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ARCHAEOLOGICAL INVESTIGATIONS IN  
THE FARMINGTON RESERVOIR AREA,  
STANISLAUS COUNTY, CALIFORNIA

By Adan E. Treganza

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**The University of California Archaeological Survey**  
**Department of Anthropology**  
**University of California**  
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ARCHAEOLOGICAL INVESTIGATIONS IN THE  
FARMINGTON RESERVOIR AREA, STANISLAUS  
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ADAN E. TREGANZA

Report on a joint archaeological project carried out by  
the University of California Department of Anthropology  
and the U. S. Department of Interior, National Park Service.

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## FOREWORD

The present report concerns the archaeological program carried out in the Farmington Reservoir Area between June 20, 1951 and August 20, 1951 as a cooperative project between the University of California and the National Park Service.

The proposal to carry out the excavations in the reservation area was informally proposed by Dr. Aubrey Neasham of the N. P. S., and upon receiving a favorable reaction from the Department of Anthropology of the University of California, a formal contract between the Park Service and University was drawn up and signed in March, 1951.

Dr. A. E. Treganza was appointed as Chief of Party by the University, and he selected a crew of students from Berkeley and San Francisco State College. Although the extent of work to be done in designated sites was specified in the contract,<sup>1</sup> after getting established in the field, Treganza felt that more could be accomplished by amending the original program. Accordingly, a field conference was held at his camp, and a decision was reached to alter the excavation program. Provision for just such readjustment was fortunately anticipated in one of the contract provisions.

Dr. Treganza and his crew are to be commended for their good work. The sites are difficult to work because of the compactness of the deposits; the area in summer is extremely hot, dry and barren; and the artifacts recovered are simple and unexciting so that even the usual anticipation of making a real find could scarcely be maintained after the first few days. To balance the unstimulating geography and artifact assemblage, however, Treganza and his men were able to see and work out with enthusiasm and energy an important problem of the stratigraphic occurrence of what he has called the Farmington (Culture) Complex, and has shown, correctly I believe, that there is good reason to suppose that the occupation of the area by man was either in terminal Pleistocene or early post-Pleistocene times.<sup>2</sup> More work must be done by geologists before this question can be settled, but the problem has been stated and possible solutions indicated.

I agree with Treganza that his findings of artifacts in gravels which were anciently deposited, and which may correctly be called "auriferous gravels," suggests that the old problem of the auriferous gravel artifact finds in the Mother Lode district to the east in the Sierran slopes might profitably be reopened. As W. H. Holmes showed,<sup>3</sup> the problem cannot be settled on the basis of finds made in the period 1849-1870, but if careful inspection of undisturbed gravel exposures were today carried out, something might be found. Once such finds are made geologists should be able to help in assigning the age of the gravel deposition. The only deposit excavated by Treganza which yielded sufficient charcoal for radiocarbon (carbon 14) analysis was site Sta-10, and in February, 1951, this was submitted to Dr. W. F. Libby with a request for a date determination.

Robert F. Heizer, Director

University of California  
Archaeological Survey

## PREFACE

The author wishes to extend his appreciation to J. A. Freed, R. H. Brooks, J. T. Davis, and F. Mangels who composed the crew, and without whose willingness to donate many extra hours of labor such a project could never have been completed in the time allotted to us.

Gratitude is also expressed to Mr. F. Riddell for his time spent with me in a preliminary survey of the area; to Mr. A. Mohr for his field notes on sites Sta-5 and Sta-6; to Dr. O. P. Jenkins, Chief of the California Division of Mines and Geology and Dr. Howel Williams, of the Department of Geology, University of California, for their aid in determining some of the geological relationships; to Dr. Robert F. Heizer and other staff members of the Department of Anthropology, University of California who were helpful at all times; and to the Acting Director of Region 4, National Park Service who gave his full cooperation throughout the entire project. The Corps of Engineers, U. S. Army, aided in providing maps and securing permission to enter the area under study.

The following property owners were kind enough to give permission to excavate sites on their land: Albert L. Groves, C. B. Orvis, Rinaldo J. Jeffry, and George J. Drais. To the latter we are most indebted for providing us space for our camp and for ethnographic information on the Indians who formerly occupied site Sta-58.

## SITES SELECTED FOR EXCAVATION

Based upon the original survey the following sites were recommended for excavation: Sta-2, -5, -6, -10, -15, -19, -21. Closer field observation at the beginning of the summer showed that the area around Sta-2, originally indicated as a habitation deposit, contained no evidence of cultural occupation and was nothing more than a bog-stained area, a feature we later found to be common to this region. Sites Sta-15 and Sta-19 produced little more than a thin veneer of camp debris, hence not enough to justify expenditure of time and money. As a result of a field conference with Dr. R. F. Heizer, this situation was brought to the attention of the Regional Director of the National Park Service, who granted permission to substitute sites Sta-57 and Sta-58, two villages within the dam area, whose locations were recorded subsequent to the original survey by Riddell.

Site Sta-11, though not on the original recommended list, was test pitted because of its close proximity to Sta-10 and its surface indications looked promising. Testing proved the area to be only a temporary camp site. In the four 5 by 5 foot test pits bedrock was encountered within a few inches of the surface.

Although site Sta-44, located on the upper drainage of Hoods Creek, lies outside the limits of the area to be inundated we sampled its content since it represented the largest village site in the near vicinity of the reservoir area.

### Field Procedure

Field camp was set up near site Sta-57 on the south bank of Rock Creek about one quarter of a mile distant from the Drais Ranch Headquarters. From this base camp operations were carried out during the eight weeks of the project.

For each site investigated permission in writing was obtained from the land owner. Upon completion of excavation all holes were filled to the owner's satisfaction and the land restored as nearly as possible to its original state.

The sites excavated were contour mapped at six inch intervals with the aid of an alidade, plane table, and stadia rod. The contours shown on all site maps are accurate only on the areas indicated as midden deposit. Contours off the sites proper indicate only an approximation to the general topographic features of the surrounding areas and should serve as recognition points rather than true features.

With the exception of site Sta-57, all sites were laid out on a coordinate grid system using a letter and numeral combination to indicate specific grid sections. Magnetic north was used throughout (declination 17 1/4 degrees). At site Sta-6 a 10 foot grid system was used in order to obtain a quantity sample. A 5 foot system of squares was used on all other sites in order to facilitate the extension of linear stratigraphic profiles.

Attempts were made to excavate those sections which would produce the greatest depth of midden and yield the best cross-section of cultural content and physical mass. Each section excavated was stripped in approximately 12 inch layers with artifacts recorded from depth of surface and measured in horizontally from the northwest corner of the specific section.

In the case of site Sta-57 a random test pit system was employed rather than a grid system. The extent of the mound as was exposed along the bank of Rock Creek showed considerable indication of former human occupation but at no point did it evidence any great amount or concentration of tangible debris such as hearths or artifacts. Test pits at widespread points failed to produce enough material to justify further investigation.

All artifacts collected were cleaned and catalogued during evening hours while in the field. The specimen numbers assigned are permanent University of California Museum of Anthropology numbers.

#### Disposal of Data

All correspondence, letters of permission to excavate, original site maps and other data sheets have been filed in the University of California Archaeological Survey office. Records of all new sites located within the Reservoir area will be noted in this report and copies of records of new sites both within and outside the Reservoir area have been filed with the UCAS office. Artifacts, photographic negatives, and other specimens collected have been deposited in the Museum of Anthropology, University of California.

#### General Geographic Features

Save for the dam structure itself the bulk of the Farmington Reservoir lies within the limits of Stanislaus County some 20 miles east of Stockton. The northern margins of the inundated area are traversed by the Copperopolis Road, State Highway 4, and the southern region near the small town of Eugene is dissected by the Mount Diablo Base Line. Most of the archaeological sites examined are in Township 1 North and Ranges 10 and 11 East, MDB&M., Stanislaus County.

The drainage pattern is that of a recent superposed dendritic system forming intermittent creeks which traverse the gradual foothill slope in an east to west direction. Concerned here are Rock Creek and Hoods Creek which unite below the Drais ranch house and together join Littlejohn Creek east of Farmington. From here Littlejohn Creek meanders at low gradient until the San Joaquin River is reached. Today some sporadic flow is maintained during the summer from overflow of rice and clover irrigation. The only major drainages in the area are the Calaveras and Stanislaus Rivers which run, respectively, about 15 miles north and south of Farmington.

The area covered in Map 1 lies wholly within the limits of the upper valley plain of the Sacramento Valley. It consists of a broad belt of short-grass some 15 to 20 miles wide situated between the scrub-oak and pine of the Sierra foothills and the valley floor of tule swamp and large valley oak. Such a feature has probably persisted at least since late Pleistocene times and was much the same when first reported upon by early Caucasians. Abundant willows and some cottonwood grew along the creek bottoms but in recent years only the sturdier trees remain.

In the post-1860 period considerable wheat and barley was grown along the open plains. Recently large areas have been converted to rice and clover with the remainder serving as cattle range land.

Unfortunately, the geological and physiographical relationships of the region are known to us only in their broadest outline. Details concerning cycles of erosion and alluviation of the inner stream channels during the late Tertiary and Quaternary periods are but little understood. Were such data available a more positive statement could probably be made concerning the data of the Farmington lithic complex for it is in these stream channels that we have a consistent geological association which suggests considerable antiquity (see profiles on maps 4, 5). A water-supply paper (Piper et al, 1939) of the adjacent Mokelumne region offers some data which will be considered under section on "Quarry-Workshops."

The geological sequences from Eocene to Miocene are more clearly defined in the sporadic outcrops of the Ione, Valley Springs, and Mehrten formations. In many cases exposures of the Mehrten formation have provided protected camping spots as indicated by sites Sta-6, -10, and -21. At site Sta-44 large flat exposures of Sierra Nevada granite have been utilized for purposes of bedrock-mortars.

Most of the sites occur at elevations above the limits of the Victor formation and fall within the range of the Arroyo Seco cobble and gravel deposits and Gravels of Unknown Age. It is probably in the history of the reworking of the Arroyo Seco deposits that the answer to the dating of the early archaeology lies.

The current faunal life in comparison to aboriginal times has probably undergone some diminution though not to the extent that the area conveys upon first appearance. The greatest decline has been in the larger and more obvious herbivores; however, closer observation reveals abundant wild life especially that of birds. During the eight weeks stay the author was able to identify some 35 different resident breeding species of birds and six species which were regular visitors. A count made throughout the year including migrants would greatly expand such a list. Small mammals like the jack rabbit, cotton tail rabbit, gopher, ground squirrel, coon, skunk, grey fox, coyote, wild cat, and weasel are common to the area, especially the ground squirrel. Occasionally a deer still takes up winter residence in the area marginal to the foothills. Mr. George Drais informed us that in the 1850's his father frequently shot antelope on the adjacent plains. Though the remains of tule-elk occur in sites near the valley margin Mr. Drais reported he had no recollection of them.

