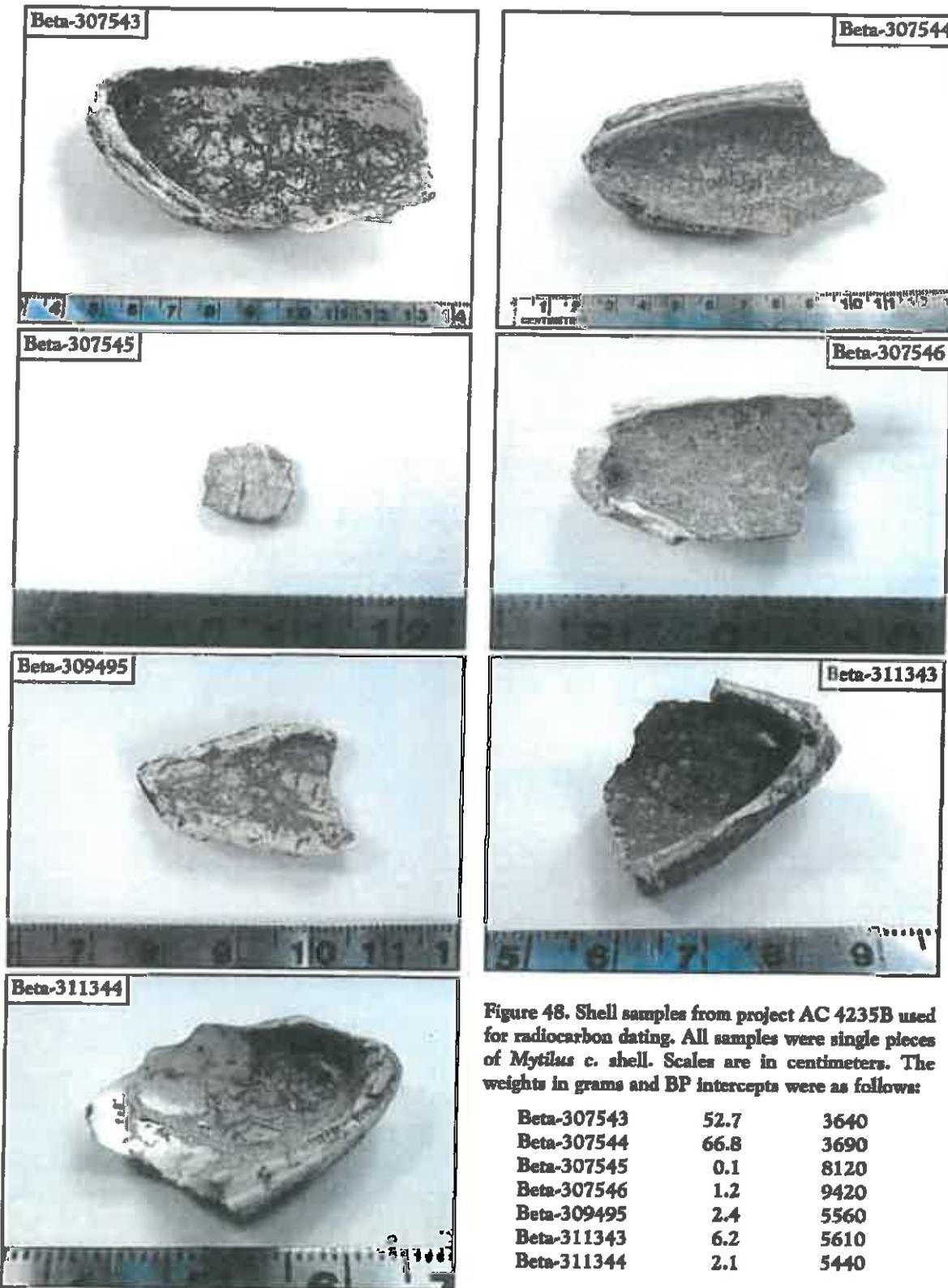


Figure 48. Shell samples from project AC 4235B used for radiocarbon dating. All samples were single pieces of *Mytilus c.* shell. Scales are in centimeters. The weights in grams and BP intercepts were as follows:

Beta-307543	52.7	3640
Beta-307544	66.8	3690
Beta-307545	0.1	8120
Beta-307546	1.2	9420
Beta-309495	2.4	5560
Beta-311343	6.2	5610
Beta-311344	2.1	5440



Figure 49. The area from which Column 2 was obtained. The indentations represent locations from which shell samples were collected. Depths are listed as "below the cut," which is the flat bench above the sidewall.



Figure 50. The area from which Column 3 was collected. The block of soil beneath the concrete foundation (arrow) was excavated with trowels, and a number of shell samples obtained for radiocarbon dating. Depth measurements were made from the top of the concrete foundation.

well. We felt it most useful to look for older site components since we had previously obtained a date on a nearby parcel (identified as AC 2932 in Figure 4) in excess of 6,300 BP.

Sample Beta-307545 was taken from an informal column of shell samples obtained from one of the construction cuts for the basement of the residence (Figures 49 and 50). The various indentations in the sidewalls shown in these figures represent the locations of shell samples excavated from these sidewalls. Depth of these samples was measured from the top of the cut at that time. Between construction of the original residence and the construction in progress it is likely that well more than a meter of midden had already been removed.

Sample Beta-307546, a small piece of mussel shell (Figure 48) from a depth of 160 cm below the cut, returned a date of 9420 BP, the oldest date so far obtained in Monterey County. This date also established CA-MNT-17C as one of the five oldest sites on California's central coast, along with two sites in San Luis Obispo County, one in Santa Cruz County, and one in Santa Clara County.

The mussel shell fragment was recovered from the lowest depths of the site that contained shell. This particular sample had veins of caliche adhering to the surface. Figure 49 shows several areas of gray caliche at the base of the deposit. The midden in that area of the site does not have a characteristic dark and greasy appearance, nor does it contain many constituents. It would probably take a large-scale excavation to recover many cultural materials from this ancient component.

The final sample submitted with the first batch was from Column 3 (Figure 50). Because the area beneath a concrete foundation needed to be excavated, we took the entire area down with trowels and collected shell samples for dating as we did so.

The sample that was submitted with this batch was the deepest one from Column 3, from a measured depth of 144 cm below the top of the concrete foundation. It returned an age of 8120 BP. That sample (Figure 48) did not have caliche adhering to the surface and appears to have come from a higher stratigraphic position within the midden. This can be seen by comparing Figures 49 and 50.

A subsequent sample submitted from Column 3, from a depth of 133 cm, returned an age of 5560 BP. Because this sample was only 11 cm above the previous sample that dated 8120 BP, this result suggests that the bulk of the midden deposit is likely to have been Early Period or more recent, and that the Archaic Period component is of limited depth.

Finally, a third batch consisting of two additional samples was submitted. The first, from Column 2 at a depth of 132 cm, was the deepest remaining sample from the column that returned the date of 9420 BP. Shell was very sparse in the lowermost portions of the site. This sample returned an age of 5610 BP.

The final sample in the third batch was obtained from the base of the wall at the rear of the parcel, from a depth of 170 cm. This sample, from an area containing some caliche, returned an age of 5440 BP.

These dates are in close agreement with the previous sample, strengthening the suggestion that much of the deposit in this immediate area dates from the Early Period and, to a lesser degree, subsequent temporal periods. It appears that the Archaic deposit, situated at the very lowermost levels of the site, may both small and sparse. Certainly this is something that can be tested for in subsequent projects in this area.

Summary, CA-MNT-17C

CA-MNT-17C appears to differ significantly from the other two subareas of this large site. These differences probably reflect the different environmental conditions found in each of the three subareas.

As it was situated on the lee side of the dunes, much of CA-MNT-17C was probably sheltered from the winds. This made it suitable as a long-term residential base. The other two site subareas, exposed to the winds, probably functioned more as campsites and temporary use areas.

Based on the artifacts which have been recovered, this portion of the site exhibits a wide range of cultural activities, and based on the radiocarbon dates (Figure 51) it was occupied throughout much of the prehistory of the Monterey Peninsula area.

OBSERVATIONS, INTERPRETATIONS AND CONCLUSIONS

CA-MNT-17, and particularly the CA-MNT-17C subarea, is now known to be one of the most significant cultural resources on the central coast. However, it has been a difficult site from which to extract information. The sheer size of the site, the small and scattered nature of the projects, and the reluctance of some archaeologists to look beyond the often sparse artifact yield have all combined to limit the amount of data which has been recovered.

The information contained within a site, and particularly the information that may yield information important in prehistory or history, is a primary criterion for site significance both on the state and federal levels.

It is clear that CA-MNT-17 has demonstrated the potential to address a number of important local and

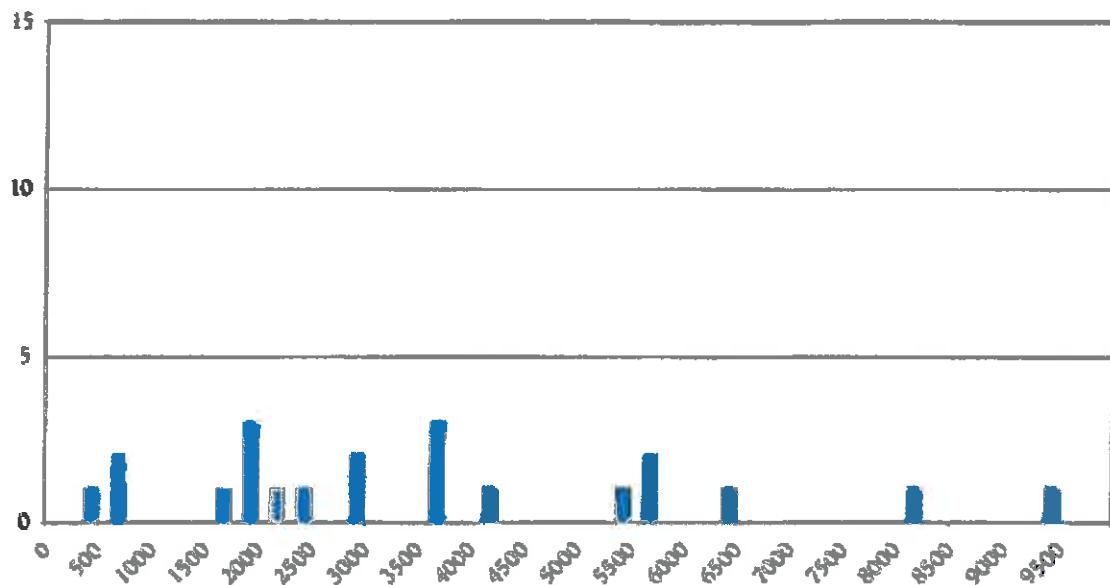


Figure 51. Radiocarbon dates from CA-MNT-17C.

regional research questions. Some of these are discussed in subsequent sections.

Site Significance

One of the primary methods for evaluating significance of cultural resources is by using the standards established for the National Register of Historic Places. If we were to use those standards (Title 36, Part 60—National Register of Historic Places, revised as of July 1, 2004), the most appropriate ones are as follows:

Sec. 60.4 Criteria for evaluation

National Register criteria for evaluation. The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

- ...
(d) that have yielded, or may be likely to yield, information important in prehistory or history.

Based on the information potential standard by itself, CA-MNT-17 would certainly qualify for inclusion in the National Register. However, it is possible that over a century of building and development,

including the projects reported upon here, have reduced the integrity “of location, design, setting, materials, workmanship, feeling, and association” to the point where the site is no longer eligible.

We have learned over the years that just because a site is not visually impressive does not mean that it is not significant. CA-MNT-17 is a good example of this.

Some of the research findings which we consider significant for Central California archaeology and prehistory are summarized in the following sections:

Initial Occupation of the Monterey Peninsula

CA-MNT-17C is currently the earliest known settlement on the Monterey Peninsula. Based on evidence from other areas, the initial occupation of California appears to have occurred more than 11,000 years ago, and perhaps significantly earlier than that date. There is currently evidence of early occupation of the coast or peri-coastal areas in south-central California at about 11,000-13,400 BP (Fitzgerald et al. 2005; Johnson and Morris 2003).

Five sites on the central California coast, including CA-MNT-17C, date to about 9,400 years or older.

Some 10,000 years ago sea levels were significantly lower than they are at present. According to Bickel

Table 5. Radiocarbon Dates from CA-MNT-17.

Mean age/R _{range}	Lab. No.	Material	Provenience	C13	BP	Intercept	AD/BC	2 sigma calibrated results
CA-MNT-17A								
320 ± 50	WSU-2981	Shell— <i>Halictis</i> r. (1 pc)	Unit 4; 38-40 cm	—	143	AD 1807	AD 1660-1950	
380 ± 90	WSU-3627	Shell— <i>Halictis</i> r. (1 pc)	Monitoring; 80 cm	—	259	AD 1691	AD 1510-1950	
400 ± 70	WSU-2980	Shell— <i>Halictis</i> r. (1 pc)	Unit 4; 38-40 cm	—	268	AD 1682	AD 1523-1950	
500 ± 60	Beta-144606	Shell— <i>Halictis</i> r. (1 pc)	Unit 1; 30 cm	1.7	319	AD 1631	AD 1467-1707	
600 ± 60	Beta-144607	Shell— <i>Halictis</i> r. (1 pc)	Unit 1; 40 cm	2.0	457	AD 1493	AD 1413-1655	
610 ± 45	WSU-2982	Shell— <i>Halictis</i> r. (1 pc)	Unit 4; 40-50 cm	—	464	AD 1486	AD 1420-1633	
660 ± 60	Beta-144608	Shell— <i>Halictis</i> r. (1 pc)	Unit 1; 50 cm	2.3	497	AD 1453	AD 1338-1560	
930 ± 60	WSU-3628	Shell— <i>Halictis</i> r. (1 pc)	Monitoring; 100 cm	—	673	AD 1277	AD 1122-1388	
935 ± 45	WSU-2983	Shell— <i>Halictis</i> r. (1 pc)	Unit 4; 45 cm	—	677	AD 1273	AD 1159-1333	
980 ± 40	WSU-2984	Shell— <i>Halictis</i> r. (1 pc)	Unit 4; 50-60 cm	—	721	AD 1229	AD 1079-1306	
1055 ± 40	WSU-2985	Shell— <i>Halictis</i> r. (1 pc)	Unit 4; 60-70 cm	—	791	AD 1159	AD 1028-1271	
1690 ± 50	WSU-2986	Carbon rich soil	Unit 4; 60-70 cm	—	1580	AD 370	AD 220-534	
2950 ± 70	WSU-3629	Carbon rich soil	Monitoring; 140-170 cm	—	3121	BC 1172	BC 1405-919	
CA-MNT-17B								
620 ± 50	Beta-192003	Shell— <i>Halictis</i> r. (1 pc)	Monitoring; 40 cm	—	470	AD 1480	AD 1411-1631	
820 ± 40	Beta-265691	Shell— <i>Mytilus</i> c. (1 pc)	Abalone feature, 100 cm	-1.0	551	AD 1399	AD 1300-1456	
840 ± 50	Beta-265692	Shell— <i>Halictis</i> r. (1 pc)	Abalone feature, 100 cm	—	630	AD 1320	AD 1240-1431	

If not directly obtained, C13/C12 was estimated at +0.5 ‰ for *Mytilus* and +2.1 ‰ for *Halictis*.
 Samples which are indicated as "mult. pc's" or carbon-rich soil under Material utilized multiple pieces of shell and are considered unreliable.
 All samples except recent Beta Analytic dates (i.e., >Beta-300000+) recalibrated using Calib. 4.3; shell samples use a Delta-R of 225 ± 35 .

Table 5. Radiocarbon Dates from CA-MNT-17 (continued).

