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13. OBSERVATIONS ON THE SCULPTURED STONE FETISHES IN ANIMAL FORM
DISCOVERED ON SAN NICOLAS ISLAND (CALIFORNIA).

By L. de Cessac

In charge of a scientific mission in America¹

Among the numerous objects which we collected on San Nicolas Island during the course of our mission in California, there is nothing which has been found of more interest, in our eyes, than the stone fetishes in animal form which we here describe and illustrate.

These are certainly the products of the rudest of art forms. These works of sculpture are even inferior to those of the Mound Builders and various Indian nations such as the Makah, Haida, Kolosh (Tlinkit) etc. who live further north on the American coast of the Pacific. They have neither the naive, but remarkable reality in attitude and expression of the former, nor the strange whimsical² spirit of the latter. But still they show, as with the unknown Niminokotch² sculptor, a certain deftness of craftsmanship which deserves their ethnographic notice.

Among the fetishes, and quite numerous in our collection, those which represent cetaceans are particularly remarkable.

The countenance of the species has been caught often; the Californian artist has at times even succeeded in reproducing the character of the great sea mammals exactly enough so as to permit the specific identification of the animals he has represented.

We confess however, that of these fetishes, those which appear to be least imperfect, are not, from our point of view, the most interesting. There are others which at first seem to be only plain little bits of stone of no importance and which at first appear as unremarkable. These latter actually permit us to give an exact account of the progress of a piece of Indian work, and to follow the evolution of an artistic idea among the San Nicolas islanders.

When we found the small triangular piece of steatite, which we show here in fig. 26 (our Pl. 2A), we were far from questioning its significance. Actually, nothing could lead us to suppose that this fragment might be the schema, or, if one prefers, the embryo of a statue of a cetacean.

We shall even add that when, a few seconds later, we collected near the small triangular piece, the serpentine object which is shown in fig. 27 (our Pl. 2B), the notch which supports one of the angles aroused in us no idea whatsoever as to what to attribute it. Quite aware of the fact that archaeology must disdain nothing, and that since the smallest debris, the crudest thing, may bear the print of human hands, and must be scrupulously collected, we were careful not to throw away our little stones, and we were right, since what we had considered first an insignificant work, proved to represent a first rough-draft of a California sculptor.

1. See "Notes" at end of article.

The next morning, we actually came across, heaped up beside a male skeleton, twenty more or less well executed stone animals, and a medicinal or witchcraft pipe also of stone. The clue to the enigma was found, since among these objects was found one of triangular form, like those aforementioned, but on which the work had gone far enough so that one could easily recognize the mouth, the spout, the eye, the gibbosity, the pectoral fins and the caudal fin of a whale of which it would be temeritous to venture to give a specific classification.

Three other killer-whales, all of steatite, like the one we have just mentioned make part of our collection of fetishes from San Nicolas. They will be found illustrated in figs. 29, 30, and 31 (our Pl. 2 E, D, F). We call especial attention to the third; the groove on this statuette which separates the head from the rest of the body was undoubtedly intended to hold a suspension cord, which signifies unquestionably the intended use of this object and of similar ones.

These killer-whales are not easier to classify than the preceding ones, but it seems probable that one of them belongs to the species rectipinna Cope. The specific classification may take on more strictness where they concern the cetaceans of the genera Lagenorhynchus, Rachianectes, and Balaena.

Fig. 32 (our Pl. 2 G) actually seems quite likely to represent the Lagenorhynchus obliquidens Gill, Striped or common porpoise of which M. Scammon gives a good picture, in his remarkable work on the mammals of the Northwest Coast.³

We easily recognize the cetacean, which is quite well fashioned, in fig. 37 (our Pl. 2 L), as Rachianectes glaucus Cope, or the California Gray Whale which M. Scammon also represents in his book.

Finally the little whale, shown in profile and from above in figs. 33 and 34 (our Pl. 2 H, I), could be no other than Balaena Sibboldii Gray.

All the pieces of which we are about to speak, except one, the second (our Pl. 2 K), are carved from a kind of compact talc, which offers a variety of appearances. But we have encountered in the strata other rough drafts of animals, either from clayey schists, such as the attempt at a whale which shown opposite (our Pl. 2 J), or from ferruginous clays, and those which represent the two unspecified fish shown below (our Pl. 2 M-P).

Placed alongside the fish and whales in our excavation were several rudimentarily fashioned birds, the true nature of which it would have been quite impossible for us to discover if the Indians to whom we showed our finds had not assured us without hesitation that these simple and conventionalized forms represented in sculpture of the inhabitants of the air.

If one glances at the reproductions of some of the pajaritos (small birds) of San Nicolas Island (our Pl. 2 Q-S), one can understand very quickly why it is quite impossible to tell which group they might belong to.

Now indeed, they show themselves to be in the form of prisms or irregular cylinders, with an enlarged base, and more or less deeply notched at the top in the manner of a beak; now they disguise themselves in the shape of a slab hollowed out laterally on the higher half, and bearing at the top on one of the faces a transverse groove which leaves a cushion thicker than the rest of the piece

representing the head, whereas on the other face two vertical grooves, placed symmetrically on the side of the lower half, are supposed to represent the wings (our Pl. 2 Q-U).

A third type which we have not shown at all, and which one would easily enough take to be a representation of some pelican, is remarkable for the development of the portion of the piece which corresponds to the head and beak.

Note in passing that one of our slab-shaped birds bears near the top, the beginnings of two perforations, which again show the intended use which we attribute to the group of stones, worked by our San Nicolas magician.

One might perhaps regard those of our fetishes which are shown in figures 47 to 51 (our Pl. 2 V-Z), as figures of mammals. Instead of being shown from the posterior view, the lateral reliefs corresponding to the wings, these on the contrary show their relief in a more likely manner, turned toward the front, and could therefore represent arms. One can see on the end surface which represents the head, projections of varied appearance, but which really seem to have as an object the representation of a face, in spite of their more or less unelaborated character.

Why did our magician choose these forms more than others? Why did he choose to copy the whales, birds and mammals which we have just presented to the reader?

Perhaps it is in the ancient myths of the country that one would find the reason for these preferences. And their examination undoubtedly would aid in specific diagnoses which we have offered in this short work.

Actually we know from the preserved accounts from the last survivors of the southern Californian tribes, that together with whales, various birds and several mammals played very important roles in the local cosmogony and ethnogeny.⁴ In these myths, among the birds, one finds the eagle, and the coyote figures among the mammals. Would it not be images of eagles and coyotes which the Niminokotch artist would have wished to consecrate?

NOTES

1. Translated and reprinted from the original article entitled "Observations sur des fétiches de pierre sculptés en forme d'animaux découverts à l'île de San Nicolas (Californie)." Revue d'ethnographie, Vol. 1, pp. 30-40, 1882. The translation is by Mrs. Nancy E. Heizer, and the illustrations have been redrawn by Mrs. R. Bendix. The notes are by R. Heizer.
2. The word "Niminokotch" which appears here and in the last sentence of the article, is the Ventureño Chumash name for the Indians of San Nicolas Island. This identification occurs in the (unpublished) A. Pinart vocabulary constituting manuscript no. 34988 in the Bancroft Library, University of California.
3. Cessac here refers to C. M. Scammon. The Marine Mammals of the Northwestern Coast of North America Described and Illustrated; together with an account of the American whale fishery. San Francisco, 1874.
4. Cessac probably is referring here to the well known account of the Chiniginish religion written by Fr. Boscana at San Juan Capistrano sometime between 1812 and 1826. It is most readily accessible in English in the Smithsonian Institution Miscellaneous Collections, Vol. 92, No. 4, 1934, Publ. No. 3255, the translation by J. P. Harrington. Harrington seems unduly secretive about his "discovery" of the "long lost Boscana original" treatise, and does not state where he discovered it or where it now resides. This "mystery" can be easily solved by a minimum knowledge of the anthropological literature. Thus, A. Morel-Fatio, Catalogue des manuscrits espagnols et des manuscrits portugais. Bibliotheque Nationale, Paris, 1892 lists, (p. 359), "No. 677. Relacion historica de la creencia, usos, costumbres, y extravagancias de los Indios de esta mision de S. Juan Capistrano, llamada la nacion Acagchemen, por el R. P. Gerónimo Boscana, misionero francisco en la Alta California, 1812-1822." The list further states, "Ce manuscrit a appartenu à Pinart; voir le Catalogue Pinart, No. 130. Papier. 31 feuillets. 184 mm. sur 152. XIXe siècle (Classement de 1860, No. 467; acquis en 1884." This statement would lead one to seek reference to Pinart's connection with the Boscana manuscript, and this occurs in an easily located article by E. T. Hamy, "Rapport sur la mission de MM. Pinart et de Cessac dans les deux Amériques", Archiv des Miss. Scientif. et Litt., 3e. ser., Vol. 9, pp. 323-332, 1882, where, on p. 329 it is stated that Cessac at Santa Barbara, "il se procure la texte inédit de Boscana, si précieux pour l'ethnographie, la linguistique, etc. de la tribu de San Juan Capistrano." Other accounts of this expedition to California and Peru are contained in an article by L. de Cessac "Rapport sur une mission au Pérou et en Californie." Archives des Missions Scientifiques et Littéraires, Ser. 3, Vol. 9, pp. 333-344, 1882, and in a note by Hamy in Revue d'Ethnographie, Vol. 1, p. 346, 1882. Cessac (op. cit., p. 341) says of his search of the archives of Santa Barbara Mission, "Je pus en outre me procurer un manuscrit original du père Boscana, missionnaire de l'ancienne mission de San-Juan Capistrano, manuscrit tres précieux pour l'ethnographie, la linguistique, etc. de cette contrée."

That the Boscana original is still in Paris is attested by my colleague, Professor John H. Rowe who, with Dr. Edwin H. Carpenter Jr. of the Huntington

Library, saw it there not over 5 years ago. Dr. Carpenter, it is hoped, will publish an exact copy of the original document from the microfilm copy which he possesses. Harrington gives us only his translation of the document but promises separate publication of notes on the Boscana manuscript. These notes are still being awaited, along with the "complete" archaeological report on the Burton Mound at Santa Barbara promised in Harrington's Burton Mound catalogue (1928).

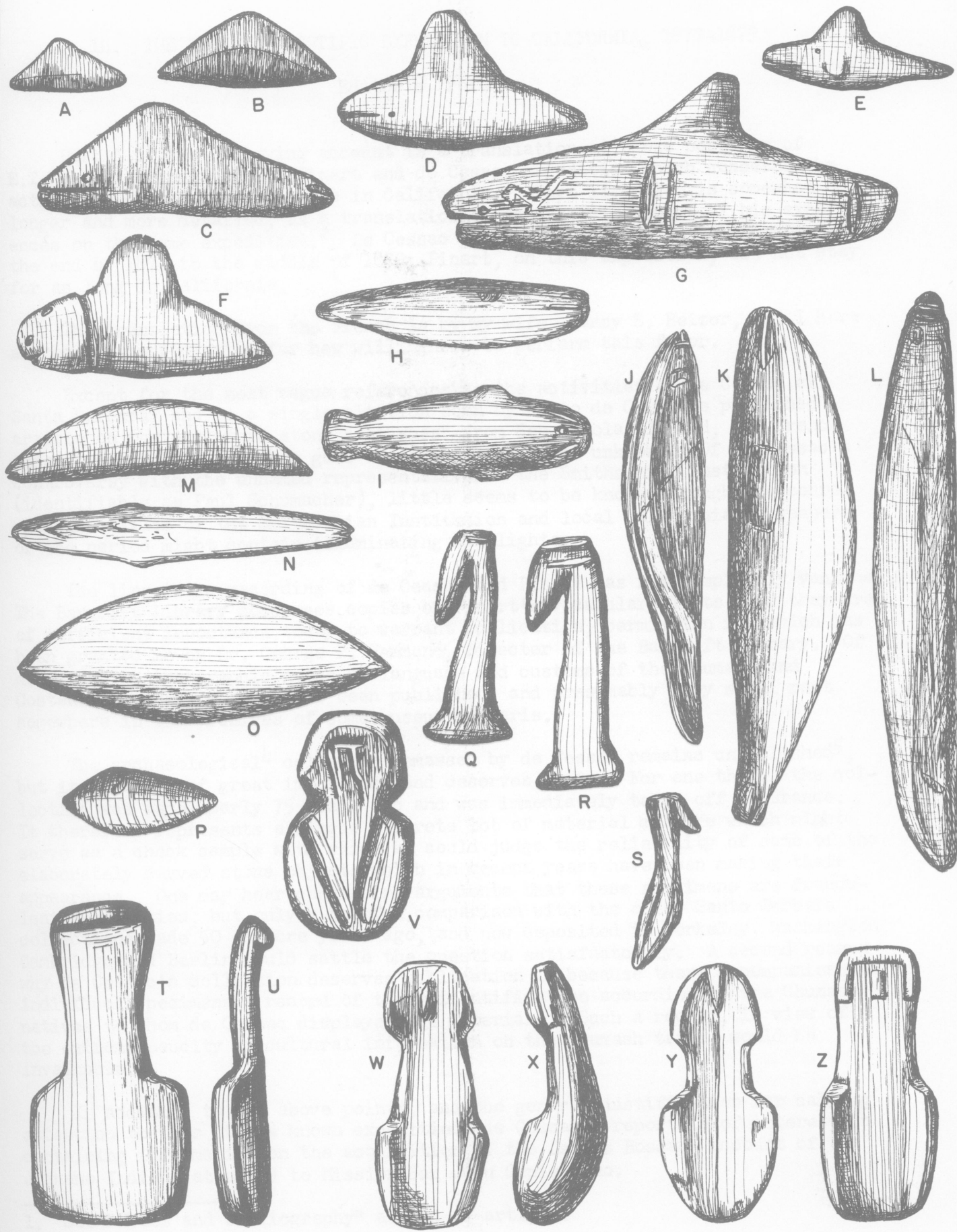


Plate I.