With the exception of perch, most of the fish species of the present day are of recent introduction. Earlier, the creeks within the dam area were popular fishing localities for the foothill Indians. Salmon and steelhead were annual spawners until their breeding pattern was disrupted through placer mining and water diversion.

#### ARCHAEOLOGY OF THE FARMINGTON RESERVOIR AREA

Although the archaeological sites within the area of the Farmington Reservoir were far from ideal from the point of view of the excavator they nevertheless furnished information which was highly desirable in furthering knowledge of the prehistory of the Great Valley of California. Prior to this time the Sierra foothill region has been conspicuous for its lack of archaeological data. This season's work, though it has in part filled a gap in our knowledge, has at the same time introduced new problems.

Three types of sites were investigated: (1), village sites which were known to have been occupied by Indians in the historic period and village sites which produced evidence of occupation in late prehistoric times; (2), village sites which produced no evidence of historic contact but rather are characterized by a crude flake and core tool industry and where the physical aspects of the sites suggest considerable antiquity (these cultural remains cannot be equated with any of the known cultural horizons of the Sacramento Valley) and (3), quarry-workshops, the name given to a large number of localities where artifacts are weathering out of a stratum of buried, unsorted cobble and gravel deposits. The artifacts are characterized as heavy duty percussion flaked core and flake tools. To this series of implements I have given the name Farmington Complex for to my knowledge there exists no known parallel to it in this region of California. It is with due hesitancy that I propose the Farmington Complex as likely evidence of Late Pleistocene or certainly early post-Pleistocene man in California.

With the already established sequences in the Central Valley of Early, Middle, and Late cultural horizons (Lillard, Heizer and Fenenga, 1939) it would be expected that some continuity would exist in an area immediately adjacent. That such is the case has not been borne out by our current data. Even in the instance of our late sites there exist differences in content with Late Horizon Sacramento Valley deposits. Such differences may be merely a reflection of contrasting environments with their associated economies. The Farmington sites may represent only summer occupation with a limited cultural inventory, or our comparative sample may be too limited to demonstrate any extensive differences. To some degree all three factors probably are involved but at least it points up problems of future concern.

Of greatest contrast is the Farmington Complex with that of the Early Horizon. The minimal date for the latter, known through a Carbon-14 sample, is 4052 plus or minus 160 years (Heizer, 1951, p. 25). Even where the earliest manifestations of this culture are exhibited we find a rich cultural inventory well adapted to the valley environment. If the Farmington Complex should eventually turn out to be older than the Early Horizon of the valley, and this may well be the case, I suspect it would be antecedent only in a time sense for there is little evidence which would suggest a cultural derivation of the Early Horizon of the valley from what we now know of the Farmington Complex. There seems little chance that Farmington Complex follows the Early Horizon of the valley in time, since the Middle Horizon already occupies that position by representing a modified cultural continuum of the Early. It is emphasized that little more than speculation can result at this point as to the relative cultural position of the Farmington Complex for it is as yet too imperfectly known as a culture and much work still remains to be done throughout the entire foothill area. However, the geological association, the types of artifacts, and the patination on the flaked surfaces point up the strong possibility that the Farmington specimens are old. Excluding the "hoax of Calaveras" and a few similar claims I am of the opinion that the finds at Farmington are significant enough to justify a reexamination of auriferous gravel deposits where artifacts were earlier reported to have been found in situ. It is possible the crude flake and core tools of the Farmington type may have been present in the auriferous gravel deposits and were not recognized by earlier observers.

### Excavated Sites, Quantity of Sample, and Artifact Yield

In all, eight village sites were excavated. The quantity of midden removed from each site was determined by two factors: (1), the amount of implements the deposit produced was used as a gauge to justify the extent of operations; and (2), the depth it was necessary to excavate in order to reach the base of the mound for purposes of observing complete stratigraphy.

The gross work combined for all sites might be expressed as the equivalent of a trench 620 feet long by 5 feet wide with an average depth of 4.28 feet. In area and weight this would approximate an examination of some 10,030 cubic feet of habitation deposit or roughly 370 tons.

Individual sites break down into the following as regards to trench area, cubic feet excavated, and UCMA catalog numbers.

<u>Site</u>	<u>Cubic feet</u>	<u>Trench Area in feet (length, width, depth)</u>	<u>Catalog numbers</u>
Sta-5	850	180 x 5 x 1	1-150271 to 1-150695
Sta-6	3400	170 x 5 x 4	1-156127 to 1-156133
			1-150145 to 1-150169
			1-150696 to 1-150697
Sta-10	1380	35 x 5 x 8	1-151063 to 1-151183
Sta-11	50	20 x 5 x 5	No artifacts
Sta-21	750	30 x 5 x 5	1-151423 to 1-151432
Sta-57	1000	40 x 5 x 5	1-150838 to 1-150720
Sta-58	1200	80 x 5 x 3	1-150838 to 1-150847
Sta-44	1400	65 x 5 x 4	1-151183 to 1-151232

In addition to the eight village sites which were excavated, some 19 new sites classed as Quarry-Workshops (Farmington Complex) were recorded within the reservoir area. Where sites are listed but show no artifacts present it is not because they were lacking but rather that conditions prevailing at the time prohibited sampling. Generally we were so loaded down with heavy chipped tools we could not carry any more or else the specimens noted offered nothing new as to types.

<u>Quarry-Workshop</u>	<u>Catalog Numbers</u>
Sta-50 -----	1-15001 to 1-150126; 1-151234 to 1-151248
Sta-51 -----	1-150928 to 1-150958
Sta-53 -----	1-150203 to 1-150270
Sta-54 -----	1-150959 to 1-151013
Sta-55 -----	No collection
Sta-56 -----	No collection
Sta-59 -----	No collection
Sta-61 -----	1-151296 to 1-1151310
Sta-62 -----	1-151280 to 1-151293; 1-151311 to 1-151320
Sta-64 -----	1-151321 to 1-151332
Sta-65 -----	No collection
Sta-66 -----	No collection
Sta-67 -----	No collection
Sta-69 -----	1-151333 to 1-151335
Sta-70 -----	1-151020 to 1-151062
Sta-71 -----	1-151336 to 1-151344
Sta-72 -----	No collection
Sta-73 -----	1-151274 to 1-151279

With the exception of site Sta-44 all other sites shown on Map 1 will not be discussed in any detail in this report since they lie beyond the limits of the reservoir area.

#### Quarry-Workshops (Farmington Complex)

Some 57 of these sites were recorded, 49 in Stanislaus County and 8 in Calaveras County. Nineteen of these sites were within the Reservoir area.

This series of work-shops will be considered first since they constitute the basis for defining the Farmington Complex and represent the most involved and interesting problem of the area.

The term "Quarry-Workshop" is applied here in a rather broad sense primarily to distinguish these artifact producing localities exposed in stream cuts from those exhibiting evidence of continued occupation where midden refuse has accumulated to such an extent it constitutes a camp or village.

The exact origin of these lithic implements which occur in unsorted cobble and gravel deposits has not been fully determined but it is presumed from the geological evidence that some time prior to the deposition of the finegrained alluvium which now covers the valley floor, possibly as early as Late Pleistocene or early Recent times, people frequently visited the area to make tools from the abundant chert and volcanic cobbles available in the creek beds. In a recent paper Kirk Bryan (1950) has suggested that not only have some localities produced suitable material for the manufacture of lithic implements but also that these areas served as places where, with a great variety of tools at hand, other artifacts were fashioned from bone, wood, etc. The occurrence of the great quantity and variety of tools represented in the Farmington Complex suggests a somewhat similar situation, hence the term quarry is used here to denote a source of lithic material rather than the conventional concept of a body of solid material which had to be mined through a quarrying technique, though the latter also existed in aboriginal California (Heizer and Treganza, 1944).

It is possible that sites such as Sta-5, -6, and -10 located adjacent to some of the larger Quarry-Workshops may represent the villages occupied by the people who frequented the quarry sites. This problem will be discussed later in the section dealing with sites of undetermined cultural affinity.

#### Geologic Occurrence

The geological setting in which the Farmington Complex exists will probably ultimately have to provide the data from which dating will be derived. No village site as yet can be absolutely identified with this complex.

Currently the artifact material occurs in the creek bottoms or in buried deposits along the banks where the recent downward cutting of the streams has exposed an older stratum of unsorted cobbles and gravels which are tightly cemented together through the action of iron oxide. It is important to note that artifacts consistently occur in this cemented conglomerate formation (Pl. 3, figs. B, D). Some specimens from both the creeks beds as well as those *in situ* show evidence of wear through stream transport. However, the majority of the artifacts still retain sharp flake scars save where the edges have been

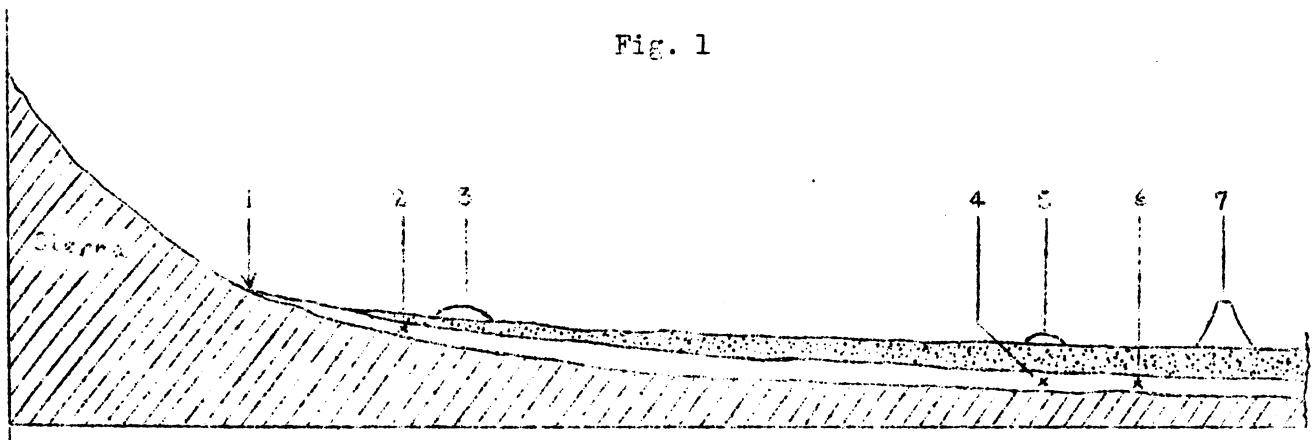
battered back and blunted through use. This would seem to imply that either these gravel and cobble deposits were being utilized at the time they were being deposited, or that the artifacts incorporated in the stream deposits were derived from sites whose age was antecedent to the action of stream deposition and that the implements were washed into the channels from adjacent hill slopes. The latter would appear to be the less likely of the two possibilities but that the artifacts are at least contemporary with the time of stream deposition is an absolute certainty.