Meas. age/R range	Lab. No.	Material	Provenience		C13	BP	Intercept	AD/BC	2 sigma calibrated results
			BP	AD					
CA-MNT-17C									
510 ± 40	Beta-215800	Shell— <i>Haliotis</i> r. (1 pc)	40 cm		7.5	380	AD 1570	AD 1473-1680	
850 ± 70	WSU-3641	Shell— <i>Haliotis</i> r. (1 pc)	Unit 2: 34-40 cm		-	636	AD 1314	AD 1200-1442	
	CAMS-160687	Fish bone—cabzon (1 pc)	Unit K, 70-80 cm		-	652	AD 1298	AD 1224-1389	
	CAMS-160685	Fish bone—rockfish (1 pc)	Augers 5 & 6		-	1681	AD 269	AD 158-409	
	CAMS-160684	Fish bone—rockfish (1 pc)	Unit X, 230-240 cm		-	1736	AD 214	AD 92-331	
2040 ± 50	Beta-215801	Shell— <i>Haliotis</i> r. (1 pc)	60 cm		0.6	1823	AD 127	BC 11-AD 265	
2210 ± 40	Beta-215802	Shell— <i>Mytilus</i> c. (1 pc)	78 cm		-3.7	1933	AD 117	BC 133-AD 135	
	CAMS-160686	Fish bone—rockfish (1 pc)	Unit K, 130-140 cm		-	2003	BC 54	BC 178-AD 51	
2410 ± 40	Beta-226691	Shell— <i>Mytilus</i> c. (1 pc)	Monitoring, 1 meter deep		0.3	2294	BC 345	BC 402-171	
2530 ± 50	Beta-270106	Shell— <i>Mytilus</i> c. (mult. pc)	Unit 1: 80-100 cm		-0.4	2349	BC 400	BC 692-334	
2650 ± 50	Beta-270107	Shell— <i>Mytilus</i> c. (mult. pc)	Unit 1: 120-140 cm		0.6	2654	BC 705	BC 788-404	
2680 ± 50	Beta-270108	Shell— <i>Haliotis</i> r. (mult. pc)	Unit 1: 140-160 cm		1.4	2695	BC 746	BC 809-499	
	CAMS-160678	Fish bone—rock fish (1 pc)	Auger 10		-	2754	BC 805	BC 910-755	
	CAMS-160683	Fish bone—cabzon (1 pc)	Augers 5 & 6		-	2754	BC 805	BC 903-757	
	WSU-3642	Shell— <i>Mytilus</i> c. (mult. pc)	Unit 2: 70-80 cm		-	3461	BC 1512	BC 2317-794	
	CAMS-160681	Fish bone—rockfish (1 pc)	Unit X, 170-180 cm		-	3549	BC 1600	BC 1714-1486	
3530 ± 40	Beta-307543	Shell— <i>Mytilus</i> c. (1 pc)	Abalone layer, ca. 155 cm		-	3640	BC 1690	BC 1850-1590	
3570 ± 40	Beta-307544	Shell— <i>Mytilus</i> c. (1 pc)	South trench, ca. 150 cm		-	3690	BC 1740	BC 1880-1620	
3720 ± 110	WSU-3643	Shell— <i>Mytilus</i> c. (mult. pc)	Unit 2: 110-120 cm		-	3867	BC 1918	BC 2258-1623	
3900 ± 80	WSU-3644	Shell— <i>Mytilus</i> c. (mult. pc)	Unit 2: 150-160 cm		-	4123	BC 2174	BC 2436-1918	
3940 ± 70	Beta-098238	Shell— <i>Haliotis</i> r. (1 pc)	Unit X: 180-190 cm	2.1	4220	BC 2271	BC 2468-2027		
4890 ± 30	Beta-311344	Shell— <i>Mytilus</i> c. (1 pc)	Below wall, 170 cm, in caliche	0.2	5440	BC 3490	BC 3610-3350		
4980 ± 40	Beta-309495	Shell— <i>Mytilus</i> c. (1 pc)	Col. 3, 133 cm below cut	-0.1	5560	BC 3610	BC 3660-3490		
5080 ± 40	Beta-311343	Shell— <i>Mytilus</i> c. (1 pc)	Col. 2, 132 cm	0.3	5610	BC 3660	BC 3770-3610		
5730 ± 70	Beta-207174	Shell— <i>Mytilus</i> c. (1 pc)	Monitoring, Augers 1-4, deep	-	6304	BC 4355	BC 4537-4224		
7460 ± 40	Beta-307545	Shell— <i>Mytilus</i> c. (1 pc)	Col. 3, 144 cm below cut	-0.3	8120	BC 6170	BC 6250-6040		
8540 ± 40	Beta-307546	Shell— <i>Mytilus</i> c. (1 pc)	Col. 2, 160 cm below cut	0.4	9420	BC 7470	BC 7540-7260		

If not directly obtained, C13/C12 was estimated at +0.5 ‰ for *Mytilus* and +2.1 ‰ for *Haliotis*.

Samples which are indicated as "mult. pc" or carbon-rich soil under Material utilized multiple pieces of shell and are considered unreliable.

Dates on fish bone were obtained by Christie Boone. They are calibrated with a C13 assumed at -14. No measured ages were available for those samples.

All samples except recent Beta Analytic dates (i.e., >Beta-300000+) recalibrated using Calib. 4.3; shell samples use a Delta-R of 225 ± 35 .

(1978a:7), the sea level 10,000 years ago was on the order of 60 meters (190 feet) below current levels. That would have placed the shoreline of the Monterey Peninsula significantly farther out than at present.

Even by 7000 BP sea levels in the Monterey Peninsula area would still have been on the order of 15-25 meters (50-80 feet) below current levels.

It is likely that many, if not most, of the earliest coastal sites around the Monterey Peninsula are now submerged. We were fortunate that evidence for occupation in the 8,000-9,400 year range was found at CA-MNT-17C. It is also likely that similar evidence, and even older evidence, exists at a number of additional sites on the Monterey Peninsula. It is imperative that these sites be identified and preserved.

It should be noted that the eight earliest radiocarbon dates for the Monterey Peninsula, representing some 3,500 years, were all obtained from *Mytilus* shell. The same pattern is found on the coast at and south of Big Sur, where the earliest 1,350 years of radiocarbon chronology has been obtained from eight *Mytilus* samples (Breschini and Haversat 2005b). To the north, in the Moss Landing area, where there is a sandy rather than a rocky shore, the earliest dates are all on *Protothaca*, *Clinocardium*, and *Saxidomus* shell.

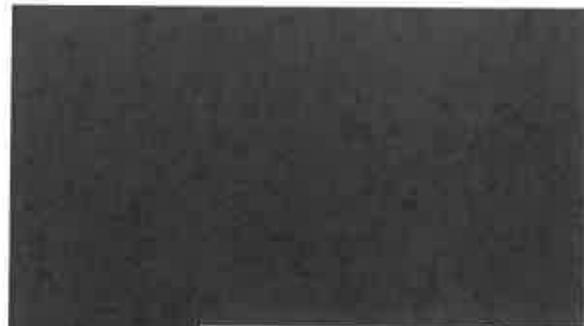
This suggests that dating abalone shell may not be an adequate technique to with which to identify the earliest sites on the Monterey Peninsula.

Early sites are also characterized by some level of caliche buildup. Some sites, such as CA-MNT-95, in the Carmel Highlands, have layers of caliche resembling concrete several inches in thickness. Most sites, however, have caliche in the black soils, giving more of a gray appearance. This can be seen to some degree in Figure 49.

Observation: the oldest known sites on the Monterey Peninsula appear as sparse middens, with dark soil and only small quantities of shell. The shell is dominated by mussel. The bases of these sites grade into sterile-appearing soils, but contain some cultural materials.

Observation: on the coast of Monterey County, if you want to identify older components you should include mussel shells in your dating suites, and not rely just on abalone shells.

By 6,000 BP habitation was known in at least two areas of the Monterey Peninsula.



The most intensive occupation at that site appears limited to an approximately 220 year period, 5770-5550 BP. It is possible that changes in environmental conditions forced an abandonment of the intensive sea mammal- and marine-oriented subsistence and settlement strategy that appears to have existed at that site for this brief time. However, it is more likely that habitation at that site flourished because of pinniped and other marine resources, and dwindled as local resources were exhausted.

Until much larger dating samples are obtained from additional Monterey Peninsula area sites it is dangerous to come to any firm conclusions. We suspect that more intensive dating, particularly at CA-MNT-108, -387 and -391, would have contributed significant information to the question of settlement and subsistence on the Monterey Peninsula during the mid-Holocene.

Observations: Many Monterey Peninsula area sites excavated in the past have been inadequately dated.

Subsequent Occupation and the Monterey Peninsula Area Culture Sequence

Our reconstruction of the culture history of the general Monterey Peninsula area is shown in Figure 52 (see also Breschini and Haversat 2011). This model is based primarily on radiocarbon dates; we currently have 473 single-piece dates from the Monterey Peninsula area with which to work. There are also 95 single-piece dates from the Moss Landing area and another 20 from the mouth of the Pajaro River which seem to show the same pattern.

Our model can be contrasted with the Jones et al. (1996) model for the Monterey Bay and with the Milliken et al. model (known as Scheme D) for the San Francisco Bay area (Figure 53).

The Jones model is based largely on shell beads, while the Milliken Scheme D model is based entirely on shell beads.

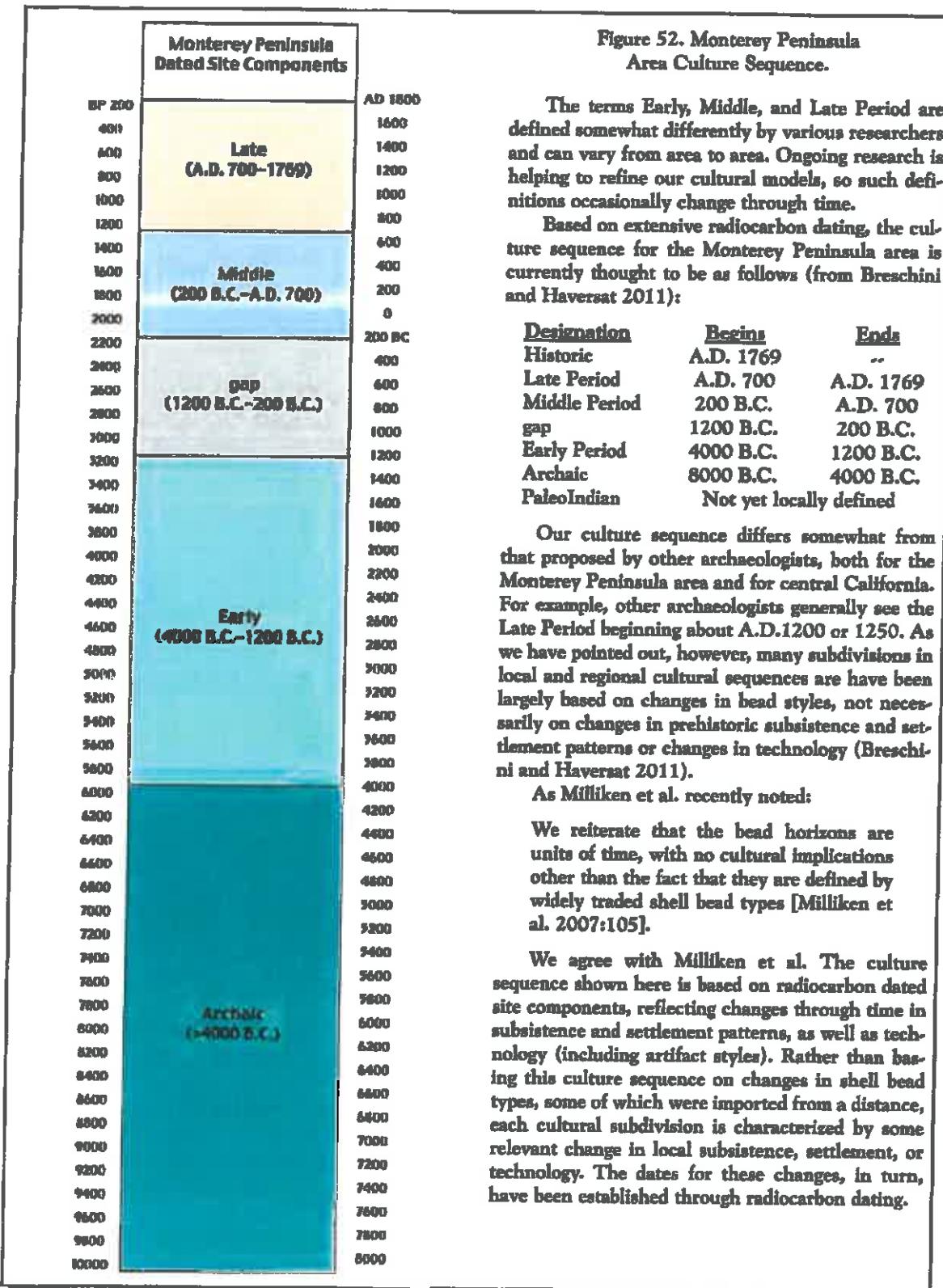


Figure 52. Monterey Peninsula
Area Culture Sequence.

The terms Early, Middle, and Late Period are defined somewhat differently by various researchers and can vary from area to area. Ongoing research is helping to refine our cultural models, so such definitions occasionally change through time.

Based on extensive radiocarbon dating, the culture sequence for the Monterey Peninsula area is currently thought to be as follows (from Breschini and Haversat 2011):

Designation	Begins	Ends
Historic	A.D. 1769	..
Late Period	A.D. 700	A.D. 1769
Middle Period	200 B.C.	A.D. 700
gap	1200 B.C.	200 B.C.
Early Period	4000 B.C.	1200 B.C.
Archaic	8000 B.C.	4000 B.C.
PaleoIndian	Not yet locally defined	

Our culture sequence differs somewhat from that proposed by other archaeologists, both for the Monterey Peninsula area and for central California. For example, other archaeologists generally see the Late Period beginning about A.D. 1200 or 1250. As we have pointed out, however, many subdivisions in local and regional cultural sequences are have been largely based on changes in bead styles, not necessarily on changes in prehistoric subsistence and settlement patterns or changes in technology (Breschini and Haversat 2011).

As Milliken et al. recently noted:

We reiterate that the bead horizons are units of time, with no cultural implications other than the fact that they are defined by widely traded shell bead types [Milliken et al. 2007:105].

We agree with Milliken et al. The culture sequence shown here is based on radiocarbon dated site components, reflecting changes through time in subsistence and settlement patterns, as well as technology (including artifact styles). Rather than basing this culture sequence on changes in shell bead types, some of which were imported from a distance, each cultural subdivision is characterized by some relevant change in local subsistence, settlement, or technology. The dates for these changes, in turn, have been established through radiocarbon dating.

AD 1800	BP 150	REGIONAL SEQUENCE Central California Coast Jones et al. (1996)	REGIONAL SEQUENCE Central California Coast Jones & Klar (2007)	BEAD SEQUENCE SF Bay Model (Scheme B) ⁿ Milliken et al. (2007)
1600	350	Late (A.D. 1200–A.D. 1769)	Late (A.D. 1250–A.D. 1769)	Late (A.D. 1250–A.D. 1769)
1400	550			
1200	750	Middle/Late (A.D. 1000–A.D. 1200)	Middle/Late (A.D. 1000–A.D. 1250)	Middle/Late (A.D. 1050–A.D. 1250)
1000	950			
800	1150			
600	1350			
400	1550			
200	1750	Middle (600 B.C.–A.D. 1000)	Middle (600 B.C.–A.D. 1000)	Middle (200 B.C.–A.D. 1050)
0	1950			
200 BC	2150			Early/Middle (500 B.C.–200 B.C.)
400	2350			
600	2550			
800	2750	Early/Middle (1000 B.C.–600 B.C.)		
1000	2950			
1200	3150			
1400	3350			
1600	3550			
1800	3750			
2000	3950	Early (3500 B.C.–1000 B.C.)	Early (3500 B.C.–600 B.C.)	Early (3550 B.C.–500 B.C.)
2200	4150			
2400	4350			
2600	4550			
2800	4750			
3000	4950			
3200	5150			
3400	5350			
3600	5550			
3800	5750			
4000	5950			
4200	6150			
4400	6350	Millingstone (6500 B.C.–3500 B.C.)	Millingstone/Early Archaic (8000 B.C.–3500 B.C.)	(No Olivella wall beads)
4600	6550			
4800	6750			
5000	6950			
5200	7150			
5400	7350			

ⁿ Scheme B marks major shifts in styles of cut shell beads traded in the San Francisco Bay Area and Sacramento–San Joaquin Delta

Figure 53. Regional Sequences for the Central California Coast.

These three models give different views of the settlement and culture history of the Monterey Peninsula and San Francisco Bay areas.

The Jones and Milliken models rely on area-wide changes in shell bead types. Shell beads provide important chronological information, as certain bead types have very tight temporal periods. For example, Olivella K1 cupped beads are a marker for Phase I of the Late Period. Radiocarbon dates have been obtained on eight specimens, and range from A.D. 1189–1497. These beads are found in both Central

and Southern California, providing reliable temporal data.

While a regional Olivella shell bead overlay can provide reliable temporal data, beads do not necessarily provide data on local changes—the culture history of a specific area. This can be seen in the contrast between the Jones and Milliken models and our radiocarbon-based model.

For example, on the Monterey Peninsula there is a gap in the occupation (at least as revealed by the radiocarbon dates we have obtained at this point in

time). This gap is a period of a thousand years (3150-2150 BP) within which there are only a small number of radiocarbon dates (Breschini and Haversat 2011). This gap is not revealed by the presence/absence of particular shell bead types or by temporally sensitive artifacts, such as projectile points—they are not sufficiently sensitive. Rather, the gap was found only by carefully examining the radiocarbon database and removing any multiple-piece samples (bulk soil, bulk shell, etc.). Only then did this pattern emerge.

This gap is also present in the Moss Landing area

but current information suggests it is not present, or only weakly present, along the coast south of Big Sur (Breschini and Haversat 2005b). It does not appear to be present in northern San Luis Obispo County.

The only event we know of that might explain a gap at this time period is the expansion toward the coast of Utian speakers. This is part of an expansion of Penutian speakers which began several thousand years earlier in eastern Washington, eastern Oregon, western Idaho, and western Nevada. It is theorized to have ended just south of Monterey some 2,500 years ago (Breschini 1983; Moratto 1984).

However, linguists continue to place the most recent phase of this expansion, that which reached the Carmel area, at around A.D. 500, almost a thousand years later in time (Golla 2011:253). If they are correct, then the Utian expansion may not be directly related to the gap.

So, to summarize the current evidence on the settlement of the Monterey Peninsula, we begin with a limited number of individuals some 9,420 years ago. Unfortunately we know little about these people.