Stone "Fetishes" from San Nicolas Island

14. THE FRENCH SCIENTIFIC EXPEDITION TO CALIFORNIA, 1877-1879

Editor's Preface

Part I of the following account is a translation of those portions of E.T. Hamy's account of the Pinart and de Cessac expedition which concerns the activities of the two explorers in California.¹ Part II, which is somewhat longer and more detailed, is a translation of de Cessac's report of his experiences on the same expedition.² De Cessac seems to have been in California from the end of 1877 to the middle of 1879; Pinart, on this expedition, did not stay for as long in California.

The translation from the French is by my wife, Nancy E. Heizer, and I here express my appreciation for her willingness to perform this favor.

Except for the most vague references to the activities of de Cessac at Santa Barbara, and to a single citation seen by me to de Cessac's published article on the sculpture stone "fetishes" from San Nicolas Island, the French expedition of 1877-1879 has gone unnoticed, and often unknown. Of de Cessac's controversy with the unnamed representative of the Smithsonian Institution (identifiable as Paul Schumacher), little seems to be known, though the correspondence files of the Smithsonian Institution and local California newspapers of the period might contain illuminating sidelights.

The linguistic recording of de Cessac and Pinart has not completely vanished. The Bancroft Library possesses copies of Pinart's vocabulary lists, and they are of sufficient importance today to warrant publication, permission for which has been granted me by Dr. George P. Hammond, Director of the Bancroft Library. Of de Cessac's ethnographic notes on language and customs of the Chumash and Costanoan tribes, nothing has been published, and presumably they still rest somewhere in the archives of some museum in Paris.

The archaeological⁴ collection amassed by de Cessac remains unpublished⁵, but it is today of great importance and deserves study. For one thing, the collection was made nearly 75 years ago and was immediately taken off to France. It therefore represents a single discrete lot of material culture which might serve as a check sample with which we could judge the reliability of some of the elaborately carved stone objects which in recent years have been making their appearance. One may hear convincing arguments that these specimens are fraudulent antiquities, but only a careful comparison with the older Santa Barbara collections made 50 or more years ago, and now deposited in Berkeley, Washington, Cambridge and Berlin would settle the question satisfactorily. A second reason why de Cessac's collection deserves publication is because there accompanies the individual specimens a record of their identification according to the Chumash natives to whom de Cessac displayed the materials. Such a record, in view of the extreme paucity of cultural information on the Chumash tribe, would be invaluable.

In addition to the above points, and the general justification for calling attention to this little known expedition, de Cessac's report is of interest in containing information on the acquisition of the famous Boscana account of the Juaneno Indians attached to Mission San Juan Capistrano.

1. See "Notes and bibliography" at end of article.

Let us hope that some enterprising student will show the necessary energy and initiative to locate the de Cessac records and make them, at long last, available to everyone, and that he, or some other, will find it possible to study and publish the archaeological collection.

R.F. Heizer
Director, UCAS

I. Hamy's Report of the Pinart-de Cessac Expedition

"Upon arriving in California, M. Pinart found his collaborator in possession of all sorts of documents, no less important nor precious than those he himself had brought. M. de Cessac, who Admiral Serres had transferred to San Francisco, after having provided him the means of ending his explorations begun at Ancon, established himself in the California base, and being even more fortunate than his American predecessors, in this curious region, had in a few months assembled an incomparable collection of objects of all sorts, used by the Indians before the quite recent importation of metals.

After having excavated for four months with a perseverance frequently crowned with success in the stations and the caves of Santa Cruz, and having discovered at Ana Capa, which had always been supposed to be deserted, a little ruined town, which was a fishing place for tribes which have completely disappeared today, our traveler followed the coast of Santa Barbara county for more than 100 kilometers, exploring the remains of destroyed villages at Cape Concepcion, the workshops for the manufacture of the stone weapons of Point Pedernal; then crossing the Sierra of Santa Ynez, he came across the lengthy valley at Purissima. He collected ethnographic objects of the Choumas Indians by hundreds.

Meanwhile he drew up the geologic map of the islands of the neighboring coast, made a considerable botanical collection, and finally collected numerous conchological, carcinological and ichthyological, specimens.

We shall not follow M. de Cessac in his crossing and recrossing of the Sierras, where he lived the life of the Indians in the company of old Raphael, whose confidence he had gained, and through whose aid he tried to reconstruct the past of the people of Samala.

We find him a little later at San Miguel, [and] at San Nicolas, where he gathered new ethnographic collections, which were even more important than the previous ones, and where he made up the geologic map. Still later, he was at Santa Barbara where he copied the most interesting manuscripts on the old missions, and where he procured Boscana's unpublished text, which is so precious to the ethnographer, the linguist, etc., on the San Juan Capistrano tribe.

On the second of July, M. Pinart rejoined his companion at Santa Barbara, and the two travelers together started to study the remnants of the tribes of Monterey, Soledad, and San Antonio. M. Pinart reached Tulare Lake, where he collected a complete skeleton and some Yo-Kuts skulls, while M. de Cessac initiated a study of the coast of San Luis Obispo. The two investigators met again shortly afterward, at San Buenaventura, only to part once more."

E. T. Hamy

II. L. de Cessac's report on his activities in California.

"San Francisco - My stay in San Francisco was not of long duration. Desirous of making the best possible use of the long months which separated me from the time the Seignelay had to return, and not finding any truly useful scientific work to undertake in the immediate neighborhood of this great city, I decided to profit by an offer which had been made me by some compatriots to explore an island which the American archaeologists had made famous several years since, and of which a large part was in the hands of a French wool-merchants' company.

Santa Cruz [Island]. Santa Cruz, the name of this island, is situated 17 or 18 miles off the coast of California, from which it is separated by the Santa Barbara channel. The representatives of the Smithsonian Institution, to whom I just referred, limited themselves to exploring the shores where they made abundant collections. After having followed their footsteps for some time without success, I decided to go into the mountainous interior of the island, and was not long in discovering flint quarries which had not before been reported, near which were found workshops, some of which were established on the vast plateau and others of which were in numerous caves. I was the first to discover the existence of many caverns which had served for habitation as well as graveyards.

I also made, while pursuing my ethnographic studies, a geological relief map of the island, and my collections were enriched with quite a number of botanical samples and a larger number of specimens of the marine fauna.

Ana Capa [Island]. My trip to Santa Cruz took about four months. I then went to the neighboring islets known by the name of Ana Capa. The explorers who preceded me there believed this spot never to have been inhabited.⁶ I was immediately convinced that not only had this little group served as a gathering place for indigenous fishers from Santa Cruz, but that several families had even lived there. I discovered traces of a little village where I collected two skulls and a basin [mortar?], as well as a small number of collection objects.

The geology of these islands interested me particularly, the nature of the rocks being exclusively volcanic trachyte. Here again I made interesting collections.

Coast of Santa Barbara. I returned toward the month of January, 1878, to the neighboring mainland, and, coming up the coast of Santa Barbara, I discovered the sites of former Indian villages, but the success of my digging at Santa Cruz had excited the zeal of the members of the Smithsonian Institution, and their researches had very nearly exhausted the coastal sites. I succeeded, however, in collecting various skulls belonging to diverse tribes. At Point Concepcion I obtained quite a number of carved stone tools, pots, mortars, pestles, etc. and at Point Pedernal I discovered an important workshop for stone and jasper weapons.

Hoping to find unexplored cemeteries in the interior, I decided to cross the Santinez [Santa Ynez] mountains to go down the valley of Lompoc [Lampoc] and Purissima. In spite of a very careful exploration, it was impossible for me to discover a single trace of cemeteries or of former Indian villages, I found nothing but a small flint chipping workshop which did not yield a single piece of value.

Valley of Santinez [Santa Ynez]. Pushing further south and forward into the mountains I arrived at the valley of Santinez [Santa Ynez] which lies between the mountains of the same name and the San Rafael range. Here there stands a former mission which is still in quite good state and is even cared for by a curé. I went through, without any results however, the archives and library of this mission, As the priest had told me that quite a number of Indians lived in the neighborhood, through him I became acquainted with these natives. It was soon possible for me to discharge the Spanish Californians who had served as scouts and guides up till then and replace them by Indians. I even succeeded in gathering a vocabulary of the Samala language or the Santinez dialect. This vocabulary amounted to over 1200 words. Moreover, I put together the basis of a grammar which I hope to finish later. In addition I penetrated bit by bit into the confidence of my men, particularly one of them named Raphael, a man of about 60 years of age, very intelligent besides. His uncle, doctor and magician (sorcier) of the tribe had, before his death, been able to teach him the traditions, beliefs and religious ceremonies of their ancestors. My old Indian could, therefore, furnish me with the most precise and numerous data on the past of his people. His information was controlled by the help which I obtained afterward from 3 other Indians of the same group. When the Samala were at my complete devotion, I noted the location of the former villages, and visited these spots with them. They made me acquainted with the location of the cemeteries which were, however, recognizable as such because of limestone flagstones which protruded slightly from the ground.

Raphael consented, without great regret, to dig those of Hounhounata (vulgo Jonata), Anaboui and Socounoutmon with me. These 3 localities, yielded to me, among other precious pieces, magnificent utensils of large size. A part of the cemeteries only demonstrated a relatively very recent period, since, together with various glass beads (perles de verroterie) I collected iron instruments and indeed, even a pottery plate of Spanish manufacture. It was unfortunately impossible to find the smallest bone fragment of any value. The strongly alkaline condition of the soil had caused all organic material to disappear. This disappointment is very common in California, and such a cemetery where one notes the burial of 100 bodies never yields the smallest phalange.

The rainy season, which prevailed during this part of my explorations, contributed not a little toward making my researches difficult. I returned to Santa Barbara, recording on my way three Indian inscriptions painted on sandstone on the summit of the Santinez mountains.

I returned to Santa Cruz [Island] to get the ethnographic part of my collection which I had left in storage. I brought it back to Santa Barbara, and exhibited it in a large space, where, bringing my Indians and an old Indian woman who was the last survivor of the natives of Santa Cruz, whom I had the happy fortune to meet some time before, I showed them my treasures. I obtained thus the name and usage of practically the entirety of the objects.

Meanwhile my researches and their happy result, having awakened the "patriotic" or "interested" touchiness of various sorry souls, notably one of my archaeological competitors, I was forbidden to excavate a very important cemetery in the very town of Santa Barbara.⁷ I succeeded, however, thanks to the help of an Italian gardener who tilled this site in obtaining a number of skulls (seven or eight) which were almost enough for study. It was only a matter of money, discretion and whiskey.