That we are dealing with a phenomenon of more than local extent is attested by continuance of this feature for distances upward of 20 miles along the longitudinal profiles of streams and in the recurrence in contiguous areas running lateral to the Sierra foothills (see Fig. 1). Deposition for a distance of about 15 miles along Rock and Hoods creeks shows some consistency in segregation of material deposited between the base of the foothills and the valley floor. Where the streams leave their "V" shaped valley, which roughly marks the base of the greatest gradient curve, deposition is in the form of large boulders and head-size cobbles with occasional lenticular inclusions of coarse gravels. Little or no overburden other than lateral slope wash is present at this point. Some six miles downstream where the gradient levels out, the flood or valley plain widens out to a half mile or more and this same stratum of unsorted cobble and gravel deposits occurs with a continuous overburden of about five feet of segregated alluvium. Just below the junction of Hoods and Rock creek at site Sta-50 the overburden reaches a depth of eight to ten feet. Inside the dam area the overlying alluvium assumes a depth of 15 feet and the artifact bearing stratum is composed of gravel and fist-sized cobbles. This point marks the greatest depth and greatest distance from the base of the foothills that artifacts were found. From here westward the deposits become lost under the great amount of alluvial valley fill (see Fig. 1).

It is apparent from the foregoing that the key to the dating of the Farmington Complex is to be found in the depositional history of these stream channels, a problem which currently offers little opportunity for immediate solution. Some possible hints are provided in the report by Piper et al (1939) which deals with the region immediately to the north and adjoining the Farmington drainage area.

The history, as determined by Piper and his associates, is as follows. During Pleistocene times the Upper Valley Plain from about the Stanislaus River in the south to the Cosumnes River in the north there existed a series of outwash gravels capping the older Mehrten, Valley Springs, and Ione formations in the form of a broad pediment. By name these gravels are known as "Gravels of Unknown Age," possibly Pliocene, and "Arroyo Seco Gravels" of Pleistocene date. The latter are characteristically composed of unsorted cobbles, gravel, and sand cemented together by a brick-red ferruginous soil. Both of these formations exist in the Farmington-Milton region as dissected pediments, remnant stream terraces, and capping remnants of upland plains. The general assumption exists that the Arroyo Seco material was deposited relatively soon after the Pleistocene tilting of the Sierra Nevada and that the age of the deposits are middle or late Pleistocene. With the dissection of the Arroyo Seco pediment during the early part of the Victor epoch (Late Pleistocene) and subsequent time the cobbles of the Arroyo Seco gravel have been washed down and distributed widely over the lower slopes. The streams of the Arroyo Seco epoch are believed to have flowed down the slope of the Sierra Nevada in courses essentially the same as those they now occupy.

Fig. 1



Ideal cross-section of Hoods and Rock Creek - ca. 15 miles



Alluvium



Unsorted cobble and gravel strata containing Farmington Complex artifacts

1. Break in gradient between Sierra foothills and Upper-Valley plain.
2. Farmington Complex tool in situ. Pl. 3, figs. b,d.
3. Site Sta-44.
4. Farmington tools in situ 8 feet from the surface.
5. Site Sta-57.
6. Farmington tools in situ 15 feet from the surface.
7. Farmington Reservoir.

As the above sequence has been fairly well established I would suggest then, but only in a tentative way, that the unsorted, artifact bearing cobble and gravel deposits of the Farmington area represent reworked Arroyo Seco gravels that have been redeposited in the old but also present stream channels following the dissection of the old Arroyo Seco pediment. This redeposition could have taken place as far back as the Victor epoch of the Late Pleistocene down to a period of several thousand years ago. That the age might be closer to the Late Pleistocene or early Recent is strengthened by the fact that the artifact bearing gravels appear to underlie, at a considerable depth, the more recent alluvial fill of the eastern margin of the Sacramento Valley. What I have suggested here will require future checking by competent Quaternary specialists before too much emphasis can be placed on the relative antiquity of the Farmington Complex. That climatic shifts might be involved as reflected by the differential rates of deposition also leaves an additional approach open.

### Artifacts

Though a great range of local lithic material were available to choose from, the makers of the Farmington implements consistently selected a tough, olive-green chert. Porphyry and felsite were utilized in much less quantity. All specimens presumably were shaped from stream cobbles and many still retain portions of the old patinated cobble surface. The flake scars on all tools exhibit a coating of patina which varies in intensity according to material. The chemical alteration on the chert specimens apparently has been more rapid than on the felsite and porphyritic examples. About one quarter of the specimens collected show abrasion from stream action and an occasional piece may be water-worn almost beyond recognition as a tool. This condition was true of both specimens in situ and those in the open creek floor exposures.

As an implement group, the Farmington Complex is representative of a core and flake industry with percussion flaking as the predominant method of manufacture. On some thin flakes it was difficult to determine whether pressure retouching had been used or whether small flakes had been thrown off through use.

To attempt to classify these tools into specific definable types such as might be expected for such a lithic assemblage would defeat the best of students. I have yet to see, at least for California, a lithic complex which had as many individual types represented and yet so resisted subdivision into any group or series of types where some division line could be noted between the groups. Individual specimens may be selected which represent perfect examples of hammer-stones, choppers, scraper planes, concave scrapers, end scrapers, etc., but when several thousand examples are examined as a continuous lot there appears to be no recognizable point at which types can be separated. What one may detect is a few general trends at producing certain broad classes of tools where function did not require a great deal of precision use. We can not tell whether these people were using these tools to work vegetable or animal matter, but regardless of which, the treatment must have been rough, for the tools are all of a heavy-duty nature and the working edges display well battered margins.

In many cases there seems to have been an attempt to obtain flat planing surfaces both on what might be called side scrapers and scraper planes. Such a flat base is often represented by a surface created by splitting a cobble through a heavy percussion blow. If the flake was used the artifact tends to have a concave undersurface. The whole technique was not unlike that of the Levalloisian,

for most of the flaking on the specimen was done prior to its removal from the core. If the core from which a large flake had been removed was used, then the base of the implement tends to be flat or convex save for the fan-like concavity on one edge where the percussion bulb existed (Pl. 1, figs. A, C).

Little attempt was made to control exterior form either as regards to refinement or toward conventional shapes. Apparently all that was required was a tool which could be held with some comfort in the hand and had one or more cutting edges present. Also the shape of the cutting edge seems to have been of little importance either as to degree of curvature or bevel of slope. Convex margins tend to show some refinement (Pl. 1, figs. A, B, D) as do the shallow to pronounced "U" margins (Pl. 1, fig. B).

Choppers are always difficult to define. If they possess no wear then they are indistinguishable from large cores; if they exhibit excessive wear then they fall within the range of core hammerstones. All three stages are present and appear to grade from one into another. Some choppers are excessively large, weighing as much as ten pounds, and would have required the use of both hands. They are not merely large cobbles from which flakes have been removed, for the margins all show a considerable degree of wear.

Significantly absent from this complex, at least in the Quarry-Workshops, were blades and projectile points. A single example recovered from the bank of Hoods Creek is a plano-convex specimen which could have been either a knife, projectile blank, or a scraper. Crude blades do occur in site Sta-5 (Pl. 2, figs. A-J) but whether this site is related to the Farmington Complex cannot as yet be decided.

With the exception of the blade or knife element, the Farmington specimens are comparable to other lithic industries of California such as Topanga-San Dieguito and Playa-Lake Mohave. This typological resemblance does not necessarily imply a temporal or cultural relationship and on this point I would be the first to introduce a note of caution. It would be forcing an issue to make such an assumption at this time.

We are fast becoming aware of the vast cultural diversity which exists within California and as of the moment Farmington is just one more example of that diversity. Ultimately it will find its chronological position but in the meantime we might keep an eye on it as a very likely candidate as evidence of early Man.

#### Excavation of sites Sta-5, -6, and -10.

##### Stanislaus-5 (Map 2)

Site Sta-5 is located on the Drais Ranch on the south side of Rock Creek about one quarter of a mile upstream from the junction of Hoods and Rock Creek. The area of occupation takes the form of a thin veneer of deposit resting on the margins of what appears to be the remnant of an old stream terrace about 25 feet above the present bed of Rock Creek. At about the center of the site the continuity of the terrace is interrupted by an erosional swale (Map 2, profile). It is in this swale that the greatest depth of midden deposit (24 inches) occurred.

This site was tested in 1949 by F. Riddell and A. Mohr by four alternately spaced 5 by 5 foot test pits. Their four pits were worked into our grid system and appear on map 2 as sections 11C, 11E, 11G, and 11I. The data collected by them have been combined with ours.

In earlier years plowing disturbed the flat areas on the terrace but the deeper deposits within the swale have probably retained much of their original character. Other than a slight discoloration of the soil the area of occupation differed little from the surrounding soil type. Reject chert flakes, charcoal traces, and fire fractured stone occur throughout the midden deposit. The physical character of the habitation area showed little resemblance to what is normally encountered in sites of known late origin. A pick was required throughout excavation to pry loose and break up the midden deposit. Pedologic alteration of the original constituents has been carried to the point where adobe-like conditions prevail and what was former midden could be pried loose only in large angular chunks.

#### Artifacts

Only stone implements were recovered. Characteristic forms were blades and a variety of scrapers predominantly manufactured by the percussion method with some secondary pressure flaking on the working margins of blades, scrapers, and drills.

A source of lithic material was available in the bed of Rock Creek adjacent to the site. Like the Farmington Complex chert cobbles predominated. Quartz, quartz crystals, fine-grained volcanics, chalcedony, jasper, and opalite were used to some degree and probably occurred locally as float material. The presence of a few flakes of obsidian may possibly indicate external sources and quartz crystals evidencing no stream wear may have been collected from around the Calaveras Hill region of the Sierra.

The blades (Pl. 2, figs. A-J) were fragmentary save for three examples (Pl. 2, figs. A, B, E). The largest of these (fig. A) being 2 1/2 inches long by 1/2 inch thick. Other specimens, judging from fragments, were larger, probably reaching lengths upward to 4 inches. All were roughly leaf-shaped, bulky, and blocked out through a percussion technique. Several are flat on one surface -- the result of using a broad flake platform where others display the original cobble surface. With the exception of these flat specimens, all were flaked on both surfaces and are oval to lenticular in cross-section. Whether these implements served as knives or heavy projectile points cannot be decided. A single specimen, with a thinned base falls, within the range of a large arrow or atlatl dart tip (Pl. 2, fig. J).