Subsequently, about 7,000 years ago, evidence suggest that the inhabitants of both the Monterey Peninsula and Moss Landing areas included a large percentage of marine organisms in their diet. This may be a continuation of an adaptation stretching back to an early coastal migration more than 10,000 years ago.

By 5770 BP, a major occupation was underway at CA-MNT-831. This lasted only a short time, some 220 radiocarbon years, and then waned. It is possible that a local pinniped resource, possibly a rookery, was quickly exhausted in that time.

While use of CA-MNT-831 waned after about 5550 BP, a number of other sites in the Monterey Peninsula area were occupied. This time span is within what we refer to as the Early Period. Most of this time span is also within what we see as Phase I of the Early Period. We do not yet have a firm date for the shift from Phase I to Phase II, but there appears to be an intensification somewhere in the 4500-4000 BP

range following a limited occupation from ca. 5200-4800 BP.

The Early Period occupation continued until about 3150 BP, when, for unknown reasons, the pattern of radiocarbon dates suddenly changes for a period of a thousand years. This is illustrated in Figure 54.

It is certain that subsequent research will add more dates to this gap, or fill it in entirely, but we are currently working with a database of nearly 600 single-specimen samples stretching between the Pajaro River and the southern Carmel Highlands. If sites exist which contain significant data from this time period, they must be in places that have not yet been examined. If this is the case, a cultural or environmental change of some kind is a distinct likelihood.

One potential problem with the gap, however, is that the vast majority of radiocarbon dates (nearly 95%) were obtained using marine shell. We plan on obtaining additional dates on bone, particularly using terrestrial bone such as deer and elk, in an effort to determine if the reliance on shellfish for dating samples has introduced a bias into the results.

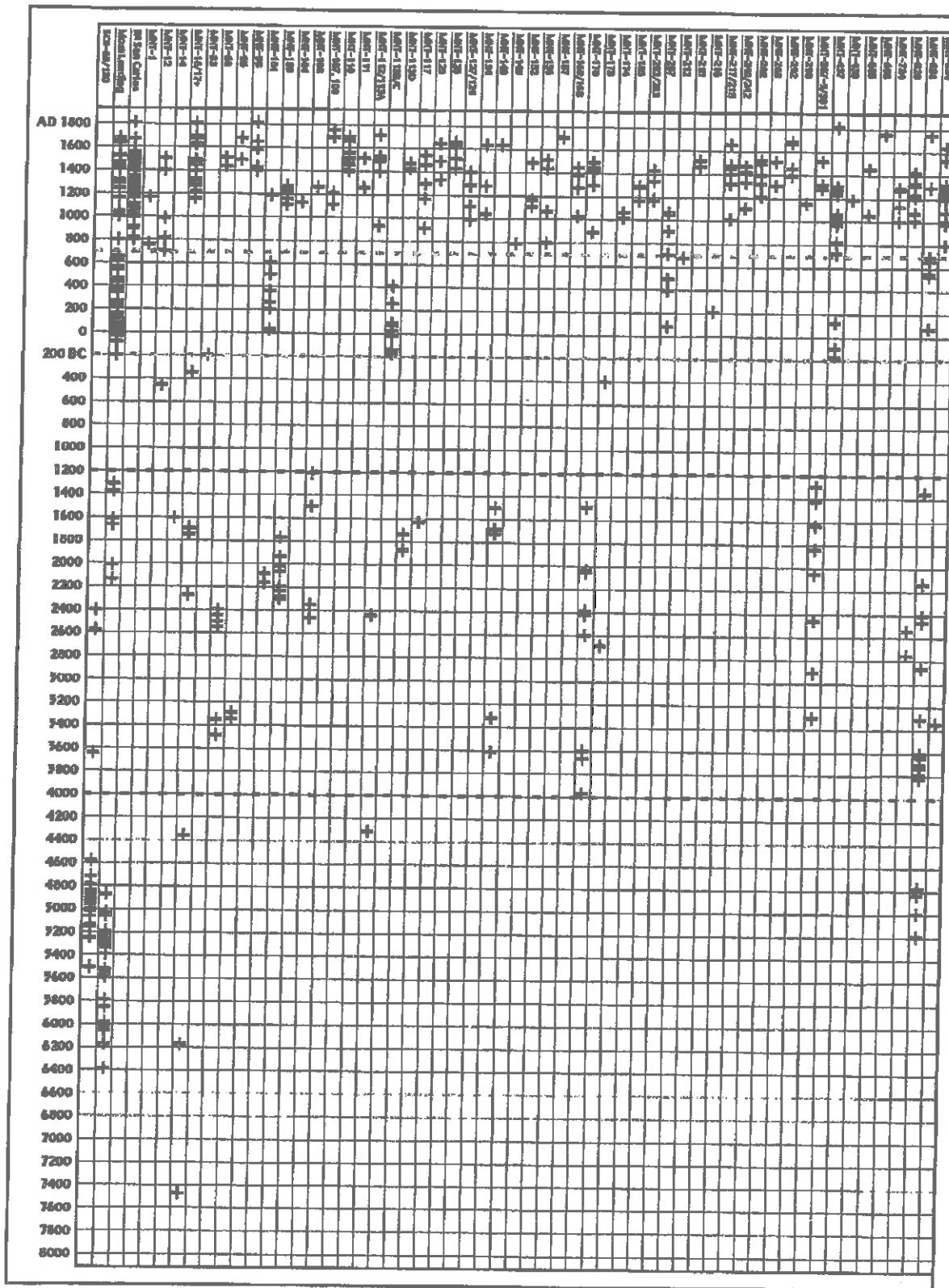
Recent dissertation research by Christie Boone (personal communication 2011, 2012) included radiocarbon dates on 30 fish bones from Monterey Peninsula and Moss Landing area sites. The fish bone dates agreed very closely with previous radiocarbon dates obtained using shell.

After the gap, occupation resumes at a very small number of sites. These sites have different characteristics, and different artifacts, than do the earlier sites. These sites are grouped together under the term "Middle Period." These sites are generally found in areas not previously occupied. To date, there are only a limited number of sites in the greater Monterey Peninsula area attributed to the Middle Period, although this number will surely grow.

About A.D. 700, the Middle Period came to an end, with most sites that had been occupied being abandoned, and new sites being started in new locations. Late Period sites were far more numerous than the Middle Period sites, and had a much wider areal distribution. This suggests a larger population during the Late Period.

Only two sites are currently known to have been occupied across the A.D. 700 line: CA-MNT-831, and CA-MNT-207, at Point Lobos (Figure 54).

The Late Period on the Monterey Peninsula seems to be subdivided into two parts, which we refer to as Late Phase I and Late Phase II. We are still working on the definitions for these components, but in general, Phase I sites on the coast often exhibit considerable habitation (for example CA-MNT-834), and suggest that the sites functioned as villages. During



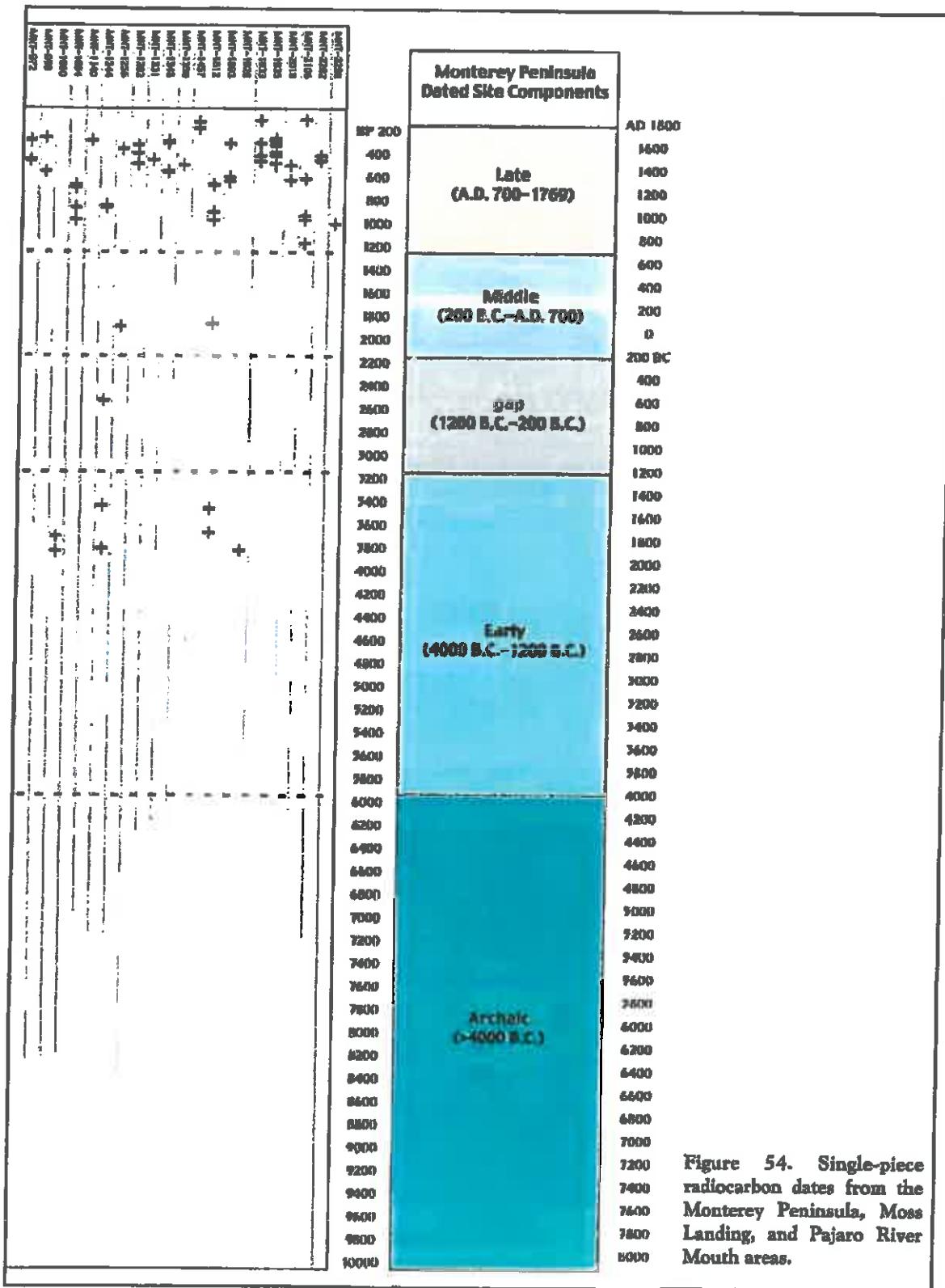


Figure 54. Single-piece radiocarbon dates from the Monterey Peninsula, Moss Landing, and Pajaro River Mouth areas.

Phase II the emphasis on the exposed outer coast shifts toward seasonal gathering sites, with camping and short-term occupation, but less evidence that these sites functioned as villages. Two examples of this type of site are CA-MNT-110 and CA-MNT-1935 (Breschini and Haversat 2004c; Breschini et al. 2005). Together these two sites produced 31 radiocarbon dates post-A.D. 1400.

The increasing emphasis toward Late Period villages on the interior evidently led to at least a partial winter abandonment of the coastal areas of the Monterey Peninsula. This is particularly true of the exposed outer coast between Monterey and Carmel.

Vizcaíno in late December-early January of 1602-1603, and Portolá in late November-early December of 1769, encountered no Indians between Monterey and Carmel. However, on November 30, 1769, Indians from the interior visited the Portolá camp near Pt. Lobos, bringing pinole and seeds. (It is not recorded whether the hungry Spanish actually ate these foods, but they killed a mule for food the following day.)

There does not yet appear to be a clear-cut temporal division between these two phases postulated for the Late Period; our initial estimates are in the general range of A.D. 1350-1400.

Sites on the interior (for example, the Rancho San Carlos sites) and some coastal sites in protected areas

appear to continue through much of the Late Period.

There is currently no evidence of a Middle-Late Transition as postulated by Jones et al. (1996) (Figure 53). That transition is apparently based on the shell bead distributions, rather than on the actual occupational patterns of the Monterey Peninsula.

Conclusions

Based on the information it contains, CA-MNT-17 has been shown to be one of the most important sites in central California. It has produced the oldest radiocarbon date in Monterey County, and one of the oldest dates on the central coast.

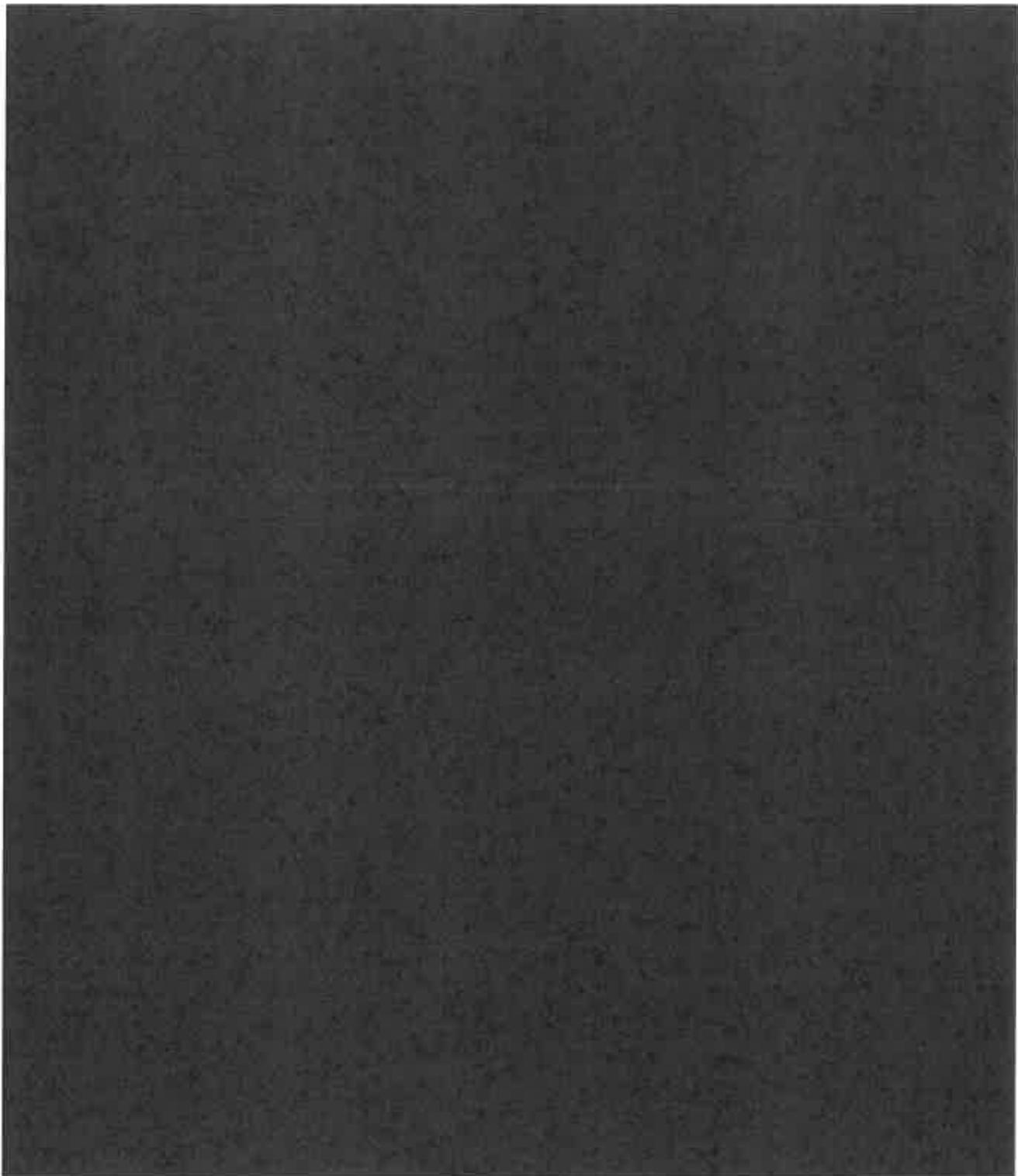
As this summary has shown, the research potential of CA-MNT-17, and particularly the CA-MNT-17C subarea, has not been realized to the extent that it could, or should have been. This is in part because the nature of the projects on the site, and in part because of shortcomings in the cultural resources management procedures.