Not content with paralyzing my efforts, my adversaries sought to force to make me leave the mainland and to restrict my researches solely to Santa Cruz Island. In this plot, I was officiously informed by several of the people with whom I had formed close relations, that there was a law forbidding the export of Indian antiquities. They would shut their eyes, I judged, if I limited myself to exploring Santa Cruz Island which was the property of a company which was exclusively French; but if I continued to collect on the mainland, nay, even on the neighboring islands other than Santa Cruz, I would run the risk of seeing my collections seized the moment I sent them off to France. Although little reassured, I confess, against the bad wishes which were thus expressed to me, I nevertheless put on a bold front, and supposing that with a little daring I might succeed, a technique which had already served me well in other countries. I chartered, as soon as possible, a schooner, and, with my men, was taken to San Miguel Island and later to San Nicolas Island.

San Miguel Island. The first of those islands is unusual because of its chipped flint jasper and agate arrowpoints. I could collect there a great number of skulls, some skeletons and isolated basins as well as very beautiful ornaments, numerous bone tools and an extremely interesting series of mortars ranging from the first rough draft to the perfect achievement.

My natural history collections received at the same time a notable addition.

After a stay of approximately three weeks which allowed me to make a geological map of the Island the schooner came to pick me up again, and toward the end of May I debarked at the island of San Nicolas.

San Nicolas Island. This island does not belong to the Santa Barbara group. Situated 40 miles further south and 57 miles from the coast, it belongs to the San Pedro channel group.

I observed immediately great differences between that which I discovered here and that which I had heretofore encountered. If a great many of the objects were similar to those of other localities which I had visited, there was also a great number which showed the stamp of quite special originality. I will cite, among others, the fetishes in bird and fish form of which I collected an important series of the greatest interest. One can follow in the collection which I brought back, the whole story of the workmanship of these amulets from the grossest first draft to the most finished production. The stone vases were also of a far from ordinary workmanship. The mortars and their pestles were first rate pieces and unique to this day for their beauty of profile and delicacy of execution.

The decorative ornaments of stone exhibited equally remarkable beauty. It is the same for the hooks of Haliotis shell in all stages of manufacture. I only speak from memory of the flutes, whistles and other bone implements.

It seems interesting to me, however, to mention the discovery on San Nicolas Island of several objects which are the incontestable proof of the trip which the Kodiaks made to this island during the first years of this century. The Russians had brought them here to use in the hunting of sea otters and seals.

I think that it is unnecessary to add that from the anthropological point of view, I obtained fine results on this island, of which the geologic map could lead equally to good ends. The marine fauna there contained species which I did not possess before (echinoderms and molluscs). The flora is practically absent, besides the flowering season was past, and I could collect no botanical specimen of any worth.

As to the terrestrial fauna, it is the same in all the California islands as that on the continent, poorer, however, than the latter. Now I had a number of specimens of the continental fauna; it seemed to me preferable to neglect momentarily this branch of the zoology. I feel sorry, however, I admit, not to have been able to obtain one type of fox which is considered unique to this island group.

The time which ended the charter contract for my schooner came, and I returned to Santa Barbara. I believed it was necessary to take certain precautions in the landing of my archaeological collections, because I was not without certain fears on the subject. All went in the best manner in the world. I was soon absolutely certain that no law of the United States forbade the export of Indian relics.

The point of departure for this whole story, was the step attempted by an American explorer, who was close to the secretary of the Smithsonian Institution, for the purpose of presenting a prohibitive law to the American Congress. The secretary refused, and exportation remained free (legal).

I did with my new collections the same that I had with previous ones. In placing them before the view of the Indians, I got exact information on the use of these objects, their method of manufacture, and so forth.

The campaign had been rugged. In the midst of quicksand and frightful storms it had been accomplished. I needed a few weeks rest. I profited by it in doing in Santa Barbara mission, some research which was crowned with unexpected success. I found there some extremely important documents relating to the history of the Indians of the territory of the old California missions. I was able, besides, to obtain an original manuscript of Father Boscana, who was the missionary of the Old San Juan Capistrano Mission, a manuscript which was very valuable for the ethnography, the linguistics etc., of this land.⁶

Thus matters stood on the second of July, 1878, the date on which M. Pinart, came to rejoin me on returning from France where he had gone after coming back from Oceania. Together we left for San Francisco, where we stayed only a few days, only to go back down to Monterey, where I had been long awaited by one of my California friends. While my colleague occupied himself with linguistics, I collected through the Indians extensive information regarding the religious and cosmogonic beliefs of their ancestors, their habits, their manners, and their customs.

My friend took M. Pinart and me to the ruins of Soledad Mission, then to San Antonio, where the priest, a half breed Mexican gave us interesting information. He made us acquainted with the last Indians who lived in the neighborhood of the mission. My friend was able to gather from them vocabularies of their language, but it was practically impossible to get, at this time, any notion of their habits and customs. It was only during another trip that I made in this region for the purpose of making paleontological, botanical and zoological collections, that I succeeded in allying myself with two of these Indians. I hope to get from them some day quite complete and accurate details, if I can judge by those with which they already supplied me during the several hours that the farm work, with which they were occupied as laborers, permitted them to devote me.

San Luis. Our trip to San Antonio lasted approximately one week. Traveling always toward the south, I directed myself to San Luis Obispo, an interesting region, still unknown to me. As for my colleague, he turned toward the north to

continue his linguistic studies in the region of four or five missions located between San Francisco and Monterey. Arriving at San Luis early in August, I left at the beginning of September. I used this time to make a general reconnaissance of the county, and to make for myself connections which allowed me a month and a half later, to continue my studies more attentively and fruitfully in that place.

I returned to Santa Barbara then to take the most valuable part of my collections there and to send them to San Luis, which had to be for several months the center of my activities. At Santa Barbara I started a collection of ethnic types which was destined later to grow, and of which I bring back the plates.

I was preparing to return to San Luis when I received a telegram from my colleague, letting me know that he was at San Buenaventura, the seat of an old mission, situated about 20 kilometers to the south of Santa Barbara. Because of the desire which he expressed to me, I went to join him. M. Pinart informed me then of his imminent departure for Sonora. He advised me, during his five or six months absence, to return to France, where material and personal interests called me.

At Santa Barbara, coming upon the old Indian woman, of whom I have already spoken, as well as an old Indian man, who was the only remaining Santa Barbara native, I was able from their information to reconstruct the ethnography of the Chumash, who inhabited these islands.

Since my colleague was preparing to leave for Guaymas, I returned to San Luis and started the study of that region. The penurious financial situation in which I found myself from that time did not permit me to dream of undertaking a new important excavation. I had to limit my studies of this sort, but I was able, nevertheless, to procure a superb Tichos Indian skeleton as well as some skulls.

Léon de Cessac

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1. J. P. Harrington, "Exploration of the Burton Mound at Santa Barbara, California". Bureau of American Ethnology, Annual Report No. 44, 1928 (p. 66). D.B. Rogers, Prehistoric Man of the Santa Barbara Coast. Santa Barbara Museum of Natural History, Santa Barbara, 1929 (p. 261).
2. E.T. Hamy, "Rapport sur la Mission de Mm. Pinart et de Cessac dans les deux Ameriques". Archives des Missions Scientifiques et Litteraires, Ser. 3, Vol. 9, pp. 323-332, 1882. The translation printed here is taken from pp. 328-329 of this article.
3. Léon de Cessac. "Rapport sur une Mission au Perou et en Californie." Archives des Missions Scientifiques et Litteraires, Ser. 3, Vol. 9, pp. 333-344, 1882. The translation printed here is from pp. 336-343 of this article.
4. De Cessac often uses the word "ethnographic" to mean archaeological research or specimens-- i.e. material culture items.
5. With, of course, the exception of his article on the San Nicolas Island "fetishes" printed elsewhere in this Report.
6. This claim was made, and is occasionally still made. De Cessac may have stated this observation partly to show his rival, Schumacher, was in error. A second account of an archaeological site on Anacapa Island is given by L. G. Yates. "Notes on the Geology and Scenery of the Islands Forming the Southerly Line of the Santa Barbara Channel." American Geologist, Vol. 14, pp. 43-52.
7. Probably the Burton Mound. See note 3.
8. De Cessac is strangely reticent of the way in which he accomplished the feat of acquiring the manuscript of the Boscana account. Perhaps, as in the case of the Italian gardener who tilled the site in Santa Barbara (probably the Burton Mound), it was only a matter of money, discretion and whiskey.

15. THE ARCHAEOLOGY OF A PAIUTE VILLAGE SITE IN OWENS VALLEY

By Harry S. Riddell

INTRODUCTION

The site with which this report is concerned was designated as Iny-2¹ by the author during an archaeological site survey in Owens Valley in 1946. This site was chosen for excavation because it appeared to be a village of considerable importance as exhibited by the numerous house pits, bedrock milling places and undisturbed cultural deposit. Also of importance in considering this former village for excavation was the fact that the site had yielded historic glass trade beads. It was believed that this site might define, at least in part, the proto-historic and historic culture periods of the Owens Valley Paiute.

Iny-2 is located within the boundaries of Inyo National Forest and a permit for excavation was obtained on March 28, 1950 through Mr. Clare Hendee, Regional Forester, United States Forest Service through the offices of Dr. Robert F. Heizer, Director, University of California Archaeological Survey. The Survey was the sponsoring institution of my project.

Persons to whom I am indebted concerning the excavation and research of this site include the following persons: Olline, my wife, who aided greatly in the excavation and in the preparation of this report; Mr. Donald H. Euler, District Ranger, U. S. Forest Service, Lone Pine, California, who extended many courtesies; Mr. Dick Shutler, Jr., Preparator, University of California Museum of Anthropology, who assisted in the examination and description of the pottery; Mr. Clement W. Meighan, Archaeologist, University of California Archaeological Survey, who identified the glass trade beads; Mr. Francis A. Riddell, who aided me throughout the project.

Iny-2 is situated on Diaz Creek near its junction with Cottonwood Creek. Cottonwood Creek flows into Owens Lake on the west side of the valley. This site is approximately 4 miles up Cottonwood Canyon and lies at an elevation of about 5700 feet. The steep canyon walls rise an additional 1,000 feet and the mountain peaks tower nearly 4,000 feet above the site. The location was well chosen for a winter village since it is sandy and well drained, receives the maximum winter sun, is in close proximity to oak and piñon groves and a constant water supply. Although the winter sun sets much earlier in the canyon than on the valley floor the snow and ice melt quite rapidly on this sunny location. This is the most favorable location in the canyon for a winter village. The site occupies the lower part of the Upper Sonoran zone which Steward regards as being favored for winter villages.² It is possible that Iny-2 may be the historic village of Hudu matu recorded by Steward;³ however, Iny-63, which is also an historic site as evidenced by glass trade beads, also must be considered as possibly being Hudu matu. Iny-63 is located near the mouth of Cottonwood Creek and also contains house pits.

An Indian trail to the Kaweah River in the San Joaquin Valley via Cottonwood and Coyote Passes passed by Iny-2.⁴ This too, would add to the importance of a village in Cottonwood Canyon.

1. See "Notes" at end of article.

Excavation of the site was undertaken during the summer and fall of 1950. The site was first mapped, primary and secondary datum points established and then a series of trenches laid out from the secondary datum. Iron pipes driven firmly into the ground serve as datum points (Map 1; Datum A is assigned an arbitrary elevation figure of 100 feet for purposes of showing direction of contour slope). The trenches were excavated with trowels, and shovels were used primarily to place the troweled deposit into a screen. All of the deposit removed from the trenches was screened. Area A (Map 1) was troweled to a depth of two inches in order to recover a concentration of pottery sherds.

The artifacts from Iny-2 have been deposited in the University of California Museum of Anthropology under the accession number 1060.

HOUSE PITS

A total of 11 house pits have been recorded for this site (Map 1, Features 1 to 9, 15 and 16). The largest house pit (Feature 1) has a diameter of 30 feet and a depression of about 18 inches. The two smallest ones have dimensions of 10 by 12 feet with a depression of but a few inches. These small house pits (Features 4 and 5) are built against a large granite boulder and movable granite stones outline the edges of these two house pits.