Scrapers (Pl. 2, figs. K, L, M, P) show a variety of forms with no single type being predominant. A feature common to side and end scrapers is the use of the percussion bulb to form the base of the scraper with the margins providing the cutting edge (Pl. 2 figs L, M). In some cases it is difficult to tell whether a crude scraper or a blade blank is involved (pl. 2, figs K, M). Turtle-back or discoidal scrapers were present but rare (Pl. 2, fig. P). The conventional scraper plane generally associated with this sort of lithic industry appears to be absent.

Both uni-faced and bi-faced choppers occur but are small, being less than fist-size in dimension. In this respect they differ from the Quarry-Workshop types.

A few of the larger percussion tools similar to the Farmington Complex specimens were to be noted throughout the midden but not to the extent that they dominated or could be cited as characteristic trends for the site. All of these larger tools suggest they were made on the site as they show sharp flake scars and a lesser degree of patination than do specimens from the adjacent Quarry-Workshops.

Both quartz crystals and optic quartz were present. The crystals and optic quartz were present. The crystals were all small, less than two inches in length, and showed no chipping or grinding. They may have functioned merely as "power" objects. The optic quartz which showed evidence of having been worked was probably derived from some of the larger crystals to be found locally as float material in the gravels.

The presence of the cobble-mortar and pestle is not surprising to be found in association with a lithic complex. A similar association was noted for the Topanga site and sporadic occurrences in California give every indication that it is quite old. One rim fragment and half a vessel (est. 8 inches in diameter) were recovered, both showing evidence of shaping through pecking and grinding with a slight inward bevel on the rims. The single pestle fragment was a rounded distal end showing shaping through pecking.

#### Stanislaus-6 (Map 3)

From all external appearances site Sta-6 looked to be the most promising, but excavation proved otherwise. The site is located on and under a slough directly below a 30 foot vertical bluff of the Mehrten formation. The slough is probably of fairly recent origin and is annually deepened as a cattle wallow and run in the dry season. The midden deposit is completely covered by alluvial silt and were it not for the cattle run cutting directly across the site it might have gone undiscovered.

Either the water table has been raised in recent years through overflow from dams or the water table in aboriginal times was much lower, for an undetermined portion of the occupation deposit could not be excavated because of water and mud conditions. The fact that we could not excavate deeper into this site may in part account for the rather low artifact content. Also there is the possibility a small rock-shelter existed which we were unable to open up because of the mud (see profile Map 3).

Sta-6 was also examined in a preliminary way by A. Mohr and F. Riddell.<sup>4</sup> Mohr used a 5 foot grid and ours was a 10 foot square system. We utilized his datum point in order to correlate his excavation pits with ours.

The sediments covering the midden are all of recent origin resulting from flooding during the winter rains. Gradient of the stream is low at this point and considerable alluviation takes place but varies in quantity from place to place within the flood plain and hence the amount of overburden at any one point is not necessarily an indicator of time. When dry the alluvium presents a compact striated yellow clay layer contrasting sharply with the underlying cobble and gravel stratum which contains the artifacts of the Farmington Complex. On the midden area this clay cap varied from 12 to 36 inches in thickness (Map 3 profile, Pl. 3, fig. A).

The midden matrix contained more of the features characteristic of a habitation site than did Sta-5 though soil alteration in the two sites appeared about the same. The soil is dark (Pl. 3, fig. A) containing numerous small flakes of charcoal, reject flakes, and some mammal bone which is too fragmentary for purposes of species identification. Mohr exposed one hearth and several caches of cooking stones; we likewise encountered a hearth from which a carbon sample was taken and two additional nests of hearth or cooking stones.

It seems evident that some cultural stratification is present but unfortunately the artifact yield was so light in both levels that the stratigraphy has little or no meaning. In sections E4 and E5 Mohr describes and illustrates a highly indurated layer with evidence of occupation on its surface and suggests this as a possible house floor. Our more extensive excavations in the adjacent sections showed this indurated layer to be a continuous feature and rather than a house floor it is a layer of finely banded alluvium which caps some of the older midden deposit and was subsequently lived upon by later peoples. In section 3D and on the same level (depth, 18 inches) as the indurated level we found a number of carbonized wheat seeds. It is apparent that two levels of occupation exist separated by a sterile level of alluvium and the presence of wheat in the upper level indicates a historic context. Ethnographic notes regarding site Sta-58 offer an explanation for the presence of wheat. In the lower level, Mohr and I both found carbonized acorns and some species of lily bulb, but nothing of historic origin.

#### Artifacts

Both artifacts and lithic resources used here are the same as those described for Sta-5, though in the main they appear to be much less refined in flaking technique and form. Of significance is the total absence of blades, knives, mortars and pestles. The latter two might be expected as they were rare even in Sta-5 but one would expect some blades to be present if these two sites are related culturally. I doubt if these absences can be accounted for through lack of sufficient sampling, for some 3400 cubic feet of deposit were examined.

The flakes and implements in this site appear to have a little less patination than those of Sta-5 and the two sites represent the opposite in extremes of topographic location, one a terrace top, the other a stream bed. Based on the slight data available I would consider site Sta-5 the older of the two with similarity existing only in the utilization of similar lithic materials.

#### Stanislaus-10 (Map 4)

Of all the sites excavated Sta-10 proved to be the most interesting and ultimately may prove to be the most useful for future interpretations. The site is located on the Albert Grove Ranch under what appears to be the remnant of a former rock shelter exposed in the Mehrten formation about a half mile up the creek from where the Copperopolis road crosses the stream. (Pl. 3, fig. C). The deposit is one indicating heavy occupation over a considerable span of time. First estimates assumed a depth of deposit of about four feet but in the excavation we dug down 10 feet and were still in midden deposit when halted by ground water.

The site produced two disturbed burials and though not many artifacts were recovered, a few new types are represented and in the lower levels the implements appear to be similar to those of the Quarry-Workshops, differing only in that they have sharper flake scars and lack as high a degree of patination. Both these features may be due to their buried and protected condition.

The surface of the midden deposit bears no resemblance to occupation debris but is composed of a recent compact covering of silt and cliff talus. Only where ground squirrels have brought to the surface the sub-deposit is there evidenced any indication that a village site lies buried beneath. Once the 4 inch thick silt veneer was removed there was exposed the typical charcoal-stained, friable soil of a habitation deposit. Unlike sites Sta-5 and Sta-6 the soil here was more easily worked. Although a pick was required, the lumps pried loose could easily be broken down with the back of a shovel. The physical consistency of soil retained fair uniformity growing gradually more compact as we approach the water table. Sections 4H, 4I, and 4J contained large chunks of the Mehrten formation which had fallen from the above cliff. There is some indication that in former times a shallow rockshelter projected out over the inner portion of the village.

The most significant feature of the site is that it lies stratigraphically over one of the Quarry-Workshops which produces artifacts of the Farmington Complex (Sta-70) and at the same time produces in the lower deposits of the site implements similar to the Quarry-Workshop specimens. This situation suggests at least three things: (1) the village was occupied roughly contemporaneously with the time of deposition and utilization of the cobble material of the creek. If this is true and the artifacts found in the midden can be ascribed to the Farmington Complex then they will reflect the minimum date of this complex since the midden stratigraphically overlaps the gravel and cobble deposits; (2) the village was occupied by different people at a much later date and they merely collected and used these tools which were weathering from the creek bottom. However, if we pass these tools off as being borrowed little is left in the deposit to accredit to the dwellers; and (3), if the site is related to the Farmington Complex it may represent the persistence of this culture into fairly late times. The buried creek deposits may represent the early phase with the village being the more recent. We have at present no idea what time span was covered by the Farmington Complex. We obtained a good charcoal sample from about the 9 foot level and when tested by the Carbon- $^{14}$  method it may help to clear this problem.

#### Artifacts

Already mentioned are the heavy core and flake tools characteristic of the Farmington Complex. Of these tools an occasional specimen showed evidence of having been water-worn and hence was obviously picked up from older deposits along the creek. Otherwise most of the tools have sharp flake scars and some degree of patination. Many of the smaller percussion flaked tools resemble those of site Sta-5 but here, as elsewhere, the blade and knife elements were lacking and again the sample was sufficiently large so that at least a single example should have come to light.

Ground stone offers some new elements. Two bi-faced manos, recovered at depths of 40 and 5 $\frac{1}{4}$  inches, were composed of a red quartzite. At 2 $\frac{1}{4}$  inches a small piece of ground steatite was found but offers no clue as to the type of artifact of which it was once a part. A pestle fragment at 7 $\frac{1}{4}$  inches was similar to the specimen recovered at Sta-5.

Bone artifacts were limited to two fragmentary and badly weathered awls. One was found at 62 inches and the other in association with burial No. 1 at a depth of 46 inches. Neither could be typed as to form or type of mammal bone used in their manufacture.

Artifacts were still occurring at a depth of 110 inches where the water table was reached and at that point fragments of worked obsidian were encountered.

### Burials

Two human burials were recovered, Burial No. 1 in section D<sub>4</sub> at a depth of 46 inches and burial No. 2 in section G<sub>4</sub> at 62 inches. Both burials consisted only of long bones with no skull or mandible fragments present. The fragmentary condition suggests rodent disturbance but the possibility of secondary inhumation as a burial practice should not be overlooked. The concentration of rocks around and over the bones suggests a partial cairn. A similar condition was noted for the Topanga culture (Treganza, 1950, Pl. 15, a) but I doubt that any historical connection is involved here. Cairns are also known in some Middle Horizon settlements of the Sacramento Valley.

Some bird and mammal bone occurred in the deposit but could not be considered as plentiful. Of interest, however, is the presence of antelope. River mussel was limited to a dozen valves. Little can be said of the food economy as reflected by the midden constituents. The manos and pestle suggest some utilization of seeds. It may be that considerable emphasis was placed upon fish and the bones have not been preserved in the midden.

### Sites of Historic and Early Prehistoric Age

With the exception of site Sta-57 the following sites, either through direct historical documentation, or through indirect evidence of artifact types fall wholly within the historic period, such as site Sta-58, or were known to be occupied as late as early historic times but whose total history extends into the prehistoric, (e.g. Sta-44). Site Sta-57 failed to produce enough artifact material to establish its cultural provenience.

#### Stanislaus-21

Site Sta-21 is located on the north bank of Littlejohn Creek about 1/4 mile east of the small town of Eugene directly below a rimrock of Mehrten formation.