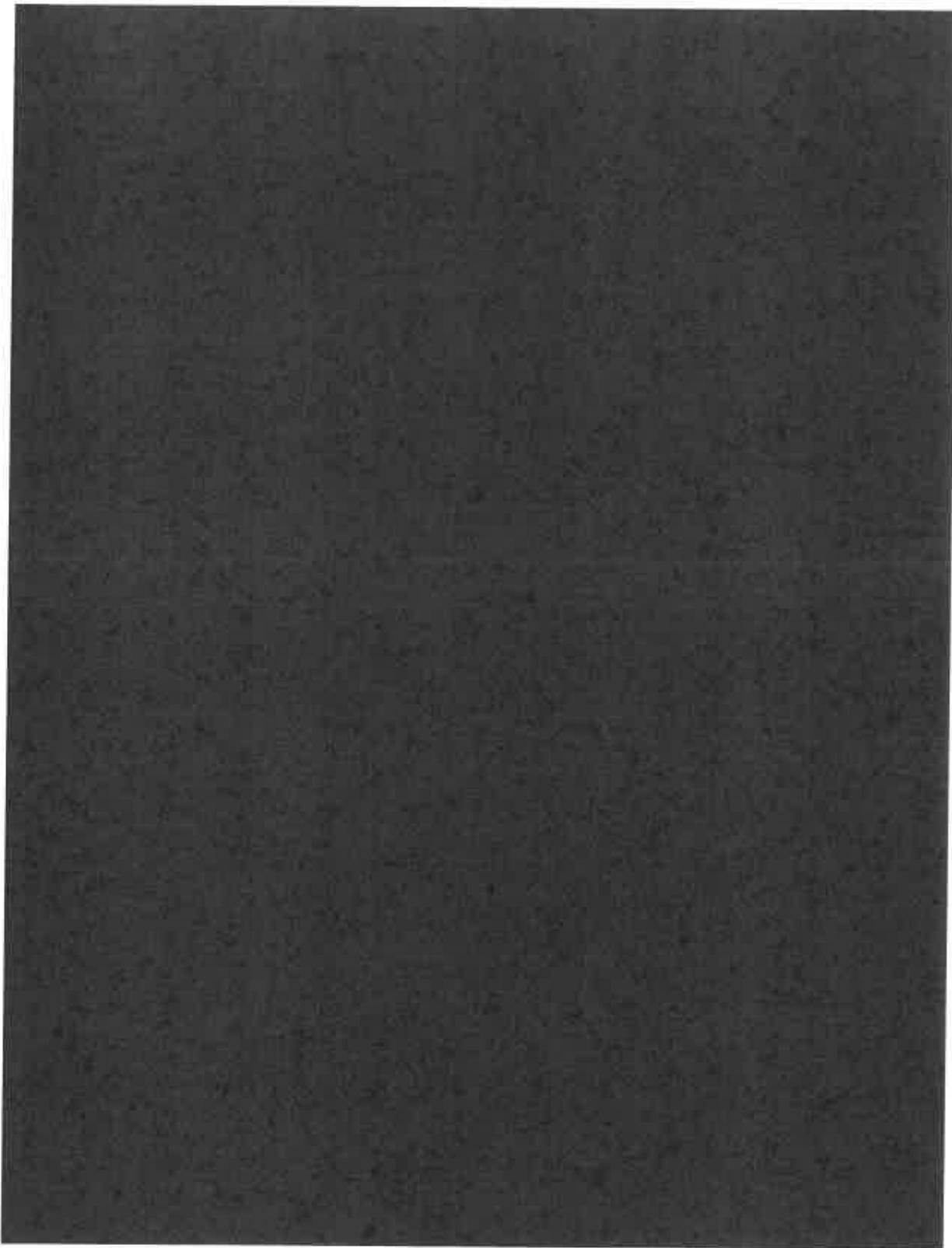
This summary points to significant areas for future research. For example, it may be necessary to use more innovative and advanced research methods to locate and explore the Archaic component, but the information return could be significant. Also, attention must be paid to obtaining better samples of the vertebrate fauna, particularly the mammals. Information on the diet, and its changes through time, will be important to understanding both the settlement and subsistence patterns. We also have the potential to explore changes in the local environment through time through a variety of techniques. Archaeological sites provide some of the best long-term databases for studying particular aspects of environmental history.

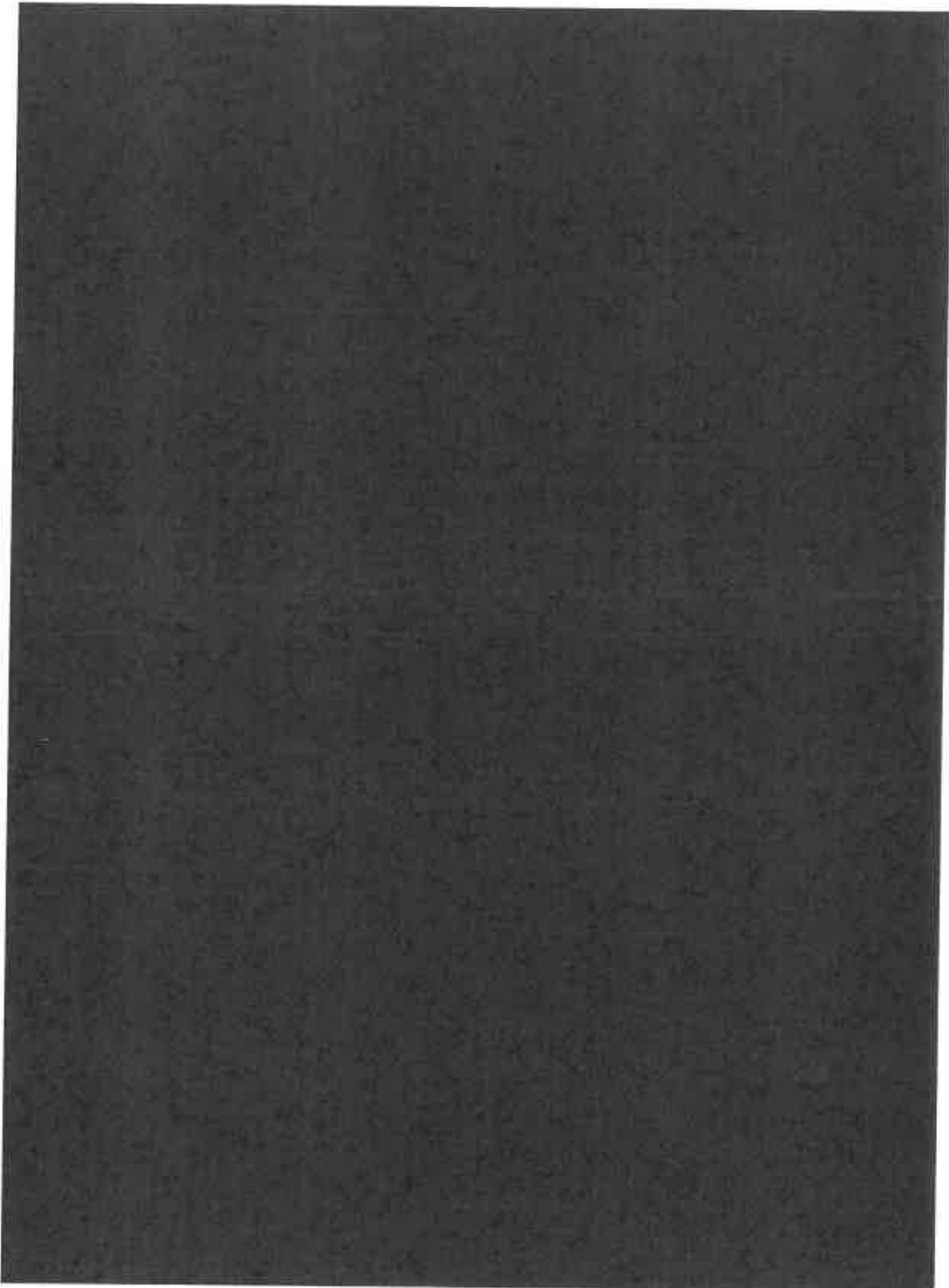
Curation of the Collections

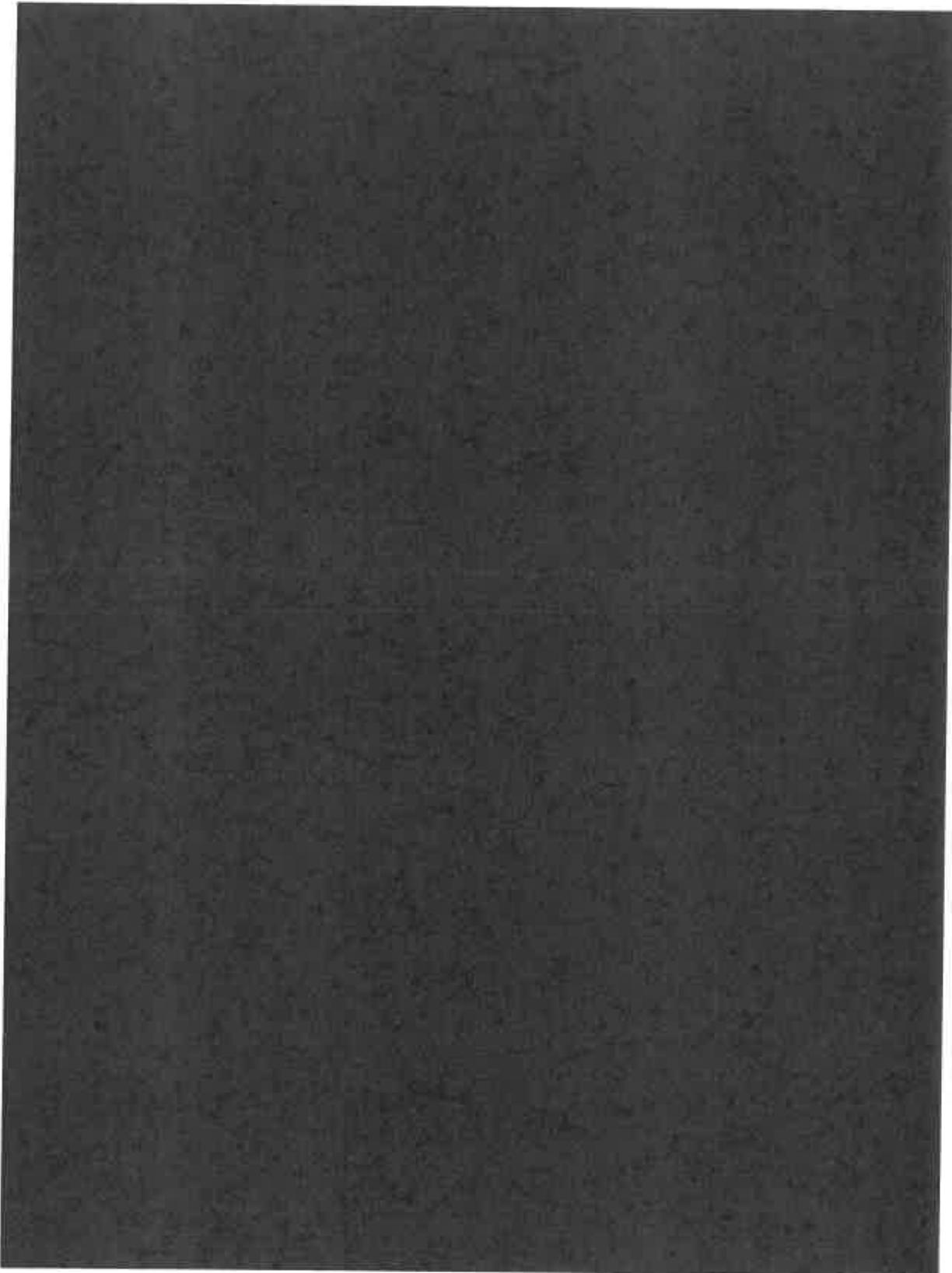
The collections from the several Archaeological Consulting (AC) projects are housed in the Monterey County Archaeological Archives maintained by the Monterey County Historical Society at their facility in Salinas.

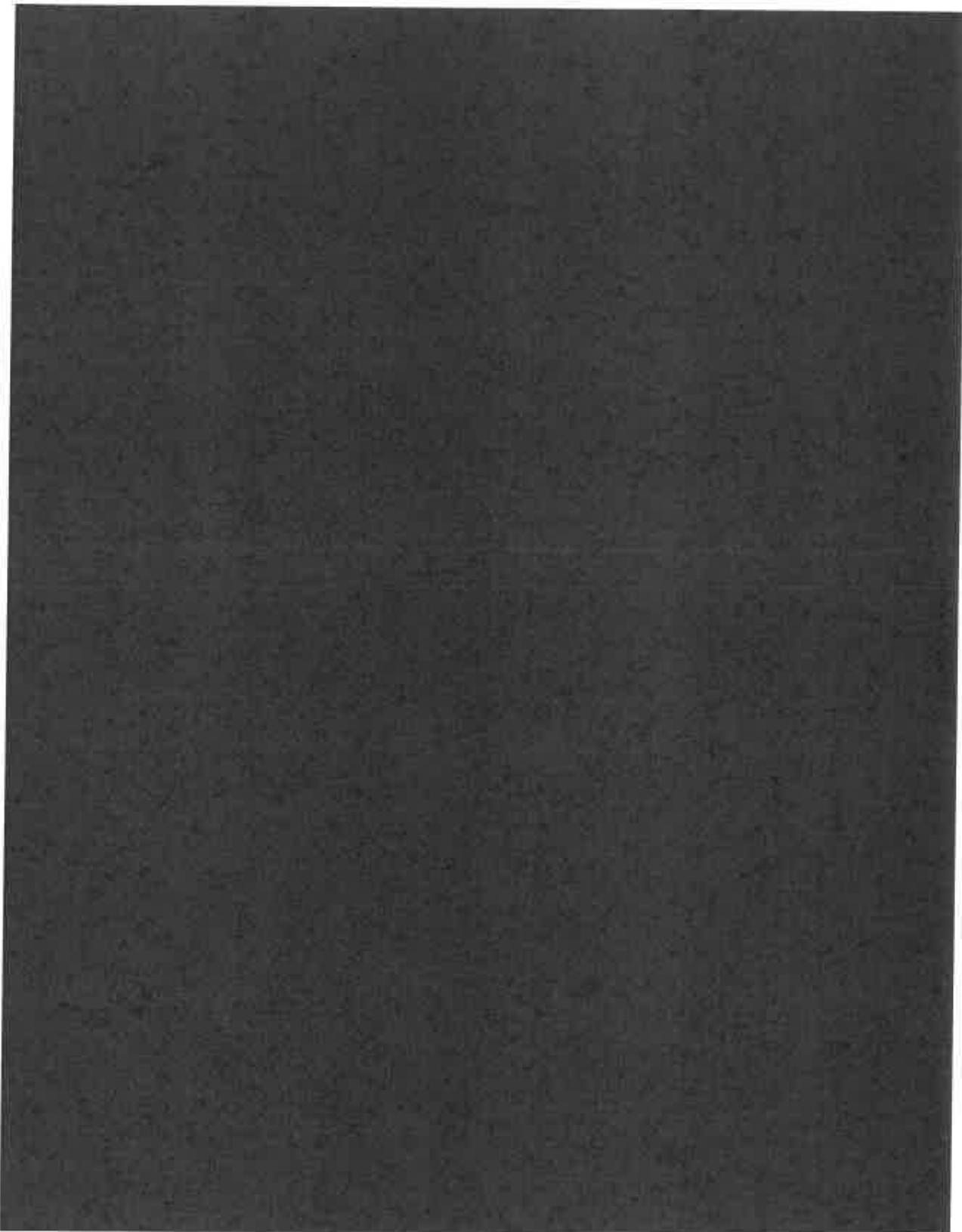
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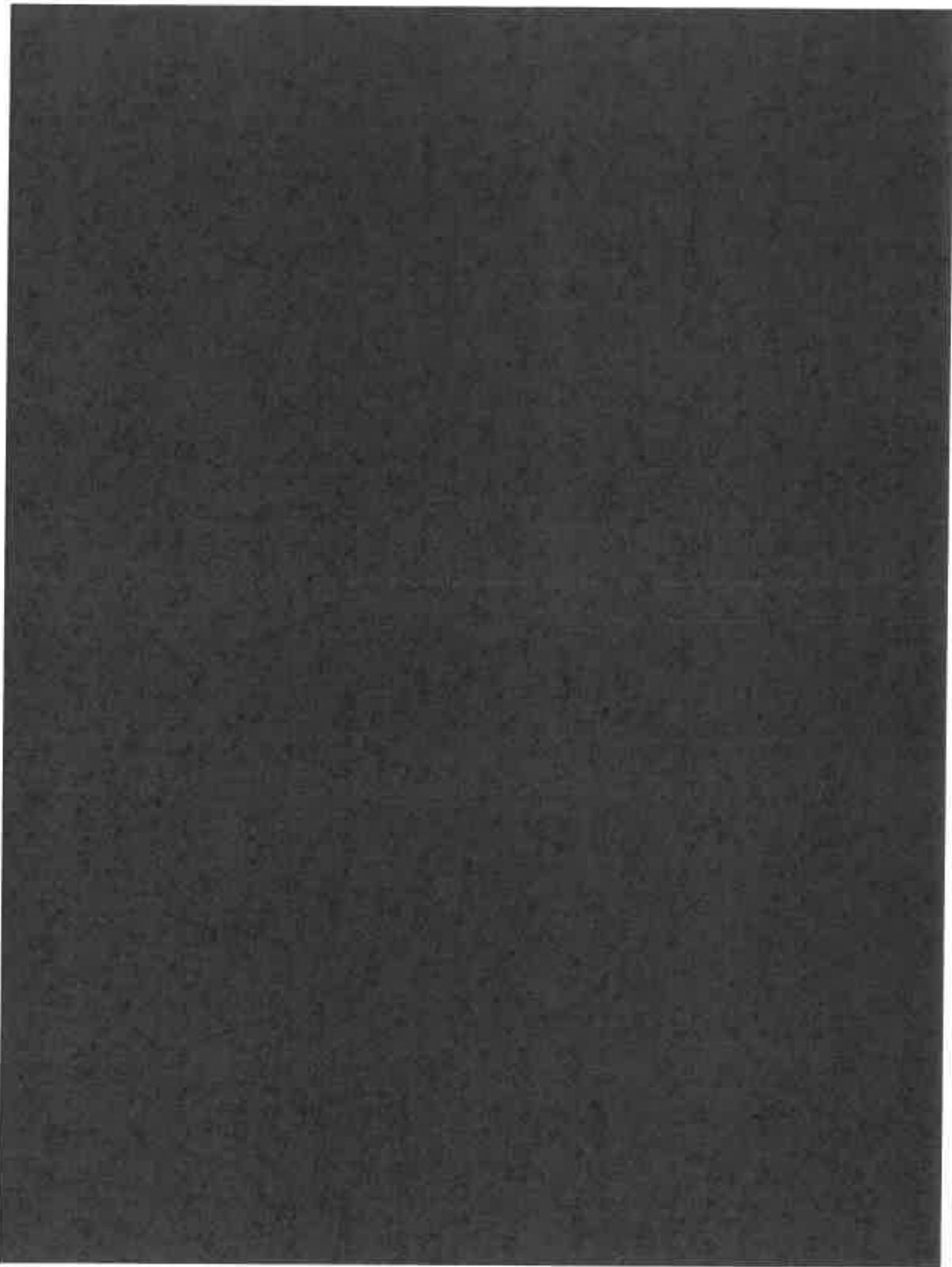