It is unlikely that all of the houses represented by the house pits were occupied at one time. Some house pits are nearly obliterated by being filled in with granitic sand derived from the slopes above. Two house pits (Features 15 and 16) were either quite shallow or somewhat older than three adjacent house pits (Features 1-3) because their outlines are only faintly visible at the present time. Three other house pits (Features 7, 8 and 9) have been nearly filled with washed in sand; they are less protected from aggradation than are some of the pits on more level ground.

Using Steward's description of house types for the Owens Valley Paiute⁵ as a guide it would appear that one house pit (Feature 1) is the remains of a sweat-house; its great diameter and depth of the depression would argue for this. The other house pits are probably the remains of what Steward calls "winter valley houses".⁶ Partial excavation of one of the smaller house pits, Feature 6, revealed charred remnants of willow poles. These were more or less evenly spaced about the edge of the pit and appear to have been the remains of the peripheral poles of the house.

BEDROCK MORTARS

The milling places associated with the site are located on granite boulders and differ in no particular way from the bedrock mortars so common on the western slope of the Sierra Nevada Mountains. The mortar pits range in depth from 1 inch to 8 inches. A total of 5 milling areas were recorded (Map 1: Features 10-14). Except in a few instances each mortar pit had a well worn metate area situated beside it. These metate areas average about 12 to 14 inches in length and about 8 inches in width; the grinding depressions, though slight, are apparent.

All of the pestles recovered from the site are heavy, unshaped cobbles of granite. All but one of the pestles came from the surface of the site, usually from around the bases of the bedrock mortars. Some of the pestles exhibit wear on their sides from being used on the metate areas. One of the mortar pits of Feature 12 still contained a cobble pestle.

PORTABLE METATE

No complete specimens of metates were recovered and only one fragmentary specimen was found. This fragmentary specimen, which came from the surface, was made of granite. It is basin shaped, 8 inches thick and has a depression about .5 inch deep. The metate areas beside the bedrock mortar pits appear to have been adequate for any grinding that necessitated the use of a metate.

MANOS

Two types of manos occurred at this site; Type 1 is bi-faced while Type 2 is single faced. Of the three Type 1 manos all are ovoid in shape and are rather well formed; two are of granite the third of some other igneous material. The two granite manos are rather flat in cross-section, the other one is fragmentary and tends to be ovoid in cross-section. One of the Type 1 manos occurred on the surface, another at a depth of 10 inches and a third from 18 to 21 inches below surface (Table 1).

The Type 2 manos are composed of either water worn cobbles or of fractured cobbles and are more or less ovoid in shape, although some are angular. Most of these manos are made of granitic materials. The manos of this type, 9 specimens, occurred from surface to 12 inches in depth (Table 1).

TUBULAR STONE PIPES

Fragments of two biconically drilled, tubular pipes of pumice were picked up from the surface of the site. One specimen is complete enough to obtain both length and diameter. The length of the more complete specimen is 45 mm. while the maximum diameter is slightly more than 32 mm. The bowl of this specimen is black from use. The other fragmentary specimen is remarkably similar in both size and form to the more complete specimen.

ABRADING STONE

A fragmentary piece of pumice 4.4 cm. wide and 1.1 cm. thick may have been an abrading stone. All of the unbroken edges of this specimen are beveled rather than being flat. The specimen came from the surface.

STONE PENDANTS

The three fragmentary stone pendants recovered were all of slate and came from the surface. The specimens range in thickness from 1.5 mm. to 3 mm., from their fragmentary condition it may only be assumed that they are rectangular ornaments with a single perforation near one end. The longest example is 32 mm. the greatest complete width is 11 mm.

STONE BEADS

Except for pottery fragments steatite disc beads were the most common artifact type recovered from the site. These beads range in color from a light cream, through light green tones to dark brown; a few are reddish-brown in color. The beads are made from an excellent grade of fine-grained steatite. All of the beads appear to have been conically drilled. The maximum thickness of these beads is

4.4 mm., the minimum thickness is 1.7 mm., the maximum diameter is 9.2 mm. and the minimum diameter is 5 mm. One of these steatite beads, found on the surface, had six vertical lines incised on its edge.

Wedel reports from the Buena Vista Lake region steatite beads similar to those found at Iny-2.⁷ Excavation of Fre-30 by the University of California Archaeological Survey in the summer of 1948 also produced steatite beads similar to those recovered at Iny-2.⁸

At the present the origin of these beads is not known but there are several possibilities. They may have been traded in from the San Joaquin Valley or they may have been made from material locally obtained in Owens Valley.⁹ There is at present no definite indication that these beads were manufactured at Iny-2. However, in making surface collections from nearly 200 sites in Owens Valley the author has found none where the surface yield of these steatite beads approaches that at Iny-2.

Steatite beads occurred from surface to 30 inches in the site; actually throughout the deposit. They were, however, much more numerous in the upper 12 inches than in the remainder of the deposit (Table 1).

PROJECTILE POINTS

The projectile points from Iny-2 (Fig. 2) have been arbitrarily divided into 13 types. There is always a natural tendency for projectile point types to overlap as may be noted in types 1 and 2, and 4 and 5. For the present, however, the subtle difference in point types seems to be worth recognizing. Occurrence by depth is given in Table 1.

Minimum and maximum lengths of complete specimens by type are given below in order to show the range in projectile point sizes.

Type 1, 1.9 to 2.6 cm., one specimen found on the surface had some pitch adhering to its base. Steward describes arrows with points stuck on with a gummy substance.¹⁰ Type 2, 2 to 2.8 cm.; Type 3, 1.9 to 2.4 cm.; Type 4, 2 to 2.3 cm.; Type 5, 1.7 to 2.4 cm.; Type 6, this single specimen is made from a thin obsidian flake and has its point missing, the reconstructed length is 1.3 cm.; Type 7, 1.8 to 2.4 cm.; Type 8, 1.5 to 2 cm.; Type 9, 1.7 to 2.4 cm.; Type 10, 2 to 3 cm.; Type 11, all specimens are fragmentary but a reconstruction of the average length would be about 3 cm.; Type 12 the single specimen has a length of 2 mm. Type 13 cannot be considered an arrowpoint but is more likely a spear point. Of the two specimens of this type one is 7.3 cm. long, the other is fragmentary but would have been considerably smaller even had it been complete. These two specimens might be classed as knives but the larger specimen, which is serrated, shows no wear along its edges. The smaller specimen is too fragmentary to determine whether it, too, was serrated, or if it were worn along its edges. In any case the two Type 13 specimens appear to be too large to have been used on arrows. These two specimens in no way differ from specimens excavated by Harrington at Little Lake.¹¹

Except for three specimens all of the projectile points are made from either an opaque or translucent grey obsidian. A fragmentary Type 2 specimen is made from a chert, a Type 7 specimen from jasper and a Type 8 specimen from what appears to be chalcedony.

Specimens too fragmentary for classification include the center section of a projectile point of red chert that has pronounced, rounded serrations.

STONE SCRAPERS

Of the 10 scrapers recovered 9 were made from flakes of obsidian. At least one edge of each specimen had been either intentionally retouched or retouched through use. These obsidian flake scrapers range in length from 2.6 to 5.2 cm., and in width from 1 to 2.2 cm. Scrapers are distributed from the surface to 18 inches deep. An end scraper of brown chert is 4.1 cm. long and 2.3 cm. wide; it is a heavy flake that exhibits both primary and secondary flaking.

DRILLS

Two drills were recovered from the site, one is made of basalt (Fig. 1a) and the other of obsidian (Fig. 1b). The basalt drill is 3.7 cm. long and has a base that is 1.8 cm. wide and 7 mm. thick. It was probably used unhafted. The obsidian drill is 2.2 cm. long and has a base 1.5 cm. wide and 4 mm. thick. It is delicate enough to be hafted. Neither of these surface specimens are notched.

PIGMENT

A few small fragments of orange-yellow ocher was recovered from the surface to a depth of 12 inches. Only one piece exhibited any modification, one side had marks on it as if it had been partially cut through with a knife and then broken. This specimen came from the surface. The pigment from this site appears to have been obtained from some sedimentary deposit and was apparently used without having been ground into a fine paste and dried into lumps.

SHELL BEADS

Olivella: Gifford's shell bead typology is used in describing the Olivella and clamshell beads from Iny-2.¹² Depth occurrence is shown in Table 1.

Type F7. This type is represented by but a single, small spire-lopped bead of Olivella pedroana. The area above the orifice has been flattened through wear or intentional abrasion. This is a surface specimen.

Type X1a. A single fragmentary specimen of this type of Olivella biplicata bead was recovered from the surface of the site. It is a half-shell bead with a punched perforation.

Type X3bI. Four beads of this type were recovered from surface to a depth of 6 inches. These specimens are circular or oval beads cut from the body whorl of the Olivella biplicata. They have an even thickness, a variable diameter and a single perforation.

Type X3bII. This type of bead was the most numerous in the site and occurred from surface to 18 inches in the deposit. They are deeply cupped, circular or oval in shape, and are cut from the body whorl of the Olivella biplicata. One edge is thicker than the other. These beads have a single central perforation. A total of 50 was recovered from Iny-2.

Clamshell beads: Only one complete and two fragmentary clamshell beads were collected from the site.

Type VIaI. This bead, apparently of Tivela stultorum, has a diameter of 8 mm. and is 7 mm. thick. It was picked up on the surface.

Type VIb. This type is represented by a quarter section of a clamshell disc bead that originally was more than 25 mm. in diameter. The evidence of a single central conical (?) perforation remains. This bead occurred in the 9 to 12 inch layer.

Type VIh.¹³ This disc bead fragment is apparently of Tivela stultorum and probably had an original diameter of about 30 mm. Instead of having a square, milled edge as in Type VIg it has a thin edge. Short lines have been incised at an angle to the radius and occur on the border of one face of the specimen. The maximum thickness of the specimen occurs at the central perforation, it is slightly more than 4 mm.

Haliotis bead: A single specimen made from Haliotis shell was recovered in the excavation of Iny-2. It is 5 mm. in diameter with a single central perforation 2 mm. in diameter. This bead, which may be made from the shell of Haliotis cracherodii, has a thickness of 1 mm. The specimen came from the 3 to 6 inch level.

FRESHWATER MUSSEL

A single fragment of freshwater mussel shell (possible Anodonta) was found on the surface. Since the site is at an elevation of about 5700 feet it is not surprising that mussel shell is virtually absent from the deposit. The lack of mussel shell, however, is in contrast with many sites along the Owens River which have a considerable quantity of mussel shell as a component element of their mass.

GLASS TRADE BEADS

A total of 9 glass trade beads were recovered from Iny-2. Seven were picked up on the surface and two were excavated from the 0 to 6 inch level. Types assigned to the glass beads from Iny-2 are those determined by Meighan.¹⁴ The following is a list of sites and/or counties from which beads of the same type occur.

Type 65. Also occurs at Sac-1.

Type 105. This bead type occurs in 33 other sites in California and is considered universal in time and area. This type also occurs locally at Iny-38, near Lone Pine, California.

Type 146. Also occurs in the following counties: Yolo, Napa, Madera, Kern, Sacramento, Modesto, Siskiyou, Shasta, Humboldt and Fresno.

Type 178. Two beads of this type came from Iny-2, both from the 0 to 6 inch level; one was excavated from a house pit (Feature 6). This type also occurs at Fort Ross, and in Napa, Shasta, Marin, Sacramento and Tuolumne Counties.

Type 200. Also occurs from Sac-1, Sac-127 and in Butte County.

Type 204. This type also occurs on Santa Rosa Island, Santa Catalina Island, Kern Lake, Ker-74, SFr-1 (Farallone Islands) and Sac-56. Meighan gives a date of 1810 to 1830 for this bead type.

One bead from Iny-2 does not have a type number assigned in Meighan's series at present since it is unique to Iny-2. This bead is similar to Types 205 and 209 but is a slightly lighter shade of blue.

CHARRED MATERIAL

Two acorn halves were excavated from the 0 to 12 inch depth of the single excavated house pit, Feature 6. As mentioned above this same house pit yielded remains of carbonized willow poles. From the 6 to 12 inch level in Pit 1R-1 a carbonized seed of Pinus monophylla, the piñon pine, was recovered. The seed had been shelled.