The matrix of the deposit is composed of a dark friable ashy soil rather high in sand content, the latter probably being derived from weathering of the cliff above. Few artifacts were recovered though of some significance was the complete absence of any large flake and core material which occurs abundantly in the Farmington Complex. Some worked chert was present but most of the stone which showed evidence of use ran to other silicates such as obsidian, chalcedony, jasper, and opalite. Retouched flakes all showed the presence of pressure flaking. Mussel shell (Margaritifera) was more abundant here than in other sites. Littlejohn Creek being greater in volume than Rock and Hoods Creek and of somewhat lower gradient provided more permanent pools and sloughs in which this fresh-water species of mussel could exist. Cooking stones were abundant and two hearths containing considerable wood ash were exposed. Bits of calcined fish bone were scattered about the fire pits.

Depth of deposit varied with the terraced slope of the Mehrten formation. Toward the downstream side of the mound a depth of six feet was reached in section C6.

### Artifacts

A single mano was recovered along with several small flake and core scrapers. Since our trench cut directly through the center of the deposit and because so few artifacts were recovered in the 750 cubic feet of midden excavated it was not considered worth while to continue further digging. Although no historic period objects were found, the physical nature of the mound, the pressure flaked silicates, and the good preservation of bird and mammal bone all suggest this is a site of fairly recent occupation. It is possible it represents a late period summer camp, for it is so situated that winter storm winds would blow directly into the village area.

### Human Remains

Scattered fragmentary long bones, skull fragments and half a lower mandible were encountered at various depths in sections 6C, 6D, and 6E. Nothing resembling an undisturbed burial was found. As the lower portion of the midden had been riddled by ground squirrels I doubt if any burials exist in the deposit that have not been badly disturbed by these burrowing mammals. Rodent burrowing is a feature characteristic of late occupation areas probably because the animals seek out the softer midden areas in which to dig.

### Stanislaus-44 (Map 5)

This site rests on an old stream terrace on the west bank of Hoods Creek some half mile up the creek from the Copperopolis road (State Highway 4). The property is that of the old Snow Ranch now owned by Mr. C. B. Orvis who kindly gave us permission to excavate and was most helpful in locating other sites on his present holdings.

The deposit indicates a large village site with occupation covering a considerable span of time. In association are numerous outcrops of the Sierra Nevada granite. Flat surfaces of these boulders provided places into which numerous bedrock mortars were fashioned. Some 211 such mortars were recorded varying from slight depressions to holes 8 inches in diameter by 15 inches deep. One boulder contained a petroglyph consisting of a great number of small cup-shaped depressions. Buckeye, oaks, pigeon berry, willows and tule are all to be found in site association and were probably utilized in aboriginal times.

) That the site was occupied in historic times was documented by Mr. Orvis who reported that his mother, when a young girl, used to visit the area about 1870 when several Indian families were living there. At that time the Indians were using numerous baskets and were pounding acorns in the bedrock mortars.

This site was important for several reasons; (1), because of its depth and area it represented a considerable span of time with a terminus known to lie within the historic period; (2), the portion of the midden known to be of late origin rested upon sterile alluvium which in turn capped the cemented cobble and

gravel deposits containing implements of the Farmington Complex<sup>5</sup> (Map 5, profile); (3), with this physical separation present there was provided the opportunity to check the degree of persistence that the tools associated with the Farmington Complex might have in carrying over into later times. As to this last point it may be noted that such excavations as we made did not produce in any amount either the typical Farmington types or the typical chert material from which they were made. This is not to say that none occurred in the site, but what few specimens were found were either waterworn or showed reflaking of the old patinated flake scars. Some examples showed evidence of fire fracture and had been apparently selected from the creek along with other cobbles merely for the purpose of cooking stones. Since some of the largest Quarry-Workshops recorded were in this area it is surprising more tools were not picked up and used. This could mean several things: (1), a shift in food economy and new techniques in implement manufacture is involved so that these later people did not recognize or have use for the older heavy-duty percussion tools; (2), the chert out of which the heavy core and flake tools are made is exceedingly tough material and does not lend itself with any ease to pressure flaking which was the custom of these later people. It could be added that the chert is difficult to flake even by the percussion method as we experienced on many occasions in trying to recreate some of the Farmington types. For purposes of both percussion and pressure flaking we found these later people turned predominantly to felsite, porphyry, and a wide range of conchoidal fracturing silicates. Green chert was in a minority and confined to small scrapers and unused cores. On occasions we can expect heavy core tools to occur in late sites<sup>6</sup> but they should not be taken to indicate evidence of antiquity. It is only where they occur as an exclusive feature or the predominant artifacts do they have significance. It is necessary to have additional supporting data of a geological nature before the presence of core tools can be taken as indicative of the site's high antiquity.

Since completing our investigations I am convinced we did not excavate in the right portion of the midden for purposes of obtaining a maximum burial and artifact sample. Ultimately it would have been necessary to excavate where we did to obtain a good cross-section of the deposit. In the long trench (squares 19C to 19J) we encountered the highest rock content I have ever seen in any mound. Fully 50% of the midden volume was composed of fire fractured stone. The matrix of the midden surrounding the stone was exceptionally high in fine pulverized charcoal. Little food bone was present and no human remains were noted. In pits 10H to 12H rock content decreases but is still quite high and human burials occurred. Since our long trench was adjacent to the granite outcrops containing the many mortar holes I would conclude that both the preparation and cooking of acorns took place in the same general area of the site and that the living area was somewhat to the south as would be indicated by the presence of burials. Future excavations should be made within the area bounded by squares 1 to 9 and A to H.

#### Artifacts

Though few artifacts were recovered they represent a range of types all of which would be expected for late horizon sites. Chipped stone was most abundant with a display of small scrapers none of which showed any distinctive character. A single piece of chipped green bottle glass shows use of that material in historic times. Contrary to expectations arrow points were rare. Only three fragments and a single side notched specimen were recovered. In part, the answer to this may be found in nearby Ama-3, a dry rock shelter of historic occupation,

where complete excavation of the dry portion produced upwards of a hundred simple-pointed arrow foreshafts, and the recovery of only a single stone point. Stone points were consistently rare on the surface of all the sites we observed throughout this section of the Sierra foothills. It may be presumed that at least in late times wooden points predominated over those made from stone. This is somewhat in contrast to valley sites where stone points are relatively abundant even though the valley is an area into which stone has to be imported.

Ground stone was limited to a fragment of schist "pencil," a mortar fragment, a unifaced mano, a biconically drilled fine-grained schist pipe, and three crude cobble pestles. As to the latter element, one would expect with all the well-made mortar holes near by that more and better formed pestles would be present, but apparently any natural elongated stream cobble sufficed. This may express a difference in cultural tradition between valley and foothill. In the valley where well-formed mortars occur the corresponding pestle generally shows considerable care in shaping. In the bedrock mortar there is no opportunity for elaboration of the exterior. It is a fixed feature, unlike the transportable mortar of the valley. In one instance we may have an expression of personal property with the exterior shaping either indicating pride or merely to reduce the weight through removal of excess material. I believe this difference as noted is more than just a local feature for this site as during our survey we examined hundreds of bedrock mortars and failed to find a single shaped pestle. The rockshelter, Ama-3, which also had a great number of bedrock mortar holes in near association also showed this same situation as it produced no pestles. The possibility that wood pestles were used should not be overlooked.

Work in bone was restricted to a bi-pointed pin and two bone awls. One whole Olivella biplicata shell was found and a small abalone pendant of the type sewn on clothing or attached to basketry.

#### Burials

Only two burials were noted and both were in a poor state of preservation and badly disturbed through rodent activity. The position of the bodies suggested a loose flex position and orientation was east-west with the heads west. In possible association with Burial No. 1 was the inner claw of some larger raptor, probably the California condor.

We were probably on the edge of a cemetery and excavations further to the south would perhaps produce more human remains. Gopher and squirrel holes in that area frequently produced fragments of human bone.

#### Stanislaus-57

It is difficult to place this site in any of the cultural phases discussed so far. It is through negative evidence that it is placed here under late sites. The only artifact recovered was a water-worn blade fragment.

Where the site is exposed along the bank of Rock Creek the soil shows the discoloration associated with midden deposit. Charcoal flakes are present, and an occasional flake and fire fractured stone. Random test pits failed to yield cultural data in sufficient quantity to justify any extensive excavations.

At an earlier time Rock Creek appears to have had an old channel some 75 yards to the east where under conditions of high water it still flows around the little island site, Sta-58. With a western migration of the channel it might have cut away most of the site in recent years leaving only the remnants exposed as evidenced today. The portion which is still preserved overlies by some eight feet an exposure of the Farmington Complex so at least the latter is not involved in the cultural position of this site.

### Stanislaus-58

Site Sta-58 lies some 300 yards west of the Drais ranch house on a small sandy "island" on the east side of Rock Creek. It is directly across the creek from Sta-57 and adjacent to Sta-50, a large Quarry-Workshop.

This small village was occupied at such a late date that its history falls entirely within the historic period and the artifact content presents a picture of remnant Indian life under the full impact of Caucasian contact. The only thing Indian about the site is the fact we know from historical documentation that several families dwelled there and we exposed a traditional house floor with a hearth that produced a few dietary items typical of Indian consumption.

No surface evidence was visible to indicate that a former cultural deposit was present. It was only through the insistence of Mr. George Drais (aged 84 in 1951) that we excavated where we did. It was his recollection that in his youth he and his brothers used to visit Indians during the summer months when they made camp on this small sand island. So far as he could recall the Indians had come to this place every summer since about 1852, the date that his father arrived as a settler. The area of occupation is inundated every winter and as a result a 2 foot cap of finely stratified silt has accumulated over the old village.

### Artifacts

No artifacts of true Indian origin were found. The specimens were wholly those acquired from White settlers by one means or another. The list includes one broken green wine bottle, one pair of small women's shoes with iron arch supports, two tin containers, scoop from a household coal shovel, two early-type hatchet heads, square cut copper and iron nails, and one horse bridle (?) made from an old draper belt off a harvester. The hearth on the house floor produced oxidized nails, fish bone, turtle-carapace, and fragmentary river mussel shell. The floor was a compact clay but produced no evidence of post holes.

### Ethnographic Notes

The following ethnographic notes as told by George Drais offers some data on the activities of the Indians of the area from about 1850 to 1880. From Kroeber's (1925, Pl. 37) map it is difficult to tell which linguistic group occupied the Farmington region as it falls about on the border line between the Yokuts, northern Miwok, and Central Miwok. From the Drais account I assume the Indians were central Miwok since their winter residence was around Copperopolis and Vallecito.

The following is a narrative account of the Indians living on Sta-58 as told to me by Mr. Drais: "The Indians were good people, they didn't hurt anybody, just moved about the country and begged food and old clothes from the whites but they minded their own business and just came and went. Once in a while they would work for a little food. My father got along with them all right because he never bothered them none. Sometimes as many as fifteen people would camp at this spot, women, men, old people, and kids. The kids didn't ever wear any clothes and they used to play a lot in the water by having water fights or by helping with the fish drives.