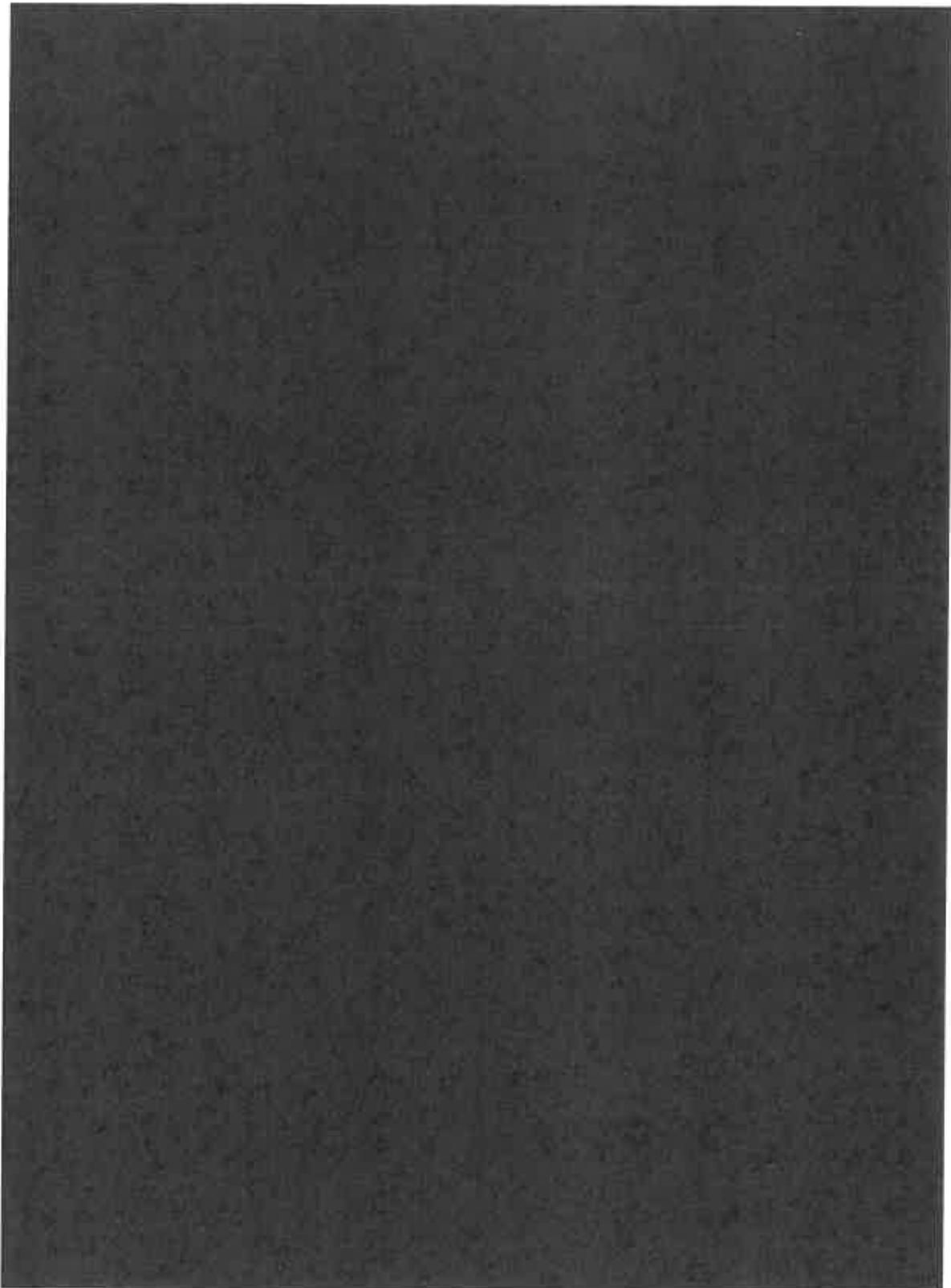


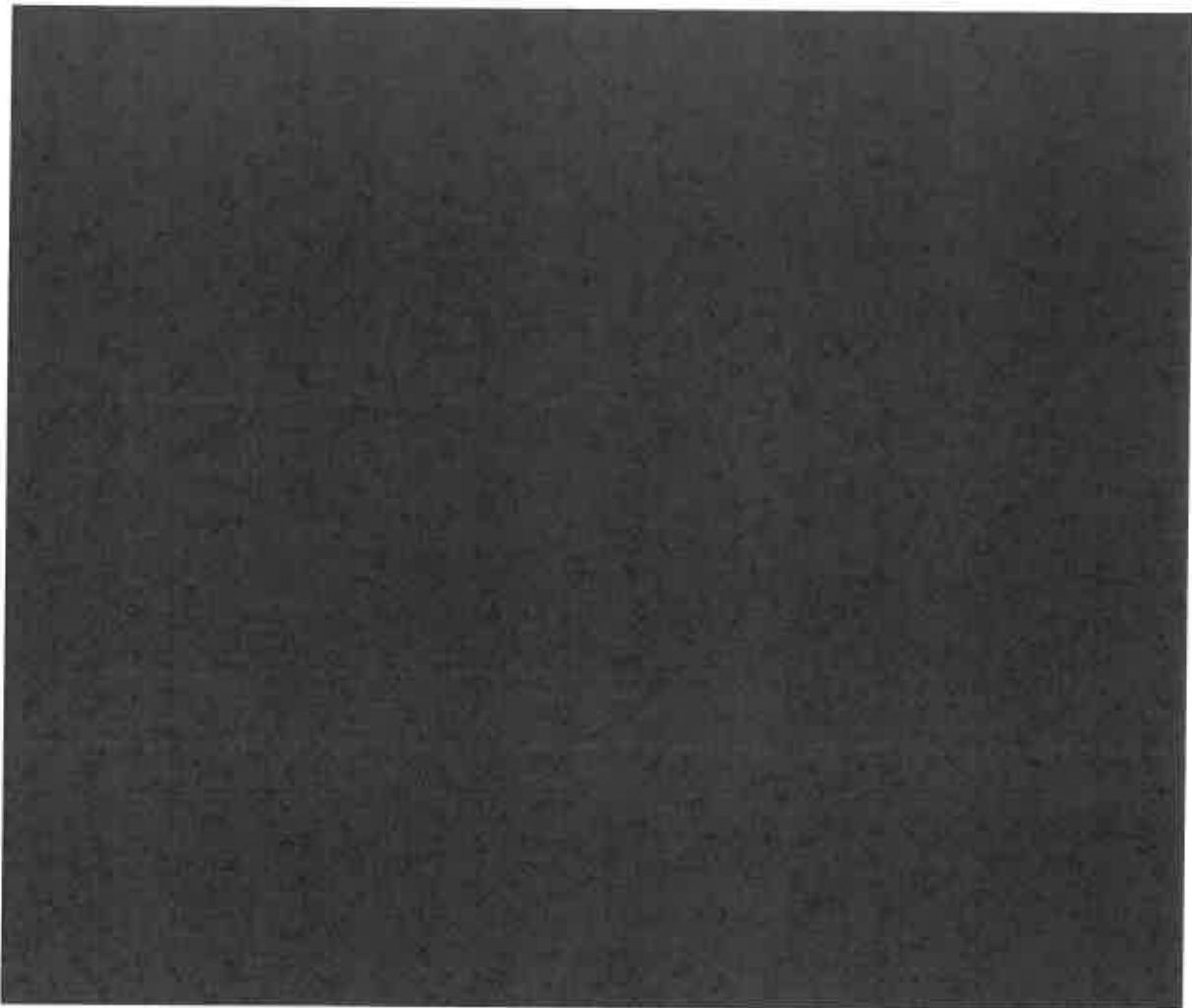












APPENDIX 1
Artifact Catalogue

Cat #	Provenience	Description	Lt.	Wid.	Th.	Wt.	Comment
Miscellaneous							
17-0000-001	±260 cm	Mortar granitic	160.0	135.0	95.0	2,270.0	
AC 49							
17-1-01	Unit 4, 60-70 cm	Biface base chert	29.9	27.5	10.9	7.6	
17-1-02	Unit 4, 60-70 cm	Cobble end battered granitic	88.0	62.0	56.0	370.2	
17-1-03	Unit 4, 60-70 cm	Core andesitic	67.0	63.2	46.1	244.8	deaccessioned
17-1-04							deaccessioned
17-1-05							deaccessioned
17-1-06							deaccessioned
17-1-07							deaccessioned
17-1-08							deaccessioned
17-1-09							deaccessioned
17-1-10	Unit 2, 10-20 cm	Pebble battered granitic	52.2	42.5	19.9	66.8	deaccessioned
AC 593B							
17-B01	Surface	Pestle granitic	136.9	57.1	47.1	591.7	Minimal use
17-B02	Surface	Cobble end battered ground porphyritic	292.0	97.9	65.1	1,845.6	deaccessioned
17-B03							deaccessioned
17-B04							
17-B05	Unit 1, 110-120 cm	Cobble battered granitic	101.0	71.8	43.0	459.1	
17-B06	Unit 1, 110-120 cm	Cobble battered Granitic	80.8	63.2	39.8	273.9	
17-B07	Unit 1, 163 cm	Pestle end battered quartz	118.9	53.4	47.5	477.3	
17-B08*	Trench backdirt	Pebble w/ochre granitic	174.0	67.1	58.6	1,061.1	
17-B09	No provenience	Bead <i>Offella</i> A1c	20.0	11.5			
17-B10*	Unit 1, 160-170 cm	Point chert	31.0	14.7	7.2	2.9	fragment
17-B11	Unit 1, 50-60 cm	Biface chert	14.8	11.3	3.5	0.3	fragment
17-B12	Unit 1, 40-50 cm	Point tip chert	19.4	17.5	4.3	1.4	Tip

* Illustrated in the text

Cat #	Provenience	Description	Lft.	Wid.	Th.	Wt.	Comment
17-B13	Unit 1, 70-80 cm	Biface chert	14.5	6.1	3.3	0.3	fragment
AC 593C	Monitoring	Mortar fragment granitic	137.0	121.7	61.0	1,582.8	
	Monitoring	Cobble edge battered bowled granite	107.7	97.4	41.3	741.8	
	Monitoring	Cobble bipitted edge battered fragment granitic	91.2	70.0	52.2	434.7	
	Monitoring	Cobble bipitted fragment granitic	89.4	44.0	49.7	216.3	
	Monitoring	Cobble end battered fragment granitic	118.5	108.0	71.5	1,261.7	
	Monitoring	Cobble w/ochre granitic	64.4	45.4	42.7	174.4	
	Monitoring	Cobble anvil fragment w/ asphaltum granitic	99.2	98.5	55.5	346.4	
	Monitoring	Cobble edge battered fragment granitic	64.0	112.5	65.4	522.5	
	Monitoring	Cobble pitted edge battered granitic	87.8	83.1	54.0	523.2	
	Monitoring	Anvil stone granitic	212.8	176.7	71.0	3,600.0	
AC 593E	East wall, 30± cm	Handstone multifaceted conglomerate	102.0	76.5	52.0	542.7	
	East wall, 30± cm	Cobble end & edge battered granitic	153.5	56.3	35.8	412.3	fragment
	East wall, 30± cm	Cobble end battered schist	75.3	57.5	37.3	236.3	Discarded
	East wall, 30± cm	Cobble edge battered granitic	116.0	71.9	42.1	474.3	Minimal use
	East wall, 30± cm	Cobble end & edge battered pitted granitic	142.0	81.0	70.2	1,078.5	
	Monitoring	Cobble end battered pitted granitic	89.5	75.3	39.3	375.4	
	Monitoring	Handstone multifaceted porphyritic	97.5	84.7	57.2	662.8	
	Monitoring	Cobble bipitted granitic	92.5	77.8	59.5	474.2	
	Monitoring	Cobble pitted granitic	61.6	64.4	40.9	218.0	fragment
	Monitoring	Cobble pitted end battered granitic	97.9	70.4	69.4	563.2	
17-104	Monitoring	Cobble end battered granitic	72.1	38.4	38.3	143.0	
17-105	Monitoring	Pebble end battered granitic	48.4	40.0	38.0	96.8	
17-106	Monitoring	Cobble end battered granitic	99.4	73.2	54.0	456.0	
17-107	Monitoring	Cobble end battered granitic	93.5	79.4	52.2	514.4	fragment
17-108	Monitoring	Cobble end battered granitic	105.8	86.0	53.8	658.8	
17-109	Monitoring	Cobble end battered granitic	74.6	65.7	51.8	346.5	
17-110	Monitoring	Cobble bipitted granitic	119.6	88.1	45.7	682.1	fragment
17-111	Monitoring	Cobble end battered granitic	103.5	58.9	46.7	433.4	fragment
17-112	Monitoring	Cobble end battered granitic	94.2	86.7	50.5	565.2	
17-113	Monitoring	Cobble end battered granitic	52.7	46.4	36.9	132.0	fragment

Cat #	Provenience	Description	Lt.	Wid.	Th.	Wt.	Comment
17-121	Monitoring	Cobble pitted end battered granitic	115.1	63.2	32.7	320.2	
17-122	Monitoring	Cobble pitted battered granitic	107.8	94.3	44.9	611.4	fragment
17-123	Monitoring	Cobble pitted battered granitic	102.8	86.4	51.5	530.8	fragment
17-124	Monitoring	Cobble edge battered granitic	166.2	136.5	50.0	1,848.2	
17-125	Monitoring	Cobble edge battered granitic	49.6	43.9	36.7	106.8	fragment
17-126	Monitoring	Core andesitic	54.6	54.5	42.2	126.2	
17-127	Monitoring	Cobble battered granitic	100.9	92.2	48.4	569.4	fragment
17-128	Monitoring	Cobble end battered cobble andesitic	111.5	87.8	53.0	748.3	
17-129	Monitoring	Cobble end battered granitic	122.1	109.3	57.7	938.7	fragment
17-130	Monitoring	Cobble edge battered granitic	90.2	65.2	73.0	649.3	fragment
17-131	Monitoring	Cobble end battered granitic	44.5	39.8	34.0	82.0	
17-132	Monitoring	Cobble end battered granitic	72.7	70.9	43.4	344.3	fragment
17-133	Monitoring	Cobble end battered granitic	103.6	81.4	63.6	651.7	Discarded
17-134	Monitoring	Cobble bipitted end battered granitic	133.1	83.8	42.4	686.1	
17-135	Monitoring	Cobble end battered granitic	135.6	96.5	66.1	1,107.4	
17-136	Monitoring	Cobble bipitted shale	105.5	82.5	29.1	257.0	
17-137	Rock cache, 0-60cm	Cobble end battered granitic	67.6	52.4	22.9	133.4	
17-138	Rock cache, 0-60cm	Cobble end & edge battered granitic	86.9	56.3	31.3	199.7	
17-139	Rock cache, 0-60cm	Cobble end & edge battered granitic	73.8	61.9	30.5	213.5	
17-140	Rock cache, 0-60cm	Cobble end battered granitic	84.8	66.3	46.0	377.9	
17-141	Rock cache, 0-60cm	Cobble end & edge battered granitic	90.0	50.0	35.0	199.0	fragment
17-142	Rock cache, 0-60cm	Cobble edge battered granitic	141.4	73.0	70.2	1,037.0	
17-143	Rock cache, 0-60cm	Cobble pitted end & edge battered granitic	114.2	84.5	57.9	763.5	Incipient pitting?
17-144	Rock cache, 0-60cm	Cobble end & edge battered granitic	102.1	88.6	62.3	769.2	
17-145	Rock cache, 0-60cm	Cobble end & edge battered granitic	100.4	67.2	44.8	511.5	fragment
17-146	Rock cache, 0-60cm	Cobble end & edge battered granitic	98.6	49.6	35.5	239.9	
17-147	Rock cache, 0-60cm	Cobble pitted edge battered granitic	89.5	81.4	48.3	524.5	
17-148	Rock cache, 0-60cm	Handstone faceted andesitic	97.7	78.2	54.8	591.1	
17-149	Rock cache, 0-60cm	Cobble end & edge battered granitic	138.8	107.5	57.9	1,279.3	
17-150	Rock cache, 0-60cm	Cobble pitted edge battered granitic	118.4	91.5	54.2	897.2	
17-151	Rock cache, 0-60cm	Cobble edge battered granitic	190.0	152.8	70.7	3,543.0	Anvil?
17-152	Rock cache, 0-60cm	Cobble end & edge battered granitic	160.0	147.9	81.5	2,756.0	Anvil?