POTTERY

On the basis of over 900 sherds recovered from Iny-2 (Table 1) it is considered feasible to name a new ware in which pottery from this site and certain pottery from Owens Valley and neighboring regions would be included. A study of sherds from other sites in Owens Valley and from neighboring regions gives full support to the naming of a new ceramic ware.

The following pottery description is of specimens recovered from Iny-2 but applies equally well to pottery specimens occurring over a rather extensive area whose known range is given in the description below and illustrated in Map 1. The criteria given by Colton and Hargrave¹⁵ for naming a new ware have been followed in setting up the following ware. The methods and techniques in the manufacture of this new ware and how these methods and techniques differ from ceramic manufacture in bordering areas are the basic criteria for the definition of the new ware described below.

Owens Valley Brown Ware

Synonyms: Northern Paiute pottery of Owens Valley.¹⁶ (See also "Comparison" infra.)

Illustrated: Steward, 1933, Fig. 1a-i; Pl. 5a, b, d. Lathrap and Meighan, 1951, pl. 3a.

Type specimens: On deposit at the University of California Museum of Anthropology, Berkeley and the Museum of Northern Arizona, Flagstaff.

Type site: Iny-2, on Cottonwood Creek, Inyo County, California.

Stages: Certainly historic and proto-historic but extending into the pre-historic period for an unknown distance. (See also "Discussion" infra for additional comments on the possible age of this ware.)

Construction: Coiling with thinning by scraping. (See also "Remarks" infra.)

Fired: In oxidizing atmosphere, although often uncontrolled as exhibited by numerous sherds that range in color from grey to black.

Core color: Variable; exterior often ranges from light red to browns while the interior will often range from light grey to black. Sometimes the core of some sherds will be entirely in the red and brown range while other sherds will be within the grey and black range.

Temper: Very fine rounded quartz sand to large rounded quartz sand; mica present in amounts ranging from small to very noticeable. Iron pyrites are occasionally present.

Carbon streak: Occasional.

Texture core: Ranges from fine to coarse.

Walls: Weak to medium strong.

Fracture: Variable, from crumbling to sharp; fractures very often occur at coil lines.

Surface finish: Variable, though normally rather rough. Exterior often exhibits finger indentations and vertical and/or diagonal striations, interior exhibits horizontal striations. Striations may be very marked or altogether lacking. Smoothing may be occasionally done with wet hands rather than with scraping tool. Exterior surfaces sometimes lumpy; quartz grains and mica often show on surface. Flaking of pottery rare.

Luster: Dull, light reflects from flecks of mica.

Surface color: Variable, ranges from reddish brown to brown or from light grey to black. Exterior is usually in the brown ranges while the interior surfaces may often be in the grey to black ranges.

Forms: Vessels from Iny-2 are fragmentary but appear to be wide mouth bowls and jars having either a flat bottom or a rounded bottom.

Vessel size: Reconstructed diameters of two jars (?) are 34 cm. and 28 cm.; reconstructed diameters of two bowls (?) are 22 cm. and 19 cm. Height of vessels was unobtainable because of fragmentary condition.

Base: Moulded out of a lump of clay, are either flat or rounded. Exterior of flat base often slightly concave. The bases are often lumpy. Flat bottoms range in thickness from 1.5 cm. to 1.1 cm., their average thickness is 1.2 cm. The single round bottom fragment is 8 mm. thick.

Thickness of vessel walls: Range from 3 mm. to 8 mm.

Rims: Often variable and uneven on the same vessel. The curvature of the vessel walls generally tends to make the rim incurving when viewed as a unit. Types IA2, IA3, IA4, and IA11.¹⁷

Handles or lugs: None recovered from Iny-2 but are reported elsewhere within the geographic range of this ware.¹⁸

Decoration: Occasional; fingernail indentation in a single band on rim top or just below rim on interior or exterior.

Slip: None.

Paint: None.

Comparison: Owens Valley Brown Ware occurs in the Panamint Mountains as described by Lathrap and Meighan,¹⁹ but as they point out, differs in several respects from Baldwin's Southern Paiute Utility Ware.²⁰ The basic differences between the two wares include the use of the paddle and anvil and a reducing atmosphere for the Southern Paiute ware in opposition to the use of the coiling (and thinning by scraping) technique and an oxidizing atmosphere in the manufacture of Owens Valley Brown Ware. The Southern Paiute Utility Ware apparently does not occur with flat bottoms nor do the vessels appear to have other than straight or outcurving rims. Flat bottoms and slightly incurving rims are common to Owens Valley Brown Ware vessels. Baldwin records some use of the coiling and thinning by scraping technique as well as some uncontrolled firing which results in occasional surface color of varying shades of reddish-grey or reddish-brown, for his Southern Paiute Utility Ware. Since this is considered by Baldwin as not being normal for his ware it seems warranted to make the Owens Valley Brown Ware a separate ware from the Southern Paiute Utility Ware. It is also possible that the specimens exhibiting thinning by scraping and some amount of oxidation as reported by Baldwin, might actually be specimens of Owens Valley Brown Ware that have been traded into the Southern Paiute area. From Baldwin's description of his ware it is apparent that there is a rather marked visual and textural similarity between the two wares. However, it must be stated again that these wares cannot be considered the same due to the basic differences noted above.

Except for some crudeness and variation in vessel form the differences between Mono-Yokuts pottery²¹ and Owens Valley Brown Ware are slight. Since there are no basic differences between the two the Mono-Yokuts pottery will be considered to be Owens Valley Brown Ware. The method of manufacture of Mono-Yokuts pottery is virtually identical to that of Owens Valley Brown, and thus should be classed as the same ware.

The pottery recovered archaeologically from the western foothills of the Sierra Nevada Mountains in the vicinity of the tribal boundary of the Mono and Yokuts²² is also considered to be Owens Valley Brown Ware. This archaeological pottery is basically similar to the ethnographic pottery of the same region and to the Owens Valley Brown Ware.

Pottery recovered archaeologically from the Tibatalabal area and from a cave in the Kawaiisu area is Owens Valley Brown Ware.²³ It is interesting to note here that with the recovery of a few sherds of pottery from the cave in Kawaiisu territory the hiatus mentioned by Gayton²⁴ and Steward²⁵ concerning the lack of pottery among the Kawaiisu is to be questioned, at least archaeologically. Additional archaeological investigation may reveal that pottery is to be found throughout the Kawaiisu region, particularly since the Kawaiisu are bounded by pottery making peoples on the north, east and the south. The peoples to the south and east, however, appear to have been making pottery for but a short time.²⁶ The affinities of the Ker-29 cave sherds are definitely to the north since they are sherds of Owens Valley Brown Ware and not Yuman pottery.²⁷

Range: At present the known range for this ware is the western foothills of the Sierra Nevada Mountains on the west; the Tehachapi Mountains (Kawaiisu territory) on the south; the Panamint Mountains on the east; and at least as far north as Mon-13,²⁸ which is located in Mono County about 14 miles north of Bishop, Inyo County California (Map 1).

Remarks: For the present types are not being named for Owens Valley Brown Ware since additional field work will be necessary in order to properly determine just what the type differences will be. At present it seems certain that types

for this ware will be differentiated by such criteria as fingernail indentation, punctate designing, incised designing, presence or absence of surface striation and similar criteria. These differences have been noted and an attempt is now being made to define the several types of this ware.

The distinctive features of this ware are the interior and exterior surface striations on the vessel, the thick base, the uneven surface, the wide mouth, the uneven rim and the often coarse texture of the vessel.

As a matter of some importance it has been noted that potsherds are used to scrape the surfaces of the vessels as indicated by the two scrapers of this type recovered from Iny-2. It is also significant to note that a similar scraper was picked up from the surface of Mon-13, the northern limit of the presently known range of this ware.

It is of interest to point out that vessel fragments often have the remains of a carbonized crust of food adhering to their interior surfaces. The exterior surfaces are often quite black from contact with charcoal and soot from the cooking fires. Repair of pottery vessels by crack-sewing is rather common as exhibited by the number of sherds recovered that have been drilled along a break in the vessel.

DISCUSSION

Iny-2 can be classed as being a good example of a historic Owens Valley Paiute winter camp, at least as regards its upper levels. The midden deposit has a maximum depth of about 30 inches. Due to the presence of numerous boulders in the soil the deposit in a portion of one pit might only be a few inches deep, while another section of the same pit might extend to 30 inches in depth. The average depth of the site is approximately 18 inches. It is from the first 18 inches that the majority of artifacts were recovered. No pottery was recovered below the 18 inch level and only 4 steatite beads and no projectile points came from below this level. The paucity of artifacts with a depth of more than 18 inches may be explained in part by the fact that the deposit is, on the average, no deeper than 18 inches. However, this does not explain why pottery and projectile points do not occur where the deposit reaches a depth of 30 inches or more. The fact that Olivella beads also were not recovered from below 18 inches indicates that recency of introduction need not be the reason that a particular type of artifact is found only in the upper levels of the deposit. If pottery alone had this restricted distribution in the culture deposit one might rightly guess that pottery was a recent introduction to the site. The same reasoning could as well apply to other artifact types from the site. A partial answer to the paucity of artifacts from the lower levels of the site deposit may lie in the fact that due to the amount of boulders on the original surface of the site area there would be less volume of deposit in the lowest 15 inches of the site mass than in the upper 15 inches.

Since the deposit of the site was so shallow it was quite difficult to obtain any delicate or refined differentiation in depth/artifact relationships, except, of course, the gross and obvious differentiation at the 18 inch level. If the site is considered to have had a continuous seasonal occupation, and there is no reason to believe it has not, an estimate of about 200 years for the length of occupation of Iny-2 would seem adequate. The terminal date of occupation could correctly be placed shortly after 1850. Since pottery did not occur at the base of the culture deposit it is difficult not to suggest that pottery was either

absent or quite scarce at that time. Until other sites are excavated in the Owens Valley region it will not be possible to state just when pottery appeared there. It is very likely that future excavations of stratified sites will bear out the findings at Iny-2, namely that pottery making extends but a short distance into the prehistoric past.

Table 1.

DEPTH DIFFERENCES OF ARTIFACTS AT INY-2.

Projectile points:

Depth/Type	1	2	3	4	5	6	7	8	9	10	11	12	13	Totals	
Surface	5	4	4	2	5	1	10	3	4	4	5	1	1	---	49
0-6 in.	0	2	0	1	0	0	0	0	1	0	0	0	0	--	4
6-12	1	0	0	0	0	0	0	0	1	0	1	0	0	--	3
12-18	0	0	0	0	0	0	0	0	1	0	0	0	1	--	2
18-24	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0
24-36	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0
	6	6	4	3	5	1	10	3	7	4	6	1	2	--	58

Pottery sherds, steatite beads and manos:

Depth	Sherds	Steatite Beads	Mano Types	
			I	II
Surface	ca. 700	77	1	2
0-6 in.	189	44	0	0
6-12	23	13	1	7
12-18	2	7	0	0
18-24	0	2	1	0
24-36	0	2	0	0
	914	145	3	9

Olivella beads:

Depth/Type	F7	X1a	X3bI	X3bII
Surface	1	1	2	24
0-6 in.	0	0	2	12
6-12	0	0	0	4
12-18	0	0	0	5
18-24	0	0	0	0
24-36	0	0	0	0
	1	1	4	45