The Indians came down from the hills only in summer mostly to fish and to visit in the valley where they could get acorns from the Indians near Stockton. They would stay and fish all summer until the rains and high water would drive them out and then they would go back to the hills. There was one woman named Susie that all the folks liked. She could speak both English and Spanish. Everybody knew Susie and when she died they gave her a "white" women's funeral and even let her be buried in the cemetery at Vallecito.

The houses weren't much; they dug out a little ground and arched it over with willow poles and then covered it with grass and willow branches - they piled most everything they had on top the houses - there used to be lots of willows along the creek in those days but they have been gone a long time now. I remember once my brother and I were visiting them when an Indian came to the camp from the hill country and told the people somebody up there had died. They painted their bodies with clay and red paint and that night they made big fires and everybody wailed and hollered all night - it was some ruckus and next day they all left.

When they fished they would stop as soon as they had enough to eat and then cook them right up - seems like they were always hungry and they ate any time they could get a little food. The women cooked the fish with heads, guts and all by just throwing them on the hot ashes - they even ate the bones.<sup>7</sup> When they fished the men used a net fastened on two poles in the shape of an "A". They would get together and walk up and down the pools even in water about four feet deep. The kids used to catch little fish under the rocks with their hands. Sometimes the women tried to drive the fish toward the men who stood between the pools in the shallow water. The men were good and didn't miss many fish.

My father sometimes used to leave a little patch of wheat or barley for the Indians and when he didn't they always went around the fields and got the little bunches that the harvester missed especially in the corners where the machine would make a turn. The women did all this work. They used a beater and a flat basket tray to catch the seeds in and then they dumped the grain in big baskets that they carried on their backs attached by a band around their head. They pounded the grain right over there in those holes on those flat rocks (Sta-59). They would cook it in baskets with hot rocks - they always cooked down in the creek where there were lots of stones. The women always collected all the fire wood and I don't remember a man ever doing much except fishing. Even when they moved the women carried everything and the men just walked or rode on the horses.

One day my father had an Indian help him butcher a cow and all he wanted was the head and the guts. He took them back to camp and roasted the whole works on a fire - they didn't even clean out the guts just ate them as they were. They could eat a lot of things us white people couldn't and I guess that's how come they could keep living. If a big flood came along the creek they would wait till the water went down and then looked for drowned ground squirrels. It didn't make any difference how much they stunk or were puffed up they ate them just the same.

If sometimes they had horses they would visit out in the valley and once I remember they went clear to Monterey to get sea shells. When they got back they were almost starved and my mother gave them some food and then they went up in the hills to trade their shells."

The Drais account is spotty and far from complete but is not too unlike the known ethnography already on record for the area. Several points are of interest; summer residence with fishing as the main subsistence economy (and yet very little evidence of fish remains were present in the site), the use of horses, and the trip to the coast for sea shells.

#### Faunal remains from the sites<sup>8</sup>

Site Sta-44. Elk (Cervus sp). 3 bones

Deer or antelope (Odocoileus or Antilocapra). 23 bones

Site Sta-10.

Upper level (0"-60")

Raccoon (Procyon lotor). 1 bone

Coyote (Canis latrans). 3 bones

Ground squirrel (Citellus sp). 15 bones

Jackrabbit (Lepus sp). 4 bones

Lower level (60"-120")

Ground squirrel (Citellus sp) 10 bones

Antelope (Antilocapra americana). 1 tooth

Site Sta-21

Ground squirrel (Citellus sp). 1 bone

Deer or antelope (Odocoileus or Antilocapra). 4 bones

Prong-horn antelope (Antilocapra americana) 2 teeth

#### Conclusions

From the point of view of reward in undertaking a salvage job of this nature the results have been gratifying. Much valuable information has been gained on an area previously unknown for its archaeological content. Outstanding has been the discovery and definition of the Farmington Complex, a hitherto unknown and important cultural type. Just what position this lithic industry holds in respect to the known sequence of the Sacramento Valley proper can not be determined with any certainty at this time. However, enough evidence is presented to suggest the Farmington Complex may hold a position of high antiquity and be a phase quite independent of the cultural manifestations we now know for the Valley. Only more future work will settle this point.

As a byproduct of the summer's work I feel there is now the opportunity to reopen the long neglected question of "Auriferous Gravel Man in California." This is not to say that man will be as early as some have claimed but only that we now have a fresh approach divorced from the heat of earlier controversies and with the hope that some finds may prove to be authentic and be related to the Farmington Complex.

NOTES

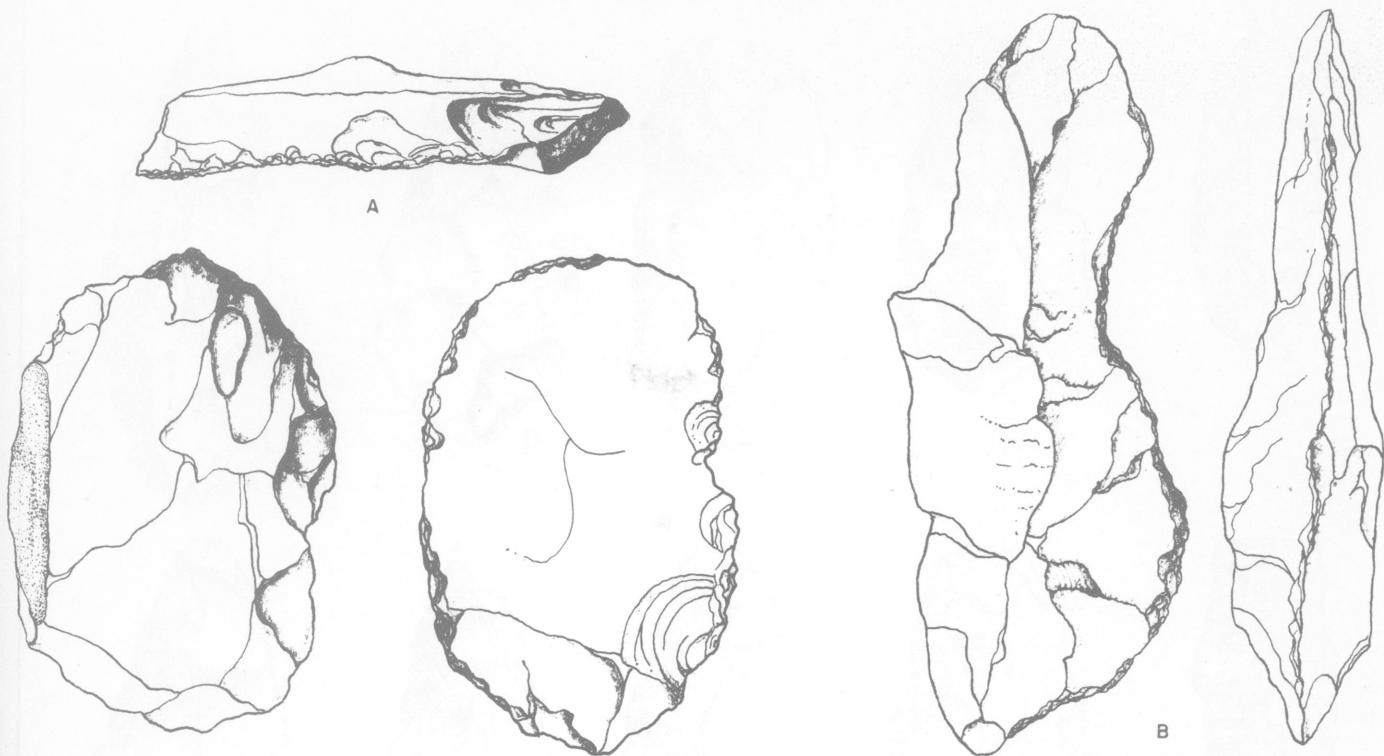
1. As outlined in F. Riddell's report "Appraisal of the Archaeological Resources of Farmington Reservoir, Littlejohns Creek, San Joaquin and Stanislaus Counties, California," submitted in July, 1949 to Dr. F. H. Roberts, Director, River Basin Surveys, Smithsonian Institution. This report has been mimeographed by the River Basin Surveys.
2. Site Sta-44 was discovered by Treganza and Heizer in June, 1950. At that time we considered it probable that the artifacts incorporated in the gravels might date from about 7000 to 5000 B. C. (i.e., from the Anathermal Age of the post-glacial period).
3. W. H. Holmes. Review of the Evidence Relating to Auriferous Gravel Man in California. Smithsonian Inst., Ann. Rept. for 1899, pp. 419-472, 1901.
4. A. Mohr. "The Excavations at Site Sta-6, 1949." Manuscript on file in the U. C. A. S. records.
5. These specimens have been left in situ in the event future observers may desire to check them.
6. In nearby Bamert Cave (Ama-3) a scraper plane was found wrapped in a small cotton bag.
7. This might be a clue, to the interpretation of those sites which lack mammal and bird bone. People might have been living on fish and leaving very little evidence.
8. Identifications by J. A. Freed.