Cat #	Provenience	Description	Lt.	Wid.	Th.	Wt.	Comment
17-899B-001							deaccessioned
17-899B-002	Unit 1, 50-60 cm	Bead <i>Olivella</i> A1c	19.8	11.5		1.5	
17-899B-003	Unit 1, 60-70 cm	Pebble battered granitic	45.7	35.7	17.3	44.4	deaccessioned
17-899B-004	Unit 1, 60-70 cm	Pebble battered granitic	57.7	47.4	14.2	64.0	
17-899B-005	Unit 1, 40-50 cm	Pebble battered granitic	16.8	16.3	8.5	1.5	
17-899B-006	Unit 1, 150-160 cm	Notched tool tip bone	57.7	52.5	23.3	119.4	deaccessioned
17-899B-007	Unit 1, 90-100 cm	Pebble battered granitic					deaccessioned
17-899B-008							
17-899B-009	Unit 1, 90-100 cm	Cobble battered sandstone	80.8	55.1	11.2	64.8	deaccessioned
17-899B-010							
17-899B-011							
17-899B-012	Unit 1, 140-150 cm	Bead <i>Olivella</i> B3a	3.6	4.0			deaccessioned
17-899B-013	Unit 1, 90-100 cm	Bead <i>Olivella</i> B2b	8.2	7.7	3.8	<0.1	
17-899B-014	Unit 1, 100-110 cm	Bead <i>Olivella</i> A2a	5.5	4.0		0.2	
17-899B-015	Unit 1, 100-110 cm	Bead <i>Olivella</i> A1a	10.3	6.4		0.1	
17-899B-016	Unit 1, 60-70 cm						
17-899B-017							
17-899B-018	Unit 1, 50-60 cm	Pendant blank <i>Haliotis</i>	44.6	16.8	6.1	4.3	
17-899B-019	Unit 1, 160-170 cm	Flake edge modified chert	29.0	19.8	8.5	3.6	
17-899B-020	Unit 1, 30-40 cm	Drill chert	35.0	16.0	0.5	2.9	fragment
17-899B-021							deaccessioned
17-899B-022							
17-899B-023	Unit 2, 120-130 cm	Bead <i>Olivella</i> A1a	6.5	3.8		0.1	
17-899B-024	Unit 2, 130-140cm	Bead <i>Olivella</i> A2a	6.8	4.4		0.1	
17-899B-025	Unit 2, 130-140 cm	Bead <i>Olivella</i> A2a	7.3	5.2		0.1	
17-899B-026	Unit 2, 130-140 cm	Bead <i>Olivella</i> A2a	7.3	5.5			
17-899B-027	Unit 2, 100-110 cm	Bead <i>Olivella</i> A2a	22.3	13.3		1.9	Natural/
17-899B-028	Unit 2, 150-160 cm	Bead <i>Olivella</i> A1c	5.5	4.4	0.1	0.1	fragment
17-899B-029	Unit 2, 140-150 cm	Bead <i>Olivella</i> M1a?	8.4	4.3	0.1	0.1	
17-899B-030	Unit 2, 130-140 cm	Bead <i>Olivella</i> M1a?	5.3	4.2	0.7	0.1	
17-899B-031	Unit 2, 120-130 cm	Bead <i>Olivella</i> L2b w/asphaltum	6.8	4.9	0.1	0.1	
17-899B-032	Unit 2, 110-120 cm	Bead <i>Olivella</i> L2b	27.4	12.2	4.7	1.1	
17-899B-033	Unit 2, 80-90 cm	Flake edge modified chert	66.5	30.2	9.9	18.6	possible point frag.
17-899B-034	Unit 2, 140-150 cm	Biface w/asphaltum chert					

Cat #	Provenience	Description	Lt.	Wid.	Th.	Wt.	Comment
17-899B-035							
17-899B-036	Unit 2, 120-130 cm	Cobble end abraded pitted edge battered granitic	114.9	77.4	50.0	739.6	deaccessioned
17-899B-037	Unit 2, 70-80 cm	Cobble end battered sandstone	118.5	87.8	49.9	924.3	2 pits on each side
17-899B-038	Unit 1, 30-40 cm	Point projectile base chert	22.0	17.2	67.3	2.7	deaccessioned
17-899B-039							
17-899B-040							
17-899B-041	Backhoe trench 1 NW	Cobble end battered granitic	153.5	65.7	53.1	952.9	deaccessioned
17-899B-042	Backhoe trench 1 NW	Grinding stone/ anvil granitic	119.3	148.5	80.4	2,700.0	
17-899B-043	Surface	Mortar granitic	198.3	149.8	62.3	2,925.0	fragment
17-899B-044	Surface	Mortar granitic	189.3	137.5	73.2	2,925.0	fragment
17-899B-045							Number not used
17-899B-046							
17-899B-047	Unit 2, 100-110 cm	Bead <i>Olivella</i> A1a	7.3	4.5		0.1	
17-899B-048	Unit 2, 70-80 cm	Flake uniface obsidian	17.0	17.4	3.5	1.0	
17-899B-049	Unit 2, 130-140 cm	Bead <i>Olivella</i> A1a	9.5	6.4	6.0	0.3	
17-899B-050	Unit 2, 10-20 cm	Flake obsidian	4.0	11.2	4.6	0.7	fragment
AC 2400 Unit							
17-2400-X01	Unit X, 10-20 cm	Point projectile tip chert	21.2	13.4	6.7	1.1	
17-2400-X02	Unit X, 20-30 cm	Point projectile chert	28.7	8.7	3.1	0.7	fragment
17-2400-X03	Unit X, 40-70 cm	Biface midsection siliceous mudstone	58.6	28.0	15.4	23.0	
17-2400-X04	Unit X, 130-140 cm	Hammerstone andesitic	40.1	56.5	52.4	116.3	fragment
17-2400-X05	Unit X, 130-140 cm	Cobble battered granitic	92.9	62.1	36.5	290.3	heat altered
17-2400-X06							deaccessioned
17-2400-X07	Unit X, 70-80 cm	Tube small perforated bone	19.3	2.5	2.3	0.3	Natural?
17-2400-X08	Unit X, 160-170 cm	Cobble battered granitic	186	131.3	76.0	2692.0	
17-2400-X09							
17-2400-X10	Unit X, 170-180 cm	Cobble battered andesitic	131.0	101.2	70.5	1,112.0	deaccessioned
17-2400-X11	Unit X, 170-180 cm	Cobble battered granitic	90.7	77.0	55.3	525.7	deaccessioned
17-2400-X12							
17-2400-X13	Unit X, 210-220 cm	Bead <i>Olivella</i> A1b	10.9	6.9		0.3	
17-2400-X14							
17-2400-X15	Unit X, 220-230 cm	Core chert	38.9	25.5	26.6	26.2	deaccessioned
17-2400-X16	Unit X, 60-100 sidewall	Point chert	13.9	14.7	5.5	1.0	fragment

Cat #	Provenience	Description	Lt.	Wid.	Th.	Wt.	Comment
17-2400-X17	Unit X, 150-160 cm	Hammerstone andesitic	45.0	67.0	48.6	190.0	fragment fossilized?
17-2400-X18	Unit X, 150-160 cm	Awl fragment bone	6.2	5.0	1.8	<0.1	
17-2400-X19	Unit X, 30-40 cm	Cobble battered granitic fragments	80.5	66.8	38.7	292.4	Discarded
AC 2400 (Data recovery)							
17-2400-001	Rock feature 1	Bead Olivella Alb	10.0	7.1		0.3	
17-2400-002	Rock feature 1	Bead Olivella Alc	21.9	13.3		1.2	Natural?
17-2400-003	Rock feature 1	Bead Olivella Alc	20.2	12.5		1.2	
17-2400-004	Rock feature 1	Cobble battered ground granitic	88.7	58.2	51.3	305.5	fragment
17-2400-005	Rock feature 1	Cobble end battered granitic	48.6	84.2	38.9	208.4	fragment
17-2400-006	Rock feature 1	Cobble end battered granitic	79.6	47	43.6	227.8	
17-2400-007	Rock feature 1	Cobble end battered granitic	99.4	64	47.3	417.5	Minimal
17-2400-008	Rock feature 1	Pebble end battered granitic	59.5	50.3	28.2	118.0	
17-2400-009	Rock feature 1	Pebble battered granitic	34.4	40.4	20.3	41.1	
17-2400-010	Monitoring	Biface base chert	15.2	18.6	8.7	2.5	
17-2400-011	Monitoring	Biface chert	23.4	14.0	7.1	2.3	Reworked
17-2400-012							deaccessioned
17-2400-013	Monitoring	Pebble battered granitic	56.3	42.2	18.5	65.7	
17-2400-014	Monitoring	Pestle midsection granitic	70.0	51.1	46.4	259.3	
17-2400-015	Monitoring	Cobble pitted & ground battered granitic	98.8	105.5	63.2	938.7	
17-2400-016	Monitoring	Cobble battered granitic	125.7	104.1	52.9	884.1	fragment
17-2400-017	Monitoring	Cobble battered granitic	143.6	118.6	59.2	1,597.6	
17-2400-018	Monitoring	Grinding slab granitic	98.5	64.5	81.6	780.4	fragment
17-2400-019	Monitoring	Cobble end battered granitic	103.4	71.0	37.8	383.3	
17-2400-020	Monitoring	Cobble bipitted granitic	105.6	87.7	63.9	835.6	Incipient
17-2400-021							deaccessioned
17-2400-022	Monitoring	Pebble battered granitic	55.9	45.0	35.5	123.3	
17-2400-023	Monitoring	Cobble battered granitic	41.1	66.8	42.5	295.7	
17-2400-024	Monitoring	Cobble end & edge battered ground granitic	125.8	95.0	62.5	1,021.4	
17-2400-025	Monitoring	Cobble battered granitic	70.1	58.0	45.1	218.3	
17-2400-026	Monitoring	Cobble battered granitic	136.3	111.4	85.0	1,793.4	fragment
17-2400-027	Monitoring	Cobble battered ground granitic	151.6	140.6	75.8	2,724.0	fragment
17-2400-028	Monitoring	Grinding slab granitic	137.3	96.5	65.7	1,557.3	fragment
17-2400-029	Monitoring	Grinding slab granitic	118.0	88.2	100.7	1,304.4	fragment

Cat #	Provenience	Description	Lt.	Wid.	Th.	Wt.	Comment
17-2400-030	Monitoring	Cobble battered granitic	110.8	60.3	57.5	580.7	fragment
17-2400-031	Monitoring	Cobble battered granitic	110.4	81.8	38.9	488.9	fragment
17-2400-032	Monitoring	Cobble end & edge battered pitted granitic	89.8	69.4	40.0	351.5	
17-2400-033	Monitoring	Cobble battered granitic	82.3	50.7	56.5	317.3	fragment
17-2400-034	Monitoring	Cobble battered edge abraded granitic	61.3	79.7	59.5	305.3	fragment
17-2400-035	Monitoring	Cobble bipitted granitic	81.4	64.5	34.3	248.7	incipient
17-2400-036	Monitoring	Pebble battered granitic	41.9	36.4	35.1	74.0	deaccessioned
17-2400-037	Monitoring						
17-2400-038	Monitoring	Hammerstone granitic	173.6	76.2	48.5	697.8	deaccessioned
17-2400-039	Monitoring	Cobble end & edge battered granitic	97.2	79.0	42.4	440.7	
17-2400-040	Monitoring	Cobble end & edge battered granitic	114.9	94.8	54.1	874.7	deaccessioned
17-2400-041	Monitoring						
17-2400-042	Monitoring						
17-2400-043	Monitoring						
17-2400-044	Monitoring	Pebble battered granitic	64.4	57.3	29.2	136.9	deaccessioned
17-2400-045	Monitoring	Cobble battered granitic	60.2	38.6	30.5	92.5	fragment
17-2400-046	Monitoring	Cobble battered granitic	95.1	79.6	65.4	440.2	fragment
17-2400-047	Monitoring	Cobble edge battered ground granitic	73.1	56.9	46.6	230.4	fragment
17-2400-048	Monitoring						
17-2400-049	Monitoring	Cobble battered granitic	64.1	50.7	27.2	129.0	deaccessioned
17-2400-050	Monitoring						
17-2400-051	Monitoring	Cobble battered granitic	89.7	73.4	54.8	440.0	deaccessioned
17-2400-052	Monitoring	Cobble end battered granitic	79.1	57.7	31.6	202.9	fragment
17-2400-053	Monitoring	Cobble battered granitic	94.7	64.0	24.5	274.5	
17-2400-054	Monitoring	Handstone faceted andesitic	45.7	78.8	54.4	257.1	fragment
17-2400-055	Monitoring	Cobble battered granitic	77.5	45.7	51.9	232.9	fragment
17-2400-056	Monitoring						
17-2400-057	Monitoring	Cobble battered granitic	88.6	61.6	28.5	290.6	deaccessioned
17-2400-058	Monitoring	Cobble bipitted battered granitic	68.3	69.9	42.0	291.2	fragment
17-2400-059	Monitoring	Grinding slab granitic	153.2	93.8	110.5	2,270.0	fragment
17-2400-060	Monitoring	Cobble battered granitic	55.9	55.3	29.0	82.0	fragment
17-2400-061	Monitoring	Cobble bipitted end battered siltstone	86.4	56	37.1	212.4	
17-2400-062	Monitoring	Cobble battered granitic	71.3	68.4	40.2	275.5	
17-2400-063	Monitoring						

Cat #	Provenience	Description	Lft.	Wid.	Th.	Wt.	Comment
17-2400-064	Monitoring	Cobble edge battered ground granitic	120.3	102.4	58.7	484.7	
17-2400-065	Monitoring	Cobble end battered granitic	186.8	58.8	50.2	402.0	deaccessioned
17-2400-066		Cobble battered quartzite	45.7	72.4	42.3	186.3	deaccessioned
17-2400-067	Monitoring	Cobble end battered pecked granite	180.0	141.5	73.9	2,724.0	deaccessioned
17-2400-068		Cobble battered granitic	68.5	49.2	36.0	164.3	fragment
17-2400-069	Monitoring	Cobble edge battered granitic	135.3	91.3	52.1	921.2	deaccessioned
17-2400-070		Cobble battered quartzite	45.7	72.4	42.3	186.3	deaccessioned
17-2400-071	Monitoring	Cobble end battered pecked granite	180.0	141.5	73.9	2,724.0	deaccessioned
17-2400-072	Monitoring	Cobble battered granitic	68.5	49.2	36.0	164.3	
17-2400-073	Monitoring	Cobble edge battered granitic	135.3	91.3	52.1	921.2	deaccessioned
17-2400-074		Cobble battered quartzite	45.7	72.4	42.3	186.3	deaccessioned
17-2400-075		Cobble end battered pecked granite	180.0	141.5	73.9	2,724.0	deaccessioned
17-2400-076		Cobble edge battered granitic	68.5	49.2	36.0	164.3	fragment
17-2400-077	Monitoring	Mano granitic	91.2	73.5	48.1	452.7	
17-2400-078		Cobble battered granitic	76.2	75.5	31.7	231.8	deaccessioned
17-2400-079	Monitoring	Pebble battered granitic	52.6	44.6	34.1	108.0	Friable, fragment
17-2400-080		Cobble end battered granitic	36.7	40.8	36.2	71.4	fragment
17-2400-081	Monitoring	Cobble battered edge abraded granitic	38.8	61.8	39.4	242.1	fragment
17-2400-082	Monitoring						deaccessioned
17-2400-083	Monitoring						deaccessioned
17-2400-084							
17-2400-085	Monitoring	Hammerstone granitic	87.2	61.2	34.6	222.7	
17-2400-086		Cobble battered siltstone	59.5	52.0	33.0	66.3	fragment
17-2400-087	Monitoring	Handstone faceted granitic	61.5	74.6	76.3	191.7	fragment
17-2400-088	Monitoring	Cobble end abraded granitic	57.3	62.1	43.4	174.0	fragment
17-2400-089	Monitoring						deaccessioned
17-2400-090							
17-2400-091	Monitoring	Cobble scraper granitic	60.5	76.5	43.1	262.7	
17-2400-092	Monitoring	Cobble end battered granitic	24.1	64.9	41.1	140.3	fragment
17-2400-093	Monitoring	Cobble battered granitic	55.5	67.3	43.5	201.1	fragment
17-2400-094	Monitoring	Cobble end battered granitic	71.8	67.5	53.2	272.6	fragment
17-2400-095	Monitoring	Cobble bipitted battered granitic	85.0	67.3	48.5	353.7	
17-2400-096							deaccessioned
17-2400-097							deaccessioned