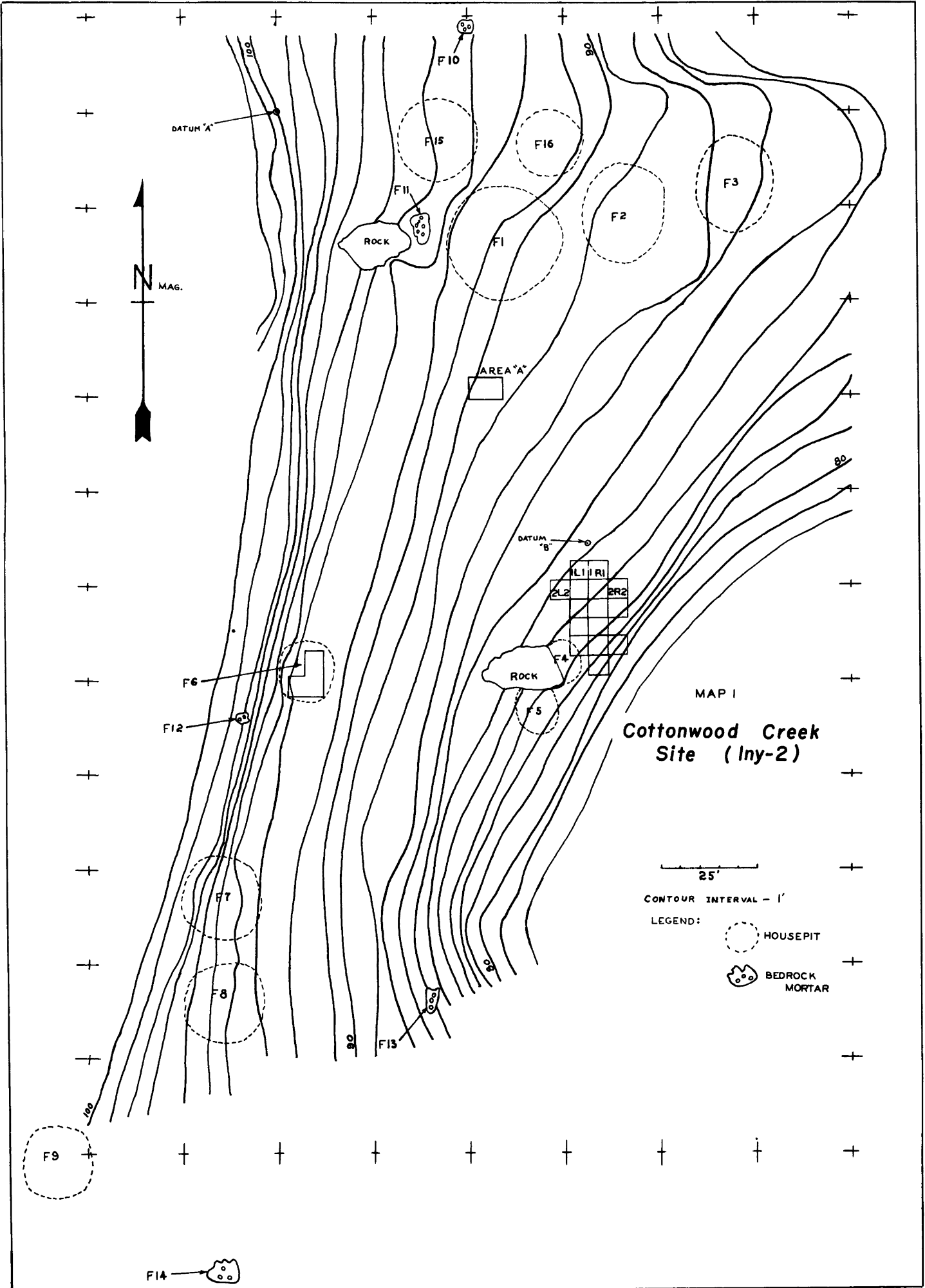
NOTES

1. Inyo County archaeological site records of the University of California Archaeological Survey.
2. Steward, 1938, p. 16.
3. Ibid., p. 52. Steward apparently was unable to obtain the exact location of this village. Andrew Glenn, a Lone Pine Paiute, stated on 1/21/51 that Hudu matu was the name for Cottonwood Creek. It is entirely possible that the creek and village had the same name.
4. Steward, 1933, p. 235; Map 1.
5. Ibid., pp. 264-265.
6. Ibid., p. 264.
7. Wedel, 1941, pp. 113-114; Pl. 31.
8. Specimens in the University of California Museum of Anthropology. Excavation records and field notes on file in the office of the University of California Archaeological Survey.
9. Murdoch and Webb, 1948, pp. 291-292.
10. Steward, 1933, p. 262.
11. Harrington's specimens were illustrated in an article in the Los Angeles Examiner, Sunday, December 3, 1950; Section 1, Part B, p. 16. Type 13 may or may not occur with serrations.
12. Gifford, 1947. Olivella bead type F7 is an extension of Gifford's typology to accommodate this bead type not described by him.
13. Type Vlh is an extension of Gifford's bead typology to accommodate a bead type not described by him. Types Vlf and Vlg also are additions to Gifford's typology (see Riddell, 1950, pp. 13-14; Fig. 1).
14. Meighan, MS, 1950.
15. Colton and Hargrave, 1937, pp. 19-22.
16. Baldwin, 1950, p. 54.
17. Colton and Hargrave, 1937, p. 10.
18. Gayton, 1929.
19. Lathrap and Meighan, 1951.
20. Baldwin, 1950.
21. Gayton, 1929.

22. Kroeber, 1925, Pl. 1: Gayton, 1929, Fig. 3.
23. The cave has the UCAS designation of Ker-29. Pottery was collected from the Tibatalabal area in 1948 by a UCAS archaeological field party, the specimens are in the collections of the UCMA.
24. Gayton, 1929, pp. 249-250.
25. Steward, 1933, p. 269.
26. Rogers, 1936.
27. Since pottery from the Kawaiisu area is represented by only a very few small sherds, and but from a single site located at the western extremity of the area, the possibility that these sherds may represent trade pottery from northern neighbors must be considered. This is a likely possibility but until considerably more investigation of archaeological sites is undertaken in the Kawaiisu area the problem will be without definite solution.
28. Mono County archaeological site records of the UCAS.

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MAP I
**Cottonwood Creek
 Site (Iny-2)**

25'

CONTOUR INTERVAL - 1'

LEGEND:
 ○ HOUSEPIT
 ⚙ BEDROCK MORTAR

F14

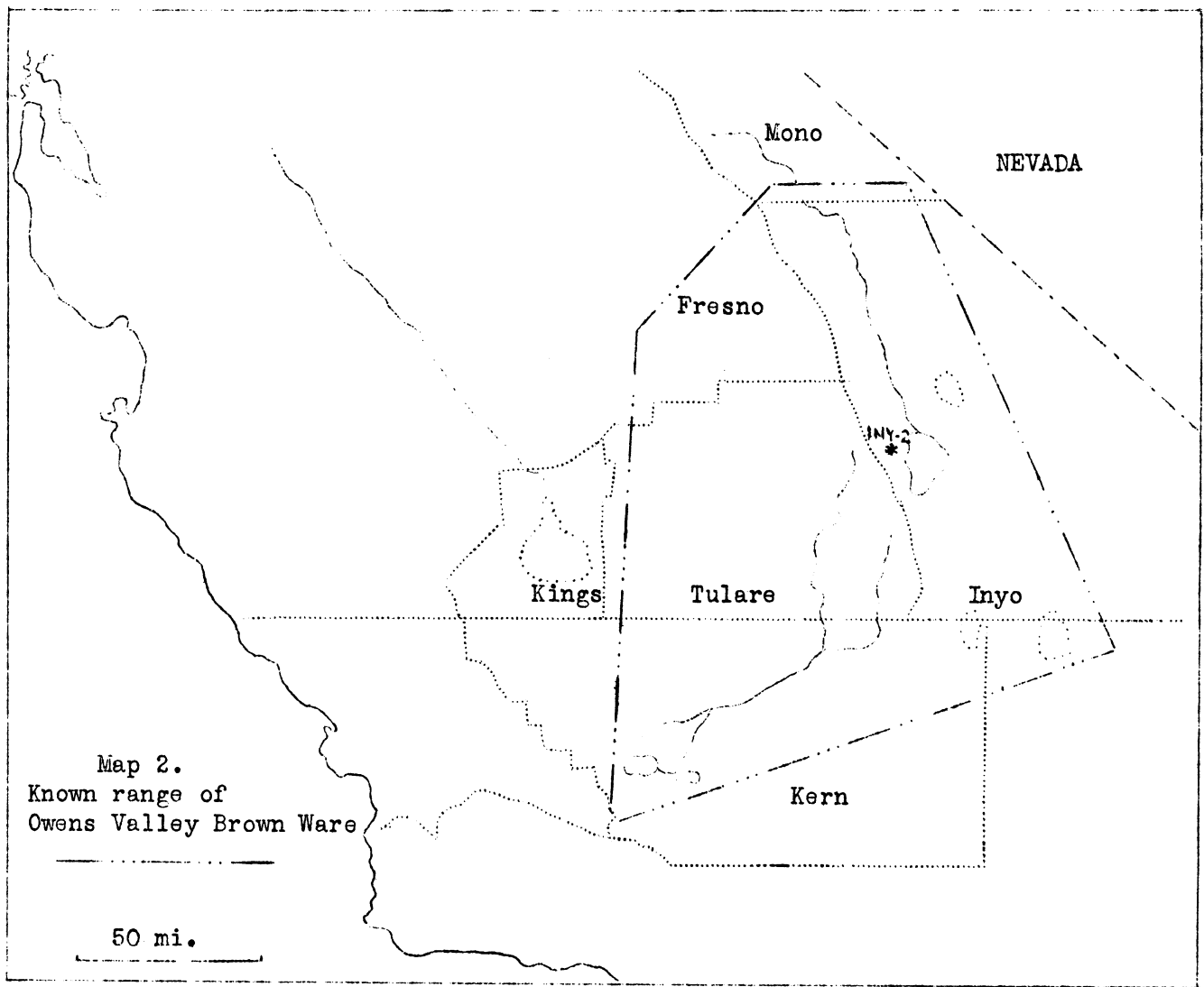
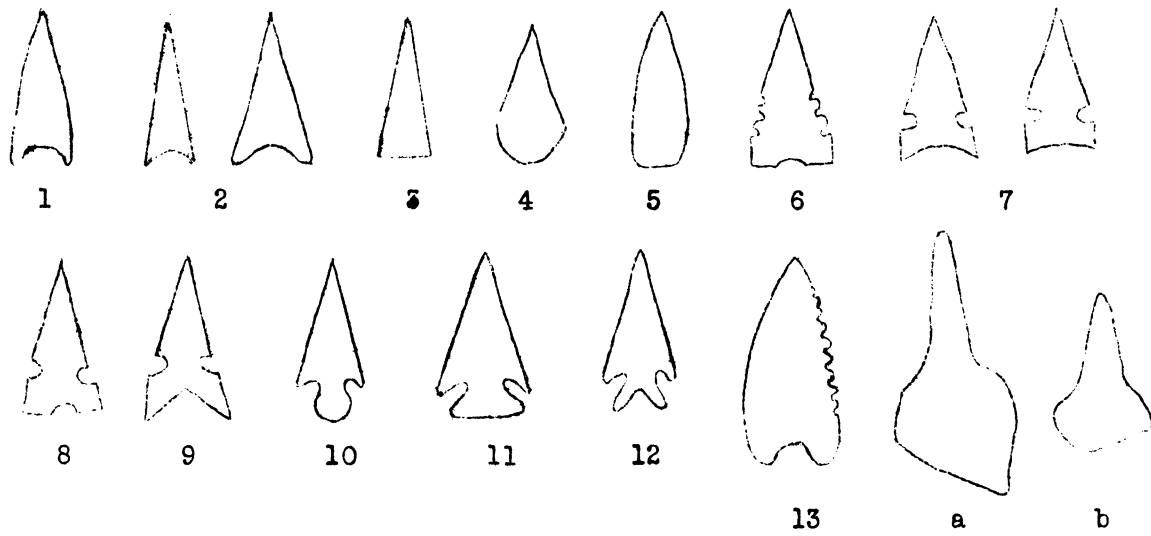


Figure 1: Projectile Point Types and Drill Forms



16. THE ARCHAEOLOGICAL DEPOSIT IN MOANING CAVE,
CALAVERAS COUNTY.

The Site

Moaning Cave is a large limestone cavern in the western foothills of the Sierra Nevada Mountains about 2 miles south of Vallecito, Calaveras county, California.¹ The mouth of the cave is on a steep hillside about 100 feet above Coyote Creek, a small but permanent stream. The surrounding region is one of rugged red clay hills with bare outcroppings of bluish gray marble. Oaks, pines and chaparral cover the slopes of most of the hills.