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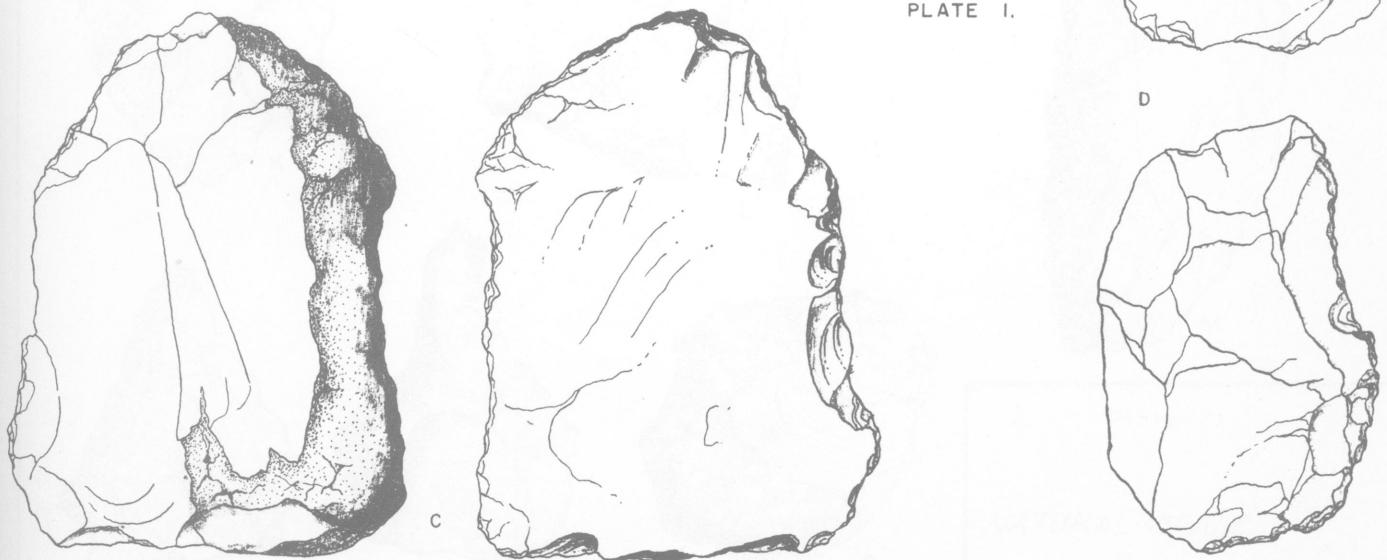
## EXPLANATION OF PLATES

- PLATE 1. Core and flake tools, Farmington Complex. A, Three views of flake scraper. B, Two views of core scraper showing both concave and convex working margins. C, Flake scraper. D, Flake scraper.
- PLATE 2. Flaked implements, Site Sta-5. A-J, Blades and blade fragments composed of green and red chert. K, core scraper or blade blank. L, Side scraper. M, scraper or blade blank. N-O, drills or hand-reamers. P, Discoidal scraper.
- PLATE 3. Farmington area, sites and stratigraphy. A, Site Sta-6 showing fine yellow alluvium covering dark midden area. B, Farmington Complex core tool in situ in unsorted cobble and gravel stratum. C, Site Sta-10 showing main trench and remnant of rockshelter in face of Mehrten formation. D, near view of Farmington Complex core tool shown in figure B.



5 Cm.  
1 In.

PLATE I.



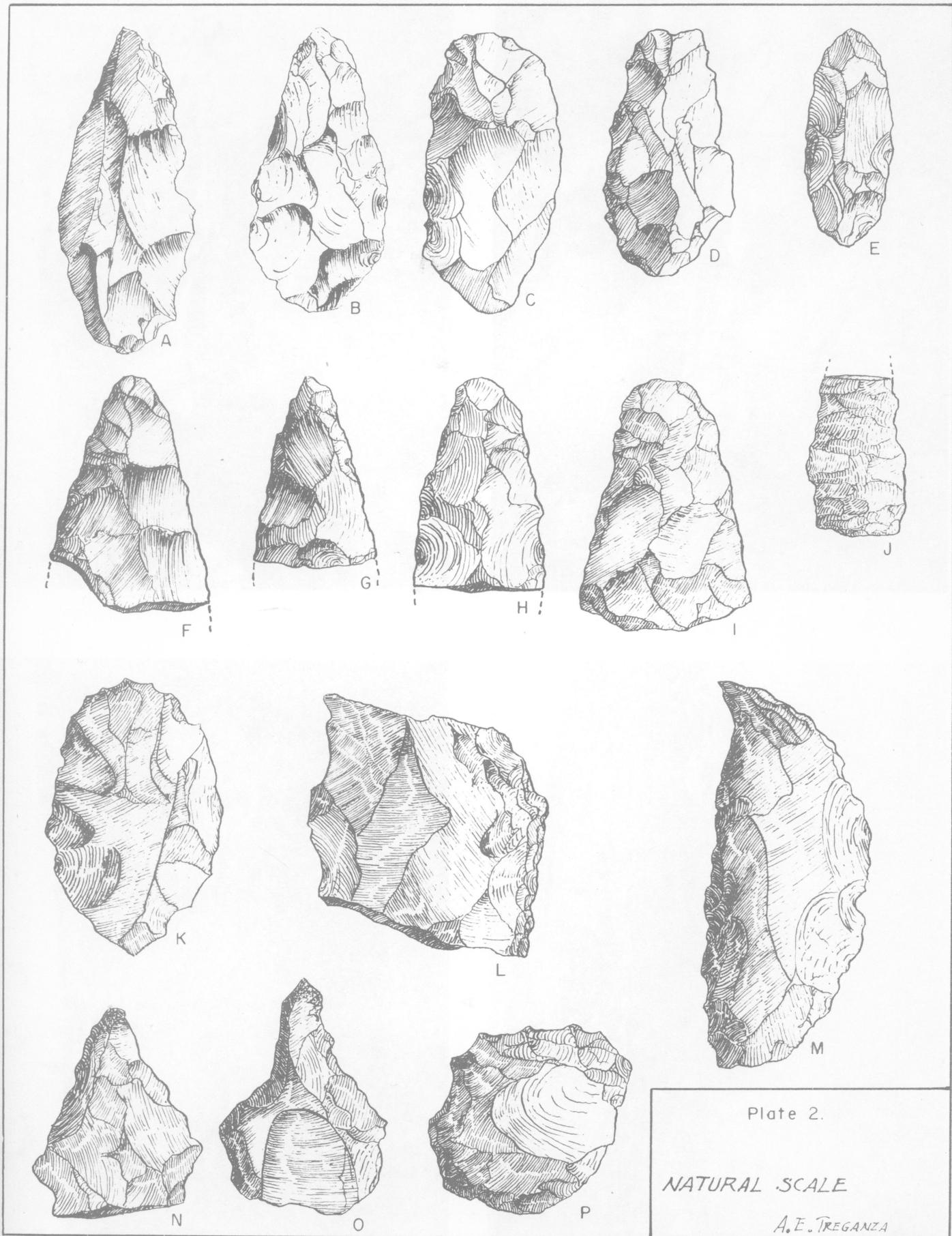
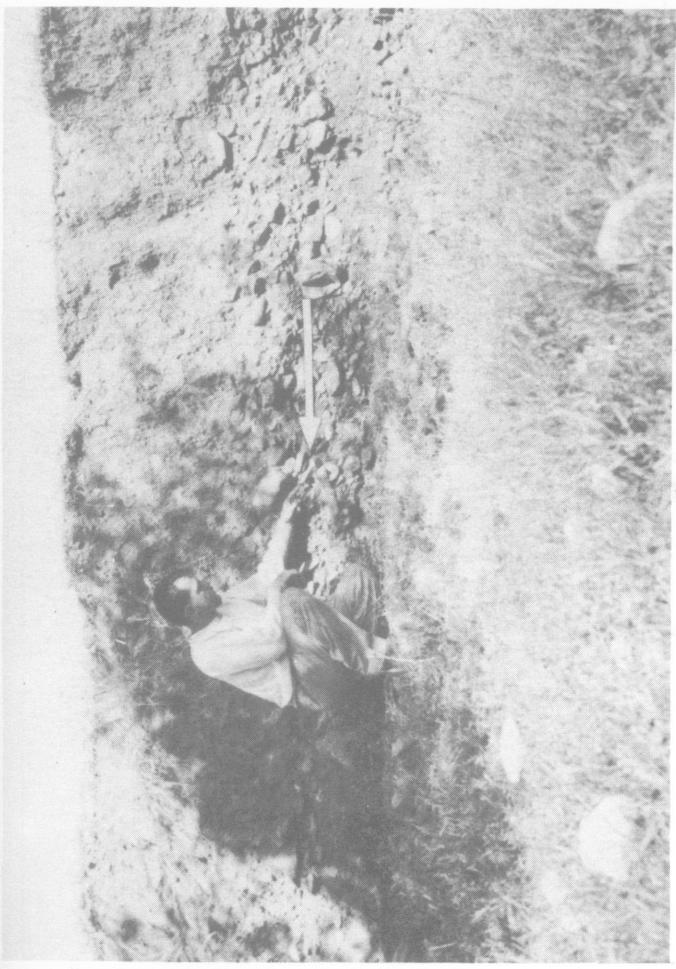


Plate 2.