Cat #	Provenience	Description	Lt.	Wd.	Th.	Wt.	Comment
17-2400-098	Monitoring	Cobble end battered granitic	96.8	65.9	56.4	540.5	fragment
17-2400-099	Monitoring	Cobble battered granitic	99.3	65.7	48.1	406.6	
17-2400-100	Monitoring	Cobble battered granitic	100.2	39.7	50.7	626.2	
17-2400-101	Monitoring	Cobble battered granitic	95.5	70.9	42.8	383.3	deaccessioned
17-2400-102	Monitoring	Cobble battered granitic	88.5	54.4	48.4	354.4	fragment
17-2400-103	Monitoring	Flake tool andesitic	85.2	65.5	20.5	91.0	
17-2400-104	Monitoring	Chopper andesitic	108.3	70.4	56.2	543.8	
17-2400-105	Monitoring	Cobble end abraded granitic	90.6	59.6	29.6	243.6	
17-2400-106	Monitoring	Cobble end battered granitic	65.3	96.1	51.2	377.8	fragment
17-2400-107	Monitoring	Cobble end battered granitic	82.4	75.0	49.2	350.0	fragment
17-2400-108	Monitoring	Cobble end battered granitic	67.9	54.6	37.7	204.8	disintegrating
17-2400-109	Monitoring	Mano faceted granitic	79.9	60.2	29.2	152.4	fragment
17-2400-110	Monitoring	Cobble battered sandstone	70.9	52.9	39.7	204.2	deaccessioned
17-2400-111	Monitoring	Cobble end battered granitic	85.4	78.4	77.1	815.5	deaccessioned
17-2400-112	Monitoring	Grinding slab granitic	70	58.5	43.3	287.2	fragment
17-2400-113	Monitoring	Cobble battered edge abraded granitic					deaccessioned
17-2400-114	Monitoring						deaccessioned
17-2400-115	Monitoring						deaccessioned
17-2400-116	Monitoring						deaccessioned
17-2400-117	Monitoring						deaccessioned
17-2400-118	Monitoring						deaccessioned
17-2400-119	Monitoring						deaccessioned
17-2400-120	Monitoring	Incised tabular siltstone	132	46.1	14.6	146.2	
17-2400-121	Monitoring	Cobble edge battered pitred quartzite	82.5	81.6	45.6	453.4	deaccessioned
17-2400-122	Monitoring	Cobble battered fragment granitic	113.9	90.9	42.0	144.6	
17-2400-123	Monitoring	Cobble battered fragment granitic					
17-2400-124	Monitoring	Cobble battered fragment andesitic	70.3	62.4	53.9	306.5	deaccessioned
17-2400-125	Monitoring	Cobble battered edge abraded granitic	81.2	44.2	53.5	236.9	fragment
17-2400-127	Monitoring	Pestle schist	194.0	61.3	54.4	1,140.2	deaccessioned
17-2400-128	Monitoring						deaccessioned
17-2400-129	Monitoring	Cobble battered granitic	122.1	83.8	45.8	697.2	deaccessioned
17-2400-130	Monitoring	Cobble edge battered granitic	114.9	84.2	44.5	615.7	fragment
17-2400-131	Monitoring						

Cat #	Provenience	Description	Lt.	Wid.	Th.	Wt.	Comment
17-2400-132	Monitoring	Awl tip bone	18.5	5.2	2.8	0.5	deaccessioned
17-2400-133	Feature #1	Point siliceous mudstone	42.2	16.0	8.6	5.0	fragment
17-2400-134	Monitoring	Bead Olivella A1c	26.4	15.4		3.1	
17-2400-135	Monitoring	Biface base sandstone	32.4	28.0	13.4	10.8	
17-2400-136	Monitoring	Point tip chert	18.3	18.9	7.6	2.3	
17-2400-137	Monitoring	Biface midsection chert	19.5	25.0	7.4	4.2	
17-2400-138	Monitoring	Point projectile chert	60.2	24.6	12.7	20.5	
17-2400-139	Monitoring	Scraper chert	42.6	23.6	9.8	12.1	
17-2400-140	Monitoring	Biface siliceous mudstone	37.5	30.5	10.7	12.2	fragment
17-2400-141	Monitoring	Point tip chert	13.8	20.2	4.4	1.4	
17-2400-142	Monitoring	Point tip chert	19.7	10.2	5.4	1.0	fragment
17-2400-143	Monitoring	Biface midsection chert	19.1	19.0	9.7	5.6	
17-2400-144	Monitoring	Point side notched base chert	18.4	24.6	6.6	4.2	
17-2400-145	Monitoring	Point side notched base chert	32.4	25.2	6.4	3.7	
17-2400-146	Monitoring	Bead Olivella A1c	15.2	11.9		0.8	Natural? fragment
17-2400-147	Monitoring	Point chert	56.0	17.6	10.6	8.5	
17-2400-148	Monitoring	Bead Olivella A1b	11.3	6.5		0.2	fragment
17-2400-149	Monitoring	Bead Olivella A1b	14.4	8.2		0.5	Natural?
17-2400-150	Monitoring	Bead Olivella A1c	17.7	11.9		0.9	
17-2400-151	Monitoring	Bead Olivella A1c	22.9	13.5		1.5	Natural?
17-2400-152	Monitoring	Bead Olivella A1c	22.4	12.6		1.5	
17-2400-153	Monitoring	Bead Olivella A1c	23.0	14.0		1.5	
17-2400-154	Monitoring	Scraper chert	86.6	30.3	12.7	33.9	
17-2400-155	Monitoring	Scraper siltstone	94.8	57.8	67.8	93.0	
17-2400-156	Monitoring	Mano granitic	108.5	99.2	61.5	1,802.1	
17-2400-157	Monitoring	Pebble end battered siltstone	62.1	23.6	14.1	25.6	
17-2400-158	Monitoring	Cobble battered granitic	87.8	85.7	33.8	342.4	fragment
17-2400-159	Monitoring	Cobble battered granitic	83.4	79.5	60.5	571.7	
17-2400-160	Monitoring	Cobble edge battered granitic	87.3	54.0	51.6	332.6	fragment
17-2400-161	Monitoring	Cobble edge abraded granitic	46.2	39.5	42.5	93.6	fragment
17-2400-162	Monitoring	Cobble edge battered granitic	66	40.9	33.6	137.3	
17-2400-163	Monitoring	Cobble edge battered ground granitic	134.1	101.3	54.4	1,160.2	deaccessioned
17-2400-164	Monitoring						
17-2400-165	Monitoring						

Cat #	Provenience	Description	Lt.	Wid.	Th.	Wt.	Comment
17-2400-166	Feature #3	Biface midsection chert	31.6	34.6	12.1	17.5	
17-2400-167	Feature #3	Flake edge modified siltstone	39.8	20.5	4.6	4	
17-2400-168	Monitoring	Biface edge fragment chert	27.5	10.2	3.7	1.7	
17-2400-169	Monitoring	Scraper chert	29.7	28.6	6.8	6.9	deaccessioned
17-2400-170							
17-2400-171	Monitoring	Scraper chert	26.3	26.7	5.8	3.5	
17-2400-172	Monitoring	Biface midsection chert	19.2	14.3	5.8	2.4	
17-2400-173	Monitoring	Flake edge modified chert	40.0	22.8	10.7	10.3	
17-2400-174	Monitoring	Flake edge modified chert	48.0	24.2	19.4	23.2	
17-2400-175	Monitoring	Cobble bipitted edge battered sandstone	144.2	74.2	52.8	435.2	fragment
17-2400-176	Monitoring	Cobble pitted granitic	65.2	54.4	42.5	712.4	
17-2400-177	Monitoring	Mano granitic	107.0	90.5	68.6	394.4	
17-2400-178	Monitoring	Hammerstone andesitic	63.7	60.2	54.5	336.7	
17-2400-179	Monitoring	Grinding slab granitic	85.3	61.7	60.1	453.8	fragment
17-2400-180	Monitoring	Pestle granitic	75.3	85.5	71.4	797.4	fragment
17-2400-181							
17-2400-182							
17-2400-183	Monitoring	Cobble battered granitic	89.1	64	50.2	424.9	
17-2400-184	Monitoring	Cobbles end battered bipitted granitic	95.7	75.1	40.7	442.8	
17-2400-185	Monitoring	Cobble battered abraded granitic	88.0	53.7	45.2	290.6	
17-2400-186	Monitoring	Cobble end & edge battered schist	96.4	56.2	25.1	207.4	
17-2400-187	Monitoring	Mano granitic	69.2	57.8	39.1	233.3	minimal wear
17-2400-188							
17-2400-189							
17-2400-190							
17-2400-191	Monitoring	Cobble end battered quartzite	87.5	36.1	52.1	213.1	
17-2400-192	Feature #3	Cobble bipitted granitic	144.0	72.0	53.8	940.0	
17-2400-193	Rock feature #1	Cobble bipitted edge battered schist	79.2	83.9	30.6	272.4	
17-2400-194	Rock feature #1	Mano bipitted granitic	98.4	86.2	50.0	703.6	
17-2400-195	Rock feature #1	Cobble edge abraded bipitted battered granitic	96.9	80.5	48.0	582.2	
17-2400-196	Rock feature #1	Cobble bipitted edge battered granitic	89.5	82.4	58.6	600.0	
17-2400-197	Rock feature #1	Arvil stone granitic	145.4	91.2	73.2	1,253.6	fragment
17-2400-198	Monitoring	Point fragment obsidian	18.4	10.7	6.8	1.0	

Cat #	Provenience	Description	Lt.	Wd.	Th.	Wr.	Comment
AC 2512							
17-2512-001	Unit K, 20-30 cm	Biface stemmed chert	28.5	29.5	10.3	6.1	fragment
17-2512-002	Unit K, 120-130 cm	Hammerstone granitic	91.0	62.0	57.0	417.5	deaccessioned
17-2512-003							Natural?
17-2512-004	Unit K, 130-140 cm	Bead Olivella A1a	6.5	4.8	0.1	<0.1	Natural?
17-2512-005	Unit K, 120-130 cm	Bead Olivella A1a	5.3	4.0			
AC 2563							
17-2563-001							deaccessioned
17-2563-002							deaccessioned
17-2563-003	Unit J2, 40-50 cm	Bead Olivella A1a	10.3	6.2	0.4		
17-2563-004							deaccessioned
17-2563-005	Unit J2, 60-70 cm	Bead Olivella A1h	10.9	7.6	0.5		
17-2563-006	Unit J2, 60-70 cm	Biface chert	16.0	21.6	5.9	3.4	fragment
17-2563-007							deaccessioned
17-2563-008	Unit J2, 130-140 cm	Cobble pitted end battered granitic	115.0	95.9	55.6	771.7	fragment
17-2563-009	Unit J2, 130-140 cm	Hammerstone faceted & battered quartzite	101.7	72.3	48.9	587.2	deaccessioned
17-2563-010							
17-2563-011	Unit J2, 140-150 cm	Cobble battered granitic	111.0	58.8	61.9	538.0	
17-2563-012	Unit J2, 110-120 cm	Scraper unifacial chert	36.3	34.1	7.1	10.2	
17-2563-013	Unit J2, 100-110 cm	Biface chert	14.8	10.9	7.5	0.9	possible midsection
AC 2932							
17-R-01							deaccessioned
17-R-02	Auger 9	Cobble end battered granitic	111.0	72.1	32.2	370.0	
17-R-03	Auger 5/6	Fishhook Mytilus	12.5	3.9	2.1	0.1	fragment
17-R-04	Auger 5/6	Cobble battered granitic	98.7	102.9	94.9	1,244.8	Anvil fragment?
17-R-05	Auger 5/6	Hammerstone andesitic	75.2	40.7	44.1	182.9	
17-R-06	Augering	Cobble end battered granitic	81.5	63.7	41.3	292.4	fragment
17-R-07	Auger 5/6, deep mixed	Biface tip chert	33.9	21.7	6.8	5.3	
AC 3925B							
17-3925-01	Under chimney	Cobble w/ centrally smoothed depression siltstone	79.7	61.7	35.3	130.8	
17-3925-02	Monitoring	End battered cobble fragment granitic	90.9	81.6	48.4	376.0	Discarded
17-3925-03	NW corner, ±30cm	Battered cobble fragment granitic	97.0	78.3	69.1	495.0	Discarded

Cat #	Provenience	Description	L.F.	Wid.	Th.	Wt.	Comment
17-3925-04	Monitoring	battered cobble granitic	112.4	81.4	71.4	958.4	Discarded
AC 3998							
17-3998-01	60 cm	Cobble ground granitic	53.9	42.0	36.1	82.0	fragment
17-3998-02	60 cm	Point chert	52.3	25.0	18.3	26.5	fragment
17-3998-03							deaccessioned
AC 4005							
17-W-01	N foundation trench	Cobble end battered sandstone	87.2	45.8	32.1	163.6	fragment
17-W-02	N foundation trench	Cobble end battered granitic	85.2	48.0	32.5	184.5	
AC 4019							
17-4019-1	Surface	Cobble battered pitted granitic	85.4	61.4	55.5	281.5	fragment min. use
AC 2870							
17-001	Unit 1, 10-20 cm	Flake utilized quartzite	54.9	22.9	7.9	8.2	
17-002							2 fragments
17-003	Unit 1, 90-100 cm	Grooved shale	77.1	59.1	17.4	72.1	deaccessioned
17-004	Unit 1, 100-110 cm	Flake edge modified chert	16.0	16.7	5.7	1.6	fragment
17-005	Unit 1, 100-110 cm	Cobble battered granitic	69.2	42.5	36.5	147.7	
17-006	Unit 1, 110-120 cm	Pebble battered granitic	29.4	32.7	20.2	25.3	
17-007	Unit 1, 120-130 cm	Pebble battered granitic	58.1	34.0	33.0	90.0	
17-008	Unit 1, 80-90 cm	<i>Halictis</i> w/asphaltum	31.8	12.2	1.5	1.3	fragment
17-009	Feature, 50 cm	<i>Halictis</i> w/asphaltum	131.8	84.6	12.6	146.6	fragment
17-010	Feature, 50 cm	<i>Halictis</i> w/asphaltum	170.0	79.7	12.4	201.5	fragment
AC 4235B (Breschini et al. 2012)							
17-201							
17-202	Unknown	Core chert	59.9	56.8	22.5	61.0	
17-203	Unknown	Core chert	71.0	69.3	51.8	280.5	
17-204	Backwall W	Point siliceous mudstone	47.2	20.9	8.5	4.1	
17-205	Backwall W ~ 200 cm	Bead Olivella A1c	21.0	12.5		1.4	Returned to owner
17-206	Backwall W ~ 200 cm	Bead Olivella A1c	24.9	14.8		2.7	
17-207	Backwall W ~ 200 cm	Bead Olivella A1c	17.5	10.5		0.7	
17-208	Backwall W ~ 200 cm	Bead Olivella A1c	19.5	11.6		0.1	

Cat #	Provenience	Description	l.f.	Wid.	Th.	Wt.	Comment
17-209	Backwall, SW 143cm	Point chert	62.7	29.0	12.5	21.6	Returned to owner
17-210	Backwall W	Point siliceous mudstone	58.2	26.5	9.8	11.3	Returned to owner
17-211	Backwall S 9th fore hole	Fishhook Mytilus	21.3	5.7	3.2	0.8	fragment
17-212	South side	Pendant blank Haliotis	31.9	29.7	3.9	4.2	
17-213	Unknown	Awl bone	85.3	20.4	10.9	11.7	
17-214	Unknown	Bead Olivella A1c	17.7	11.7	1.4		
17-215	Unknown	Fishhook Mytilus	14.3	6.0	2.8	0.3	fragment
17-216	Unknown	Awl tip bone	13.2	4.2	3.5	0.2	
17-217	Unknown	Bead Olivella G6b	6.5	6.3	1.9	0.1	Returned to owner
17-218	Unknown	Bead Olivella G1	5.0	4.9	1.5	0.1	Returned to owner
17-219	Unknown	Awl bone	84.3	24.0	13.3	19.8	
17-220	Unknown	Fishhook Mytilus	16.8	7.4	3.3	0.5	fragment
17-221	NW property corner	Utilized bone	121.7	13.7	8.1	14.9	
17-222	Unknown	Flake edge utilized chert	31.5	19.2	8.4	4.6	
17-223	Unknown	Flake edge utilized quartzite	43.6	26.2	8.0	7.1	
17-224	Center of property	Mortar granite	170.0	144.0	105.0	3,300.0	Returned to owner
17-225	Back wall W 143 cm	Pestle granite	168.0	72.2	62.3	1,175.0	w/edifice; returned to owner
17-226	Back wall W 1 meter	Mortar granite	132.4	80.5	73.0	774.7	
17-227	Unknown	Mortar granite	165.0	100.0	55.0	1,261.5	fragment
17-228	Unknown	Mortar granite	141.5	102.8	44.7	1,052.5	fragment
17-229	Unknown	Pestle granite	77.9	66.7	63.6	536.3	fragment
17-230	Unknown	Pestle granite	67.3	57.4	56.9	293.4	fragment
17-231	Unknown	Handstone faceted granite	139.5	67.2	56.3	747.0	
17-232	Unknown	Rock grinding granite	165.0	160.0	100.0	3,000.0	
17-233	Unknown	Mortar granite	285.0	230.0	130.0	10,000.0	fragment
17-234	Unknown	Pestle granite	108.6	54.0	51.4	519.0	fragment
17-235	Unknown	Cobble edge battered granite	46.3	45.5	44.9	107.1	fragment
17-236	Unknown	Pebble edge battered granite	53.0	45.0	21.6	75.2	
17-237	Unknown	Cobble end battered granite	102.2	57.6	39.8	335.5	
17-238	Unknown	Cobble battered granite	80.2	68.0	39.7	302.5	
17-239	Unknown	Cobble battered granite	91.8	64.0	37.3	321.5	
17-240	Unknown	Cobble battered granite	79.0	71.8	48.9	362.5	fragment
17-241	Unknown	Cobble edge ground granite	102.0	63.9	51.1	516.9	

Cat #	Provenience	Description	Lt.	Wid.	Th.	Wt.	Comment
17-242	Unknown	Chopper andesite	83.8	80.5	52.1	517.0	
17-243	Unknown	Cobble edge battered granite	102.3	75.8	55.2	622.0	
17-244	Unknown	Cobble edge battered granite	106.5	78.7	52.8	636.6	
17-245	Unknown	Cobble edge battered granite	131.0	105.5	72.0	1,088.9	fragment discarded, no analytical value
17-246	Unknown	Cobble end battered granite	82.9	58.4	56.3	396.8	discarded no ana- lytical value
17-247	Unknown	Cobble edge battered granite	86.4	77.3	51.5	490.5	discarded no ana- lytical value
17-248	Unknown	Cobble pitted granite	127.5	105.9	45.5	1,021.0	discarded no ana- lytical value
17-249	Unknown	Cobble pitted edge battered granite	76.3	71.3	39.1	300.0	discarded no ana- lytical value
17-250	Unknown	Cobble edge battered granite	105.2	82.6	55.8	691.5	discarded no ana- lytical value
17-251	Unknown	Cobble battered granite	165.0	110.0	80.0	2,020.0	discarded no ana- lytical value
17-252	Unknown	Boulder pecked & ground granite	240.0	200.1	130.0	8,000.0	discarded no ana- lytical value
17-253	Unknown	Lead Olivella A.1c	16.7	11.1	0.7		fragment

Exhibit D

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PRELIMINARY ARCHAEOLOGICAL RECONNAISSANCE OF ASSESSOR'S PARCEL NUMBER CARMEL, MONTEREY COUNTY, CALIFORNIA

by

Mary Doane, B.A., and Trudy Haversat, *SOPA*

June 12, 1997

Prepared for

Jeff Crockett
Tunstall Engineering Consultants, Inc.