The cavern is a vertical limestone fissure over 250 feet in depth. (Fig. 2). The natural entrance is a narrow almost perpendicular crevice descending about 30 feet to a narrow ledge of rock. From here there is another drop of about 150 feet to the irregular floor of the main chamber, a room about 50 by 80 feet. Below this a series of narrow passages leads down to a small underground lake.

The interior of the cave is dark, as only a small amount of daylight penetrates the upper reaches through the entrance shaft. Water constantly drips from the ceiling and sidewalls, the amount of moisture varying seasonally. A daily average of about 57° Fahrenheit prevails, being only slightly influenced by the rise and fall of temperature outside.

Moaning Cave is in an active stage of growth. The work of carving its walls and openings by water taking the lime in solution and carrying it away is still going on. Dripstone is being formed along the walls and on the floor.

The Discovery and Exploration of Moaning Cave

The date of discovery and early history of exploration, not only of Moaning Cave, but of many other caverns in the vicinity are obscure. The first effective penetration of the Sierra foothills occurred during the Gold Rush period, one hundred years ago. Gold seekers, swarming through the Mother Lode district, were the first Caucasians to see most of the caves, but either kept their finds secret or gave only vague verbal descriptions of their discoveries. Occasionally the finding of a unique grotto was announced in a local periodical or mentioned in the journal of a traveler.

An early account which seems to describe Moaning Cave appeared in the Sacramento Times of December 4, 1851.² On the following Sunday The Daily Alta California (v. 2, no. 300, p. 2) published a description based on the earlier article. The details seem to be somewhat confused.

1. See "Notes" at end of article.

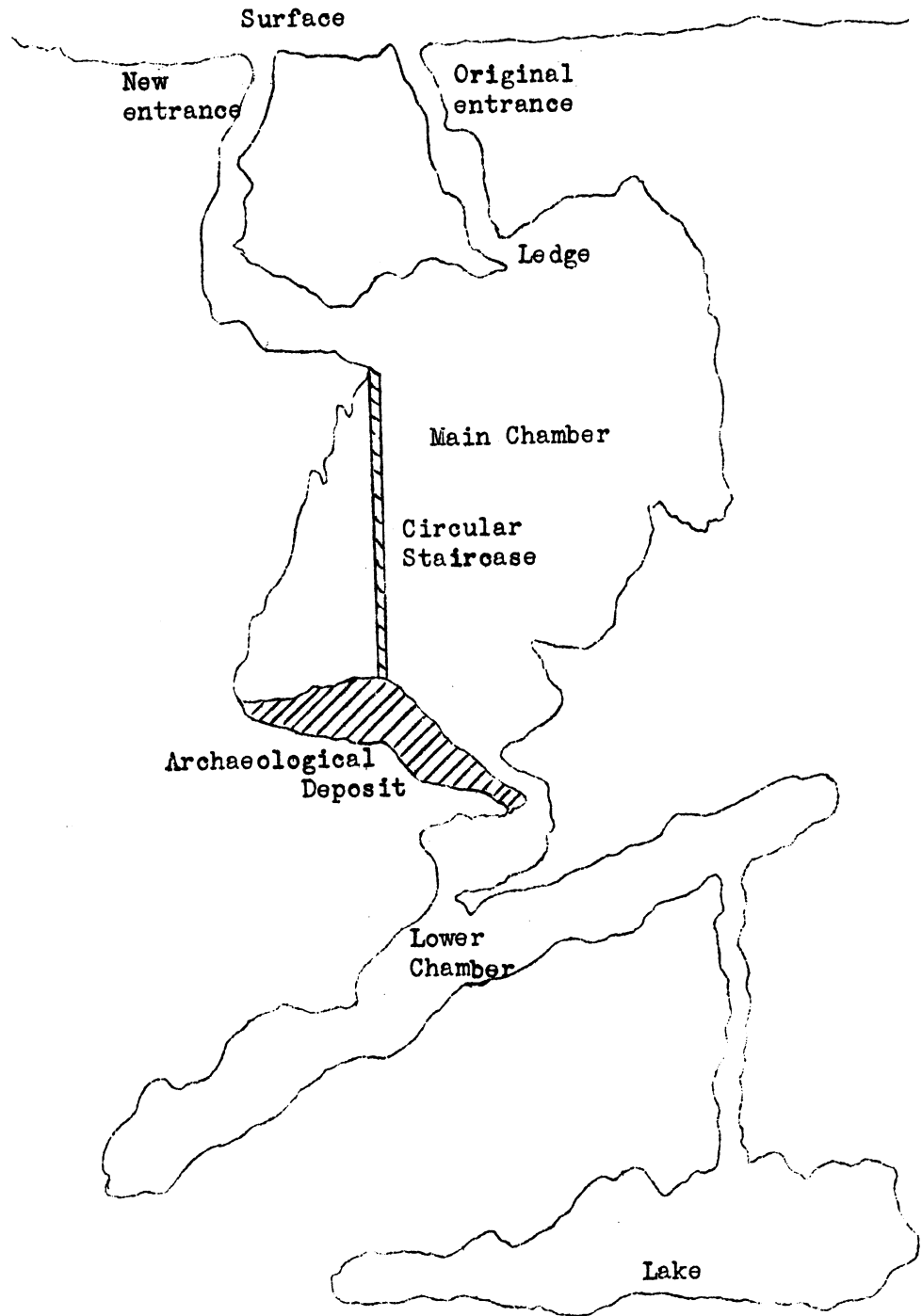


Figure 2. Cross section of Moaning Cave.

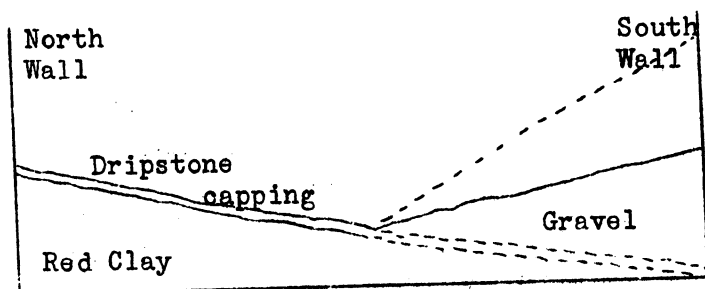


Figure 3. Cross section of archaeological deposit.

Daily Alta California, San Francisco
Sunday Morning, Dec. 7, 1851
Mammoth Cavern of Calaveras

In the County of Calaveras there exists an immense cavern under solid stone, which has been called by the miners of that district for some time, Solomon's Hole. A mining claim has been located at the spot, the cave having been explored to the depth of three or four hundred feet. This cavern is situated on Wadie's Creek, one of the tributaries of Cooti Creek, and is six miles distant from Carson's Hill. Mr. J. B. Trask, who is now engaged in a tour of scientific observations and geological survey of the State, thus writes of the locality. His correspondence appears in the Sacramento Times of Thursday.

The interest of this locality is much more than that of a mining point, from some circumstances associated with it. I will describe as nearly as I can, the general appearance of the cavern, more for the purpose of doing away an idea now prevalent of its formerly having been worked for gold some centuries since by Mexicans or Spaniards. It is situated in limestone, and the descent is from the side of the hill on the west side of the creek. The opening is about three feet in diameter, and the descent vertical for 30 feet; at this point a mass of limestone rock forms a platform some six or eight feet in length; the next descent is to the right of the plat [sic platform] some five feet, and eighteen feet vertical; at this place a smaller stage occurs sufficient only for one man to stand (the above two points cannot be shown in the plat from darkness and position.) From the second plat you descend in a space some fifteen feet diameter to that point, at which you notice the first and upper candle placed on the left; this line of descent is 70 feet. This point, from its form, is called the Liberty Cap; it is of stalactite formation and 15 feet high, being composed of four or five of these apparently cemented together, and resting as you see on a table jutting from the main ledge with circular stalactite hanging pendant from its sides; the other lights on the left were placed for a better view of the interior and sides. From the cap the descent is near 100 feet, and you gain your first footing some 30 feet in the dark space in front nearly opposite the two figures in the centre and on an inclined plane of 35 degrees.

The shape of the first chamber is that of a bishop's mitre; the space between fire on the right, to the narrowest point on the left, in a line of the two figures in the centre, is 50 feet and it expands to a width of 300 feet in diameter, covered with draped curtains of stalactites,

A large mound occupies the centre of this room, 50 feet in height and 70 feet in diameter, composed of loose stones and earth, that has washed in from the top, and contains gold. Behind the figure, sitting by the fire, on the right, you will notice a triangular space, in distance 46 feet in the scale. This is the aperture to the next chamber, below and directly under the first; it cannot be shown in the plate. The vertical depth of this room is 100 feet, and is composed of fragments of the rock, forming the cavern; in this chamber the most interesting feature of the whole presents itself, which was the appearance of portions of a human skeleton. On a large flat rock, on one side of

this room, lay a portion of the skull. The skull was not entire - the entire base was wanting. All that remained was the os frontis, the parietal bones, and part of the occiput. One of the company, Mr. Philips, attempted to pick it up, in doing which it crumbled and fell to pieces. No other vestige is as yet found of these remains; the opening of the cave next season will probably develop them. I will not attempt to speculate on these remains, or the age in which they may have been deposited, but the situation or peculiarities attendant, to say the least, is strongly presumptive of high antiquity.

This cave is now explored to the depth of 450 feet, but as yet the bottom is not found. Two other apertures of great depth are still known to exist, below those named, and until more efficient means are used, they must remain unknown; but the company, who have now located it, are determined to find its bottom.

Almost two years later, the cavern was again described (as a new discovery) in print. The Daily Alta California of October 7, 1853 (v. 4, no. 282, p. 1) contained a short notice.

The Daily Alta California, San Francisco,
Monday Morning, Oct. 31, 1853.

Extraordinary, If True - The Calaveras Chronicle mentions the discovery of a very remarkable cave in Calaveras County, near the town of Vallecito.

It appears that a Frenchman was at work there at a considerable depth, and his pick displaced a rock, which laid bare an entrance to a large cave. A party afterwards descended and explored the subterranean apartments. Their report is most astonishing. They assert, that at the depth of about 300 feet, they came upon a collection of over 300 human bodies, perfectly petrified; that the hall contained an immense number of stalactytes, some of which rested on and were incorporated with the bodies. It is said that the skulls indicate a race distinct from the Indians.

A few weeks later on November 6, 1853 a more complete account was published in the same newspaper. (v. 4, no. 288 p. 1).

The Daily Alta California, San Francisco,
Sunday Morning, Nov. 6, 1853.

The Calaveras Cave

The Echo du Pacifique of Friday contains a communication from Mr. Alhino on the Calaveras Cave, which he, in company with several others, discovered a short time since. The grotto is situated among the mountains of the Stanislaus, near Columbia. The discoverers intend to exhibit the curiosities found. We condense and translate the communications.

There have been many discussions about this country and its inhabitants. We will exhibit for examination fifty-three broken and entire human heads, petrified to various degrees, from a simple deposit of calcareous matter to the hardest stone. To judge by the peculiar formation and great size of these heads, they must have belonged to a race which

exists no longer, for they have nothing in common with the heads of Indians found in other parts of America. The different deposits which cover the bones indicate that they existed anterior to the Deluge.

These objects were found a short time since in a grotto among mountains which by their aridity and abrupt character, appear to defy the curiosity of the most intrepid explorers. Nevertheless, the writer of this article, with several of his friends, resolved upon a trip over the rugged peaks and through the deep gullies. In recompense, they found a cave. At first, repelled by the unpromising appearance of the yawning gulf, the prospectors were about to retire, but their curiosity was excited, and soon after one of the party descended into the hole by means of a rope. The descent was perpendicular for about thirty feet; then there was an oblique descent of forty feet, and then another descent nearly perpendicular. At the bottom was a small opening sideways, after creeping through which, on his belly, the adventurer found himself in a large cave, completely invisible in the darkness at first, and filled with a thick air which appeared to forbid the sojourn of man. The first adventurer, after discovering this much, was followed by his companions. The deepest silence reigned in the cave: the only tenants were some bats, which were frightened from their resting places and fluttered around, and occasionally the wind would cause a dull sound among the rocks.