NATURAL SCALE

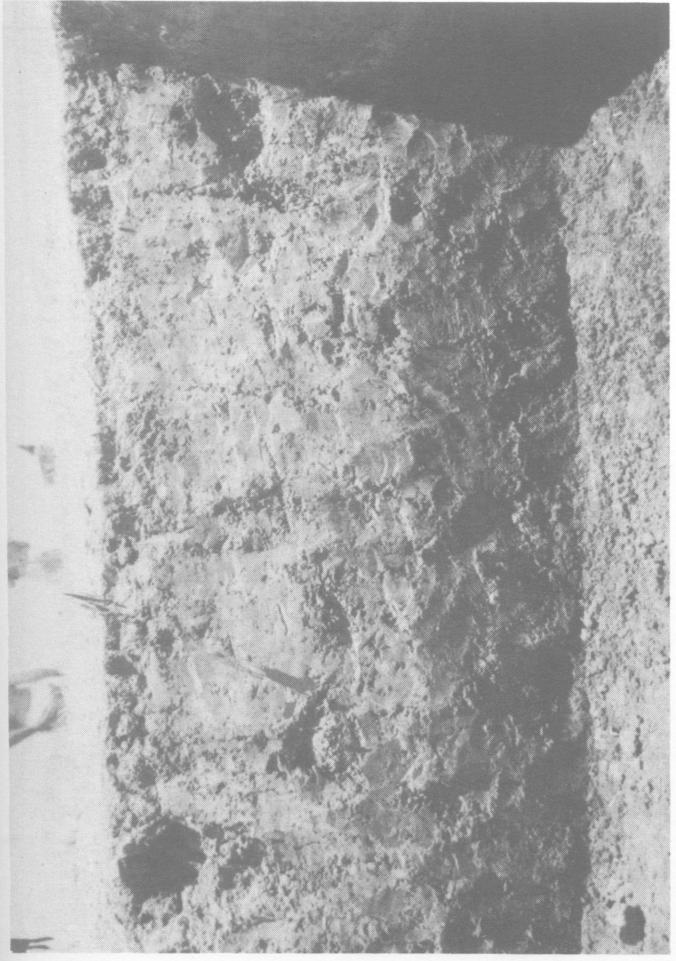
A. E. TREGANZA



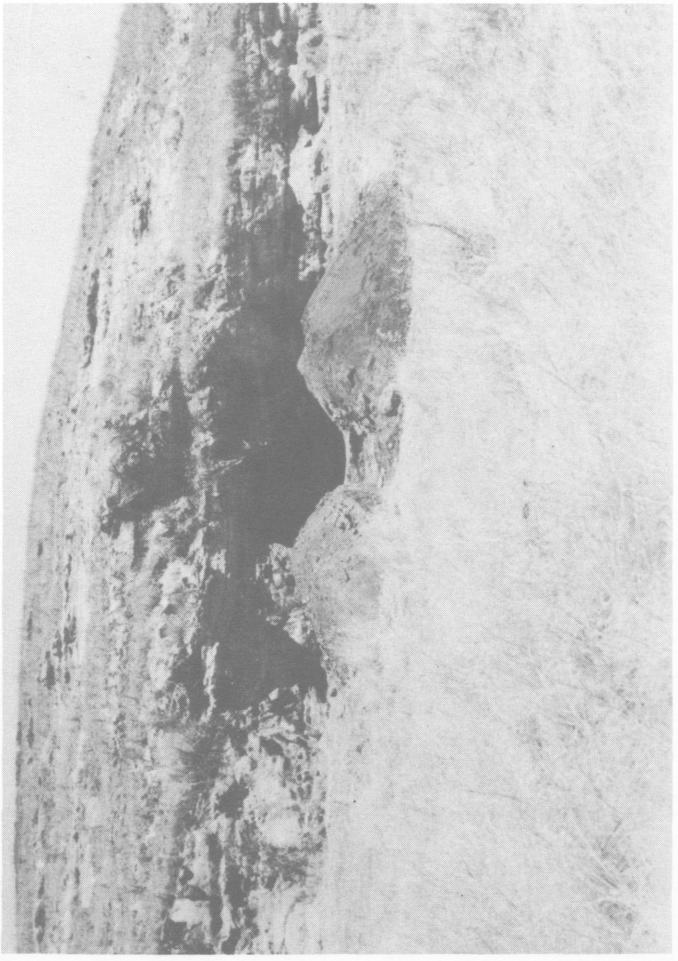
A



B



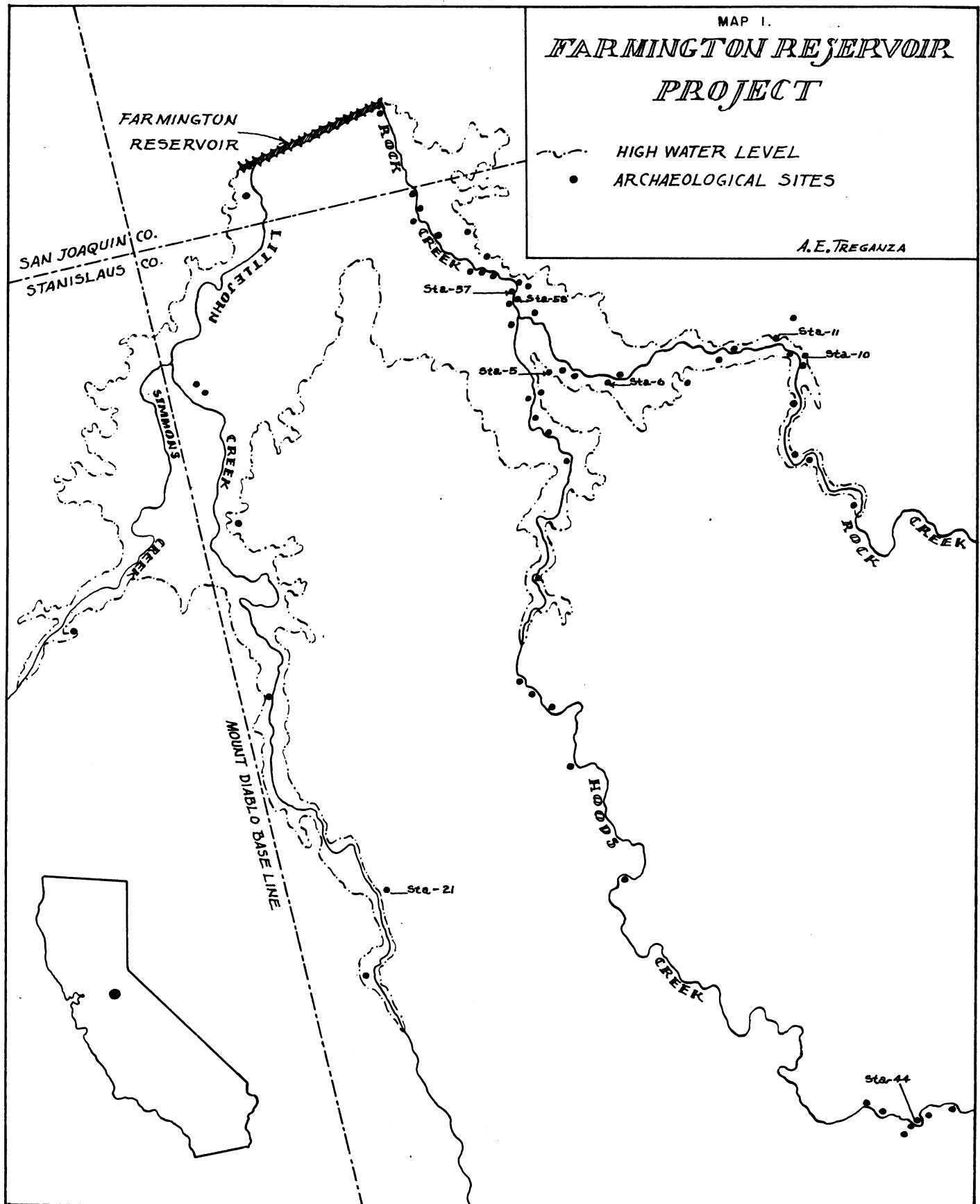
C

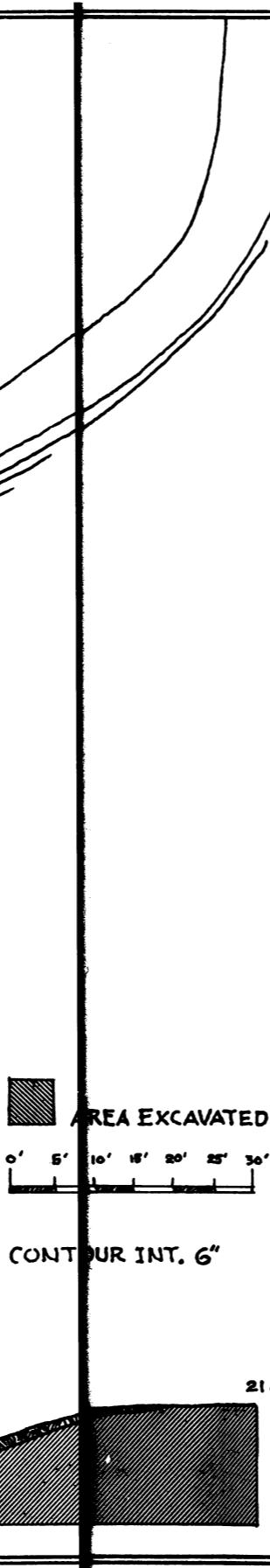
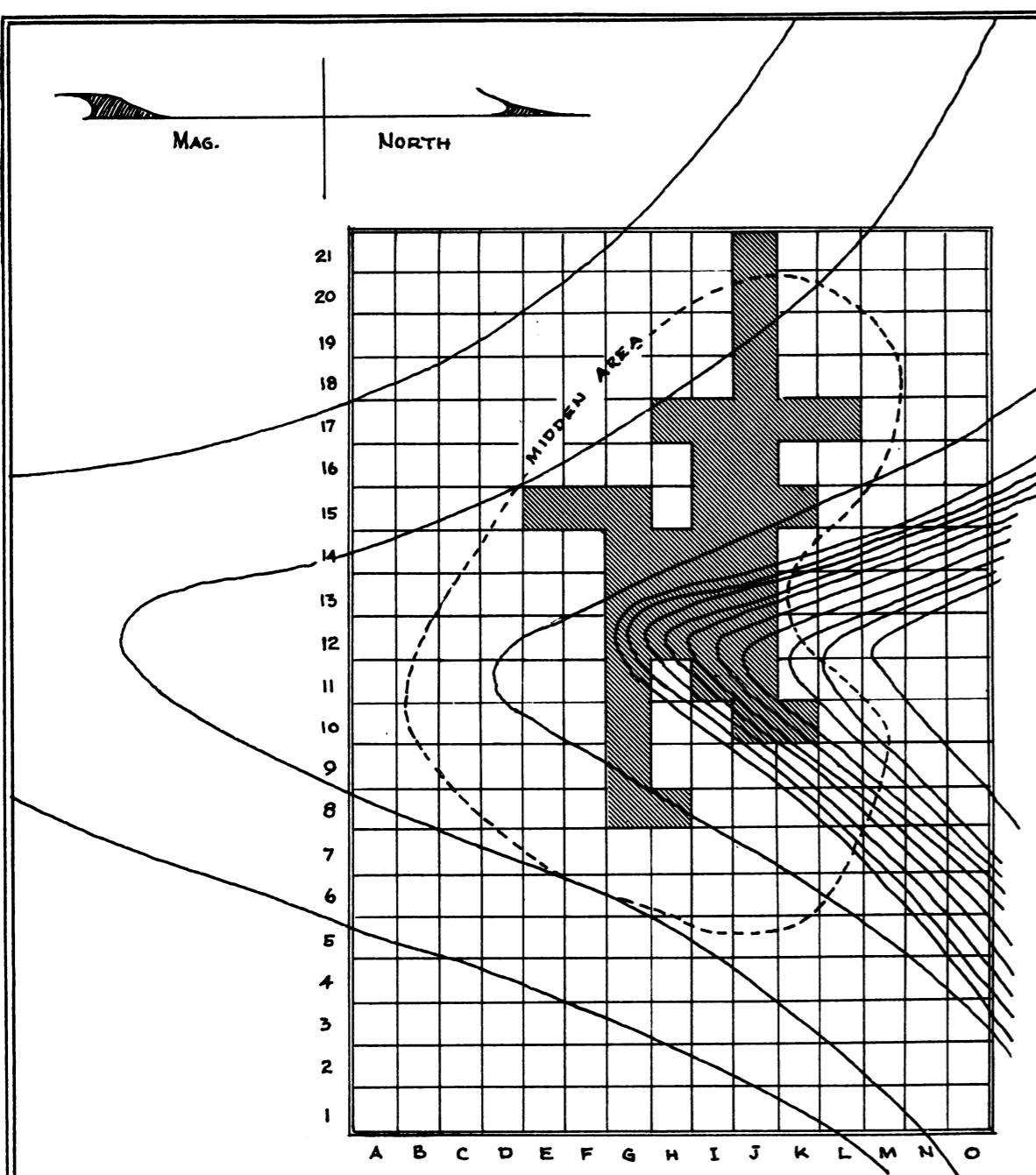


D

3.

Plate





ROCK CREEK

MAP 2

SITE Sta. 5

FARMINGTON RESERVOIR  
AREA

DEPT. OF ANTHROPOLOGY, UNIVERSITY OF CALIFORNIA  
AND  
NATIONAL PARK SERVICE - REGION 4

A.E. TREGANZA