SUMMARY: PROJECT 2512

RESULTS: POSITIVE

ACRES: <1

SITES: CA-MNT-17

UTMG:

MAP:

Note: *SOPA* indicates certification by the Society of Professional Archaeologists.

INTRODUCTION

In May 1997, Archaeological Consulting was authorized by Jeff Crockett of Tunstall Engineering Consultants, Inc. to prepare a Preliminary Archaeological Reconnaissance report for the demolition of an existing structure and new construction on a parcel in Carmel, Monterey County, California.

As part of our methodology in the preparation of this report, we have conducted: 1) a background records search at the Northwest Regional Information Center of the California Archaeological Inventory, located at Sonoma State University in Rohnert Park; and 2) a field reconnaissance of the project area. The following report contains the results of these investigations as well as our conclusions and recommendations.

PROJECT LOCATION AND DESCRIPTION

The project parcel is located at in Carmel, Monterey County, California (see Maps 1 and 2). The Assessor's Parcel Number is

and the Universal Transverse Mercator Grid (UTMG) coordinates for the approximate center of the project parcel are on the

The parcel is less than an acre in size.

At the time of the archaeological reconnaissance there was an existing house on the parcel. The house, pavement, walkways and kikuyu grass covered much of the lot. There was good soil visibility in the planting bed in the front of the house, as well as several small areas around the lot perimeter and in the back yard. Overall, ground surface visibility was considered adequate for the purposes of this reconnaissance.

PROJECT METHODOLOGY

The methodology used in the preparation of this report included two primary steps, as follows:

Background Research

The background research for this project included an examination of the archaeological site records, maps, and project files of the Northwest Regional Information Center of the California Archaeological Inventory, located at Sonoma State University in Rohnert Park, California. In addition, our own extensive personal files and maps were examined for supplemental information, such as rumors of historic or prehistoric resources within the general project area.

The Northwest Regional Information Center has been established by the California Office of Historic Preservation as the local repository for all archaeological reports which are prepared under cultural resource management regulations. The background literature search at the appropriate Regional Information Center is required by state guidelines and current professional standards. Following completion of the project, a copy of the report must be deposited with that organization.

These literature searches are undertaken to determine if there are any previously recorded archaeological resources within the project area, and whether the area has been included within any previous archaeological research or reconnaissance projects.

Field Reconnaissance

The field reconnaissance was conducted by Mary Doane, B.A. and Kathy Owens on May 27, 1997. The survey consisted of a "general surface reconnaissance" of all land surfaces within and immediately adjacent to the project area which could reasonably be expected to contain visible cultural resources, and which could be viewed without major vegetation removal or excavation.

RESULTS OF THE RECONNAISSANCE

Background Research

The search of the files at the Northwest Regional Information Center and our office records indicated that the project parcel is located within the boundaries of the extensive archaeological site, CA-MNT-17. There was no indication of a previous archaeological reconnaissance having been conducted on the parcel.

In addition, the California Inventory of Historical Resources (March 1976), California Historical Landmarks, and the National Register of Historic Places were checked for cultural resources which might be present in the project area, but which were not recorded with the Regional Information Center.

The project area lies within the currently recognized ethnographic territory of the Costanoan (often called Ohlone) linguistic group. Discussions of this group and their territorial boundaries can be found in Breschini, Haversat, and Hampson (1971), Kroeber (1925), Levy (1971), Margolin (1971), and other sources. In brief, the group followed a general hunting and gathering subsistence pattern with partial dependence on the natural acorn crop. Habitation is considered to have been semi-sedentary and occupation sites can be expected most often at the confluence of streams, other areas of similar topography along streams, or in the vicinity of springs. These original sources of water may no longer be present or adequate. Also, resource gathering and processing areas, and associated temporary campsites, are frequently found on the coast and in other locations containing resources utilized by the group. Factors which influence the location of these sites include the presence of suitable exposures of rock for bedrock mortars or other milling activities, ecotones, the presence of specific resources (oak groves, marshes, quarries, game trails, trade routes, etc.), proximity to water, and the availability of shelter. Temporary camps or other activity areas can also be found along ridges or other travel corridors.

- A. A single 1.5 x 1.5 meter test unit should be excavated. The unit should be excavated using standard archaeological techniques¹. The following studies should be conducted on the material recovered:
 1. Professional evaluation of the animal bone recovered;
 2. Professional evaluation of the lithic artifacts and debitage recovered;
 3. At least 2 radiocarbon dates shall be run on material recovered; and
 4. Any other analyses as required; for instance, bead analysis if any beads are recovered from the site.
- B. Following the test excavation, a *Preliminary Archaeological Report and Archaeological Mitigation Plan* should be prepared. This should evaluate the significance of the cultural resource on the project parcel and make the appropriate mitigation recommendations. This report should be submitted to the lead agency for their use during project review.
- C. A *Final Technical Report* should be completed within approximately one year of completion of the field work. This should be submitted to the lead agency and to the Regional Information Center at Sonoma State University.

Because of the possibility of unidentified (e.g., buried) cultural resources being found during construction, we recommend that the following standard language, or the equivalent, be included in any permits issued within the project area:

- If archaeological resources or human remains are accidentally discovered during construction, work shall be halted within 50 meters (150 feet) of the find until it can be evaluated by a qualified professional archaeologist. If the find is determined to be significant, appropriate mitigation measures shall be formulated and implemented.

¹ The unit should be excavated in 10 cm vertical increments (where appropriate) with all materials (except bulk rock) being passed through 1/8 inch mesh screens and any materials remaining in the screens transported to the laboratory for wet screening, again using 1/8 inch mesh. Following sorting, the appropriate analyses (including faunal, shell, lithic, ground stone, etc.) should be completed, and radiocarbon and other appropriate dating techniques should be employed.

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Exhibit E

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**PRELIMINARY ARCHAEOLOGICAL REPORT AND
ARCHAEOLOGICAL MITIGATION PLAN FOR
PROPOSED DEVELOPMENT AT CA-MNT-17,
APN _____ AT _____
CARMEL, MONTEREY COUNTY, CALIFORNIA**

Gary S. Breschini, *SOPA*, Trudy Haversat, *SOPA*

March 7, 1998

Prepared for:

Tunstall Engineering, Salinas

INTRODUCTION

In late January of 1998, Archaeological Consulting was authorized by Tunstall Engineering to conduct a secondary archaeological test excavation for a proposed development project within archaeological site CA-MNT-17, on , Carmel, Monterey County, California. The following report constitutes a *Preliminary Archaeological Report and Archaeological Mitigation Plan* for these investigations.

PROJECT LOCATION AND DESCRIPTION

The project parcel is located at _____, in Carmel, Monterey County, California (see Maps 1 and 2). The Assessor's Parcel Number is _____, and the Universal Transverse Mercator Grid (UTMG) coordinates for the approximate center of the project parcel are _____ on the _____). The parcel is less than an acre in size.

The proposed project will involve demolition of an existing single-family dwelling and construction of new single-family dwelling on the property.

PROJECT BACKGROUND

During the Preliminary Archaeological Reconnaissance (Doane and Haversat 1997) we noted that the soil on the parcel was very dark gray ashy midden, with shell fragments (primarily mussel and abalone) visible. Some fire-altered rock was also observed.

Based upon the background research and the surface reconnaissance of the project area, we concluded that the project area contains surface evidence of potentially significant cultural resources, specifically, archaeological site CA-MNT-17. This is a large site, which has been archaeologically sampled in several areas. The project area lies within a short distance of five previous test excavations, two in the immediate vicinity, and three to the west.

One of these test excavations, along the coast, produced evidence of a Late Period Coastal Abalone Processing Site (after Breschini and Haversat 1991), dating primarily between 250 and 1,000 years B.P.¹ The other excavations all found evi-

¹ B.P.: Before the Present. As used in radiocarbon dating, the present is defined as A.D. 1950. Radiocarbon dating produces approximate (7500 ± 100 B.P.) rather than exact (9 A.M., October 29, 4004 B.C.) dates. As such, the radiocarbon dates cited in this and other reports must be regarded as a measure of central tendency, and should not be strictly equated with calendar years.

dence of an Early Period village characterized by approximately two meters of midden, and dating approximately 3,400 to 4,000 years B.P. Human remains were found during one project. Because of this background data, and the indicators noted on the property itself, we made recommendations for archaeological testing of the parcel.

PROJECT METHODS

Archaeological Consulting conducted the fieldwork for the project, as had been recommended during the Preliminary Reconnaissance, between February 18 and March 3, 1998. This consisted of excavation of a single archaeological test unit (125 x 125 cm in size) situated in the front (northern) portion of the property. This area will be impacted by the proposed new construction. The unit was excavated under the overall direction of Gary S. Breschini, Ph.D.

The unit, designated Unit K, was excavated in 10 cm vertical increments with the exception that the uppermost levels, consisting of dense lawn and a massive root base, was excavated as 0-20 cm and discarded. Because human remains were found, the unit was abandoned at a depth of 150 cm.

All materials (except bulk rock) were passed through 1/8 inch mesh screens and the materials remaining in the screens were water washed on site, dried, bagged and transported to the laboratory for sorting and analysis.

This report, a *Preliminary Archaeological Report and Preliminary Archaeological Mitigation Plan*, is based on the field investigations. A final report, containing only scientific data and not required for project planning purposes, will be forthcoming at the end of the analyses.

RESULTS OF THE INVESTIGATIONS

The project parcel contains a portion of archaeological site CA-MNT-17. The single test unit extended to a depth of 150 cm, which did not represent the bottom of the deposit. Nearby parcels have extended to 200 cm and beyond.

Because of the short time frame allowed for this project, the laboratory sorting and analysis has not yet begun. A number of midden constituents were noted in the field, however, and this report is based on those observations and recent experience with other portion of the site on the adjacent lot to the west and on the parcel across the street to the north. The project on the adjacent parcel involved excavation of a large area for a subsurface garage and basement, and offered a significant sample of the contents of the site. This thus provides a very good basis for comparison.

Midden Constituents

Shellfish remains were the primary midden constituent, and these were found in only limited quantities. The final report will quantify the species at selected levels, as this has been found useful in exploring the temporal period represented and the subsistence activities conducted at the site.

In addition to shell, small quantities of bone (including both fish and non-fish), lithics, and cobble tools also were present. Unfortunately, the quantities of most constituents appear too small to allow productive analysis, as had been recommended. It is likely that there will be several pieces of obsidian, however, of sufficient size for obsidian hydration and source analyses.

Temporal Placement

Evidence suggests that this portion of CA-MNT-17 contains an Early Period village ranging from about 3400-4000 years ago. Two radiocarbon dates will be obtained from this project, and, together with previously obtained dates from the site, will help to quantify the temporal placement of the site. Radiocarbon dates obtained so far on CA-MNT-17 are listed in Table 1.

Table 1. Radiocarbon Determinations from CA-MNT-17.

Age/Range		Lab. No.	Material	Provenience
Coastal bluff area				
320 ±	50	WSU-2981	Shell- <i>Haliotis</i> r.	Unit 4, 38-40 cm
380 ±	90	WSU-3627	Shell- <i>Haliotis</i> r.	Monitoring, 80 cm
400 ±	70	WSU-2980	Shell- <i>Haliotis</i> r.	Unit 4, 38-40 cm
610 ±	45	WSU-2982	Shell- <i>Haliotis</i> r.	Unit 4, 40-50 cm
930 ±	60	WSU-3628	Shell- <i>Haliotis</i> r.	Monitoring, 100 cm
935 ±	45	WSU-2983	Shell- <i>Haliotis</i> r.	Unit 4, 45 cm
980 ±	40	WSU-2984	Shell- <i>Haliotis</i> r.	Unit 4, 50-60 cm
1055 ±	40	WSU-2985	Shell- <i>Haliotis</i> r.	Unit 4, 60-70 cm
1690 ±	50	WSU-2986	Carbon rich soil	Unit 4, 60-70 cm
2950 ±	70	WSU-3629	Carbon rich soil	Monitoring, 140-170 cm
Lagoon area				
850 ±	70	WSU-3641	Shell- <i>Haliotis</i> r.	Unit 2, 34-40 cm
3400 ±	300	WSU-3642	Shell- <i>Haliotis</i> r.	Unit 2, 70-80 cm
3720 ±	110	WSU-3643	Shell- <i>Haliotis</i> r.	Unit 2, 110-120 cm
3900 ±	80	WSU-3644	Shell- <i>Haliotis</i> r.	Unit 2, 150-160 cm
3940 ±	70	Beta-98238	Shell- <i>Haliotis</i> r.	Unit X, 180-190 cm

CONCLUSIONS AND RECOMMENDATIONS

Previous test excavations have been conducted in the immediate vicinity of the current project. The first test produced a considerable quantity of midden constituents, and was judged significant. Recommendations were made to preserve the deposit through construction of a house with shallow slab-on-grade foundations.

The second test excavation, immediately adjacent to the current project, produced surprisingly fewer cultural materials. Because of this, it was recommended that, with appropriate mitigation, a subsurface garage and basement could be permitted. The initial mitigation excavations, during which the garage and basement were excavated under our direction, has recently been completed, and has provided a good deal of information about the cultural deposit. For example, one burial was recovered from the excavated area, showing that even in sparse midden deposits burials can be present.

The cultural deposit on the current project parcel appears to be even sparser than that of the previously described project. **Significant portions of the deposit, particularly in the area beneath the existing house, have already been graded away; they were deposited to the front of the parcel, leveling the previously sloping lot. While the cultural deposit is sparse, the current test excavation confirmed results from the adjacent property to the west that human burials are present.**

Based on the sparse nature of the cultural deposit, and the historic disturbance, it appears that there is a reduced, but definite, cultural value to the remaining deposit on this particular property. It is our opinion, however, that the information obtained during the current project should serve as the bulk of the mitigation for **the damage which will be caused by the proposed single-family dwelling.** Additional scientific information can be obtained during the grading phase of the project by recovery and analysis of any features which may be encountered. Accordingly, we make the following recommendations:

- The proposed project should not be delayed for archaeological reasons.
- An archaeological monitor should be present during demolition of the existing structure and during any other construction or pre-construction activities that involve ground disturbance, such as grading, excavation for utilities, etc. Any significant archaeological finds will be subject to archaeological recovery and analysis.
- Soil excavation and disturbance should be reduced where possible. This includes such techniques as reusing the existing utility trench for future utilities.
- The grading and subsurface excavations should be conducted using a wheeled, rather than a tracked, vehicle so as not to disturb underlying archaeological materials.
- Soils should not be removed from the property.
- If human remains are identified the Most Likely Descendant, Linda Yamane, who was appointed by the Native American Heritage

Commission when small quantities of human bone were identified during the test excavation, is to be notified immediately.

Because the possibility always exists that unidentified cultural resources may be found during construction, we recommend that the following standard language, or the equivalent, be included in any permits issued within the project area:

- If archaeological resources or human remains are accidentally discovered during construction, work shall be halted within 50 meters (150 feet) of the find until it can be evaluated by a qualified professional archaeologist. If the find is determined to be significant, appropriate mitigation measures shall be formulated and implemented.