Having lit a couple of candles the party began to examine the cave. Before them was a large vault from which stalactites descended to the floor, in one place presenting the appearance of a large curtain, in another offering large clusters of crystals; and at one side was a large plane surface, and the roof over it was covered with little festoons. One of the explorers crept in between the table and the overhanging stalactites with a candle in his hand, and thus discovered an immense serpent lying coiled up. Frightened at the sight he drew back, and his companions went in likewise and satisfied themselves of the truth of his story.

After this they discovered nothing to interfere with their researches. At a little distance from the table they found a large number of human bones, and some bones of carnivorous animals lying pell mell; but these bones were in their natural condition, and we left to secure some heads which were more or less petrified. Some of these latter were so fixed in the stone that the discoverers could not get them unbroken. Others, however, they obtained entire besides a number of bones. The party filled several sacks with earth and made their way back to the open air.

The writer desires to be excused for not giving further details, for it is their intention to publish a pamphlet descriptive of their adventure with accurate engravings of what they saw. They name their discovery the "cave of the sepulchre" "Le puits de tombeaux."

The skulls retrieved from the cave apparently were brought to San Francisco for exhibition, because in the same issue of The Daily Alta California (p. 2), the editor writes of his personal examination of the crania.

Petrified Human Skulls - We went yesterday to satisfy our curiosity and scientific doubts by an examination of the "petrified" human bones, the history of whose discovery is related in another column. The specimens are kept in a house on the north side of Jackson street, above Kearny. The most remarkable specimens are five skulls; one of which is an ordinary skull in appearance, and the others are covered more or less with sulphate of lime, the calcareous matter which forms stalagmites and stalactites in caves. One skull is covered completely with this stoney coat, about a quarter of an inch in thickness; another skull is covered with it in places; and a third has only a slight shell scarcely thicker than coarse paper. There is no petrification; there is a simple deposit of sulphate of lime, which would have been deposited on any substance lying in the same place, there being a continual drip from the roof above. There are about sixty-five skulls in all, many of which were so deep in the deposit that they could not be obtained without being broken to pieces. Besides the skulls, there are a number of other bones, covered in like manner. One of the skulls [sic] is covered by eight visibly distinct layers; and the cicerone informed us that probably a century was required to form each layer. That calculation would make the relics quite venerable. The skulls are undoubtedly of Indians who lived long since. The cranial developments are very similar to those of the present Indians, though one of the skulls appear to have a very intellectual character."

After the initial excitement of discovery the cave attracted only local attention until 1922 when the construction of a new entrance passage and a circular steel staircase made it accessible to tourists.³

The Archaeological Deposit

The cave floor is covered with a deep deposit containing quantities of human bones, artifacts, charcoal, and a few faunal remains. This does not represent camp or habitation refuse but seems rather to be material thrown and washed into the cave. There is no indication that the aborigines ever resorted to making their homes in the inner depths of the cavern and actually this would have been impossible if present-day conditions prevailed.

The archaeological deposit consists of two distinct strata (Fig. 3). The first, capped by an unbroken dripstone layer 2-4 inches thick, is a formation of wet sticky red clay and angular stone slabs of limestone. The clay is probably the red surface soil of the surrounding hills, washed in through the entrance passage and through inlets in the limestone large enough to permit the passage of solid matter or blown in during the dry season. The walls of the cave are streaked with red in several places. Another possible source of the cave mud is from the limestone itself. Practically no limestone is pure calcium carbonate but contains impurities which weather out. The stones, which increase in size and number in the deeper levels of the deposit, represent fall from the ceiling and walls. Additional dripstone layers, are interspersed with the clay and stone. Two were encountered during excavation and others probably occur in deeper levels. The deposit, which has a known depth of at least 11 feet, begins at the north wall and terminates at the south. It slopes downward to the south and east.

The second stratum is made up of unconsolidated gray gravel liberally sprinkled with larger rocks. It appears to be redeposited river detritus washed into the cave, perhaps by recent mining operations, through a fissure in the south wall. The fissure still retains ample evidence of the passage of the gravel.

The deposit originally sloped upward to the south wall but was leveled some years ago. It covers a wide area on the west side and meets and partially overlies the red clay layer.

The Excavation

A limited, exploratory excavation was carried on in the red clay.⁴ A 5 by 10 foot trench encompassing a pit previously dug by Addison Carley, owner of the cave, while in search of hidden galleries, was staked out along the north wall. The northwest section of this area was then excavated to a depth of 72 inches. Progress was necessarily slow because the calcareous layers had to be chipped away and, as excavation proceeded, increasingly larger rocks were encountered. The frequent occurrence of human bones which had to be cleared and removed also slowed down the work. A small section of the gravel deposit was dug out and screened.

Human Skeletal Remains

A heterogeneous mixture of dissociated human bones was encountered in the red clay deposit. There were no complete skulls or skeletons and only occasionally a few parts of skeleton was found directly articulated. Limb bones, jaw and skull fragments were most numerous with pelvis, vertebrae and ribs noticeably scarce. This is probably the result of differential disintegration; the more porous bones, in the presence of a supply of air, decayed more rapidly because the larger cells and more open structure permitted freer access of oxygen. Many of the bones were broken; some were crushed by the weight of the deposit above.

The osseous material was found embedded in the calcareous capping and in the red clay below. Many bones were encrusted with stalagmite and some seem to have lost part of their organic material, being thoroughly impregnated with lime carbonate. The remains of eleven individuals (nine adults, and two children) were found. Each consisted of only a few bones and the remains of several persons were often mixed. A large number of isolated bones and fragments were also noted. The adult bones were large and robust. The quantity of human remains decreased strikingly below 24 inches so that in the deeper levels only a few single bones wedged between large stones were recovered. A femur was observed protruding from the side wall of the earlier excavation at a depth of 11 feet. Hundreds of complete bones and fragments removed in the course of previous digging were scattered about.

It is doubtful that the individuals found in the red clay were actually interred. There is no evidence of graves having been dug into the sticky soil and the osseous material embedded in the limestone must have originally been lying on the surface because this type of dripstone can form only on the surface. Interment below 24 inches would have been difficult because of the size and number of fallen rocks to be removed in preparing a grave. The depth of the cave itself argues against actual burial because it would have been almost impossible for a man, perhaps burdened with a corpse, to have been lowered 150 feet into the darkness of the cave floor from the ledge above to dig a grave for a fellow tribesman.

The corpses were either lowered, or more probably, thrown into the cave from the ledge above. It would have been relatively easy to lower or perhaps even carry a dead body down the entrance passage to the ledge and from here to throw it

into the chamber below. The wide scattering of human remains may indicate that the ledge was larger in prehistoric times than at present. In the process of decay the remains were scattered for a considerable distance over the slanting floor. It is conceivable that Moaning Cave was not a place of first entombment but was used instead for secondary disposal. There is no evidence of disturbance by carnivores or rodents as none of the bones bears the marks of strong teeth. Moaning Cave was certainly not an animal's den where human victims were dragged to be eaten.

Human bones have been found in other Calaveras county limestone caverns, indicating that Moaning Cave was not unique in being used as a mortuary chamber. In Mercer Cave, a large cavern of many rooms and passages, 1.1 miles north Murphys, were found a number of human bones bearing a thin calcareous encrustation.⁵ The skeletal remains were in such position as to indicate that the corpses had been thrown into the first chamber of the cave through the small entrance opening. No artifacts were reported found. A number of skulls were removed from The Cave of Skulls near the Stanislaus river about two miles from Abbot's Ferry over eighty years ago.⁶ These crania, like the osseous material from Mercer and Moaning caves, were coated with stalagmite. The skulls were described as lying on the surface and not buried in the deposit. Remains of bows and arrows and charcoal were also found in the cavern. O'Neal (Skull) Cave, located at the site of an abandoned placer mining camp between Sheep Ranch and Cave City, is another limestone grotto known to contain quantities of human bones.⁷ The cave has a vertical shaft over 50 feet deep with other passages and rooms leading off in several directions. The bottom of the shaft and the other parts of the cave have been described as being "choked" with human and animal bones. Some artifacts and pieces of charcoal were also found. Miller Cave, situated in a canyon between Adobe and Dry Gulches, was found to contain numerous human bones, some badly broken, others complete. The bones littered the floors of several galleries and some were observed in a pool of water at the bottom of the cave. No artifacts were recovered.

Human remains have been reported from several other caves in the foothills of Calaveras county but their location is vague or the data are not complete.⁸ Not all available grottoes were so utilized, however. Crystal Cave, near Cave City, first discovered by miners in 1851, so far as is known, has yielded no human skeletons. Caverns with more or less vertical shafts seem to have been preferred as tombs, perhaps because corpses thrown into them were not likely to be disturbed. Crystal Cave, easily entered by a gently sloping passage, was probably not considered suitable for disposal of the deceased.

Neither Moaning Cave nor any of the other nearby limestone grottoes seem to have been employed in recent times for entombing the dead. The Sierra Miwok, historic inhabitants of the region, either cremated or interred deceased tribesmen in rock-covered graves. The caverns, according to Miwok tradition, were frequented by a stone giant, who sallied forth at night in search of human victims to be carried to the depths to be devoured.⁹ The thought of tossing corpses of fellow tribal members into caves to be eaten by this monster was abhorrent to the recent Indians.

Scattered human skeletal remains - bits of skull, isolated teeth, and fragmentary limb bones - were recovered from the gravel formation in Moaning Cave. Many of these seemed to be water-worn. Less fragmentary bones were observed in the passage leading to the underground lake.

Cultural Material

Artifacts were found in both strata.¹⁰ Those from the red clay are all ornament types located in close proximity to human skeletal material. A greater variety of cultural objects was recovered in the gravel.

A total of 13 more or less complete abalone ornaments and 6 fragmentary ones were taken from the red clay. These exhibit a great diversity in form and also vary in such details as size, position and number of perforations, edge decoration and finish. The following forms occur:

1. Circular; 70 mm. diameter; one central and one peripheral hole; serrated edge; ground on both sides; 1 specimen (Fig. 3a).
2. Circular; 60-70 mm. diameter; 1 central perforation; some of these may originally have had a peripheral perforation as well but the edges are broken away so that this could not be definitely determined; serrated edge (one partially incised); rough outer layer of shell visible on back; 4 specimens (Fig. 3b)²
3. Circular; 25 mm. diameter; 2 peripheral holes (third hole started on back); radially incised edge; rough outer layer of shell on back; 1 specimen. (Figure 3c).
4. Rectangular; 22 x 29 mm.; single peripheral perforation; unmodified edge; rough outer layer of shell on back; 1 specimen. (Fig. 3d).
5. Rectangular; 24 x 40 mm.; 2 peripheral holes; unmodified edge; ground on both sides (?); 1 specimen (Fig. 3e).
6. Rectangular; 12 x 20 mm.; 2 peripheral holes at opposite ends of the ornament; unmodified edge; rough outer layer of shell on back; 1 specimen (Fig. 3f.).
7. Rectangular; 20 x 40 mm.; 1 peripheral hole, 1 central or below; serrated edge; rough outer layer of shell on back; 1 specimen (Fig. 3g).
8. Triangular, elongate; 8 x 42 mm.; 1 peripheral hole; unmodified edge; rough outer layer of shell on back; 1 specimen (Fig. 3h).
9. Triangular, isocetes; 15 x 15 x 20 mm.; 2 central perforations; unmodified edge; rough outer layer of shell on back; 2 specimens (Fig. 3i).

There was a definite preference for shells of the green-backed or black abalone (Haliotis cracherodii) and where identification is possible, this proves to be the species utilized. The surface of some of the ornaments is badly eroded.

Beads manufactured from the body whorl of olive (Olivella biplicata) shells were numerous in the red clay. Three types are recognizable:

1. Crude "half" shells which retain a trace of the inner whorl at one end; 15-20 mm.; central perforation; 115 specimens (Fig. 3j).
2. Elongate-saucers ("saddle") which have no vestige of the whorl; central perforation; 10-12 mm.; 25 specimens; 14 of these were found together in

one necklace and 11 in another; true "saddles" were not mixed with the "half" shells, though some of the eroded "half" shells closely resemble this type. (Fig. 3k)

3. Small, round, slightly cupped disks; 4 mm.; 1 central perforation; 25 specimens. (Fig. 3 l)

The small disk olivellas occurred in association with the larger beads and seem to have been strung in groups of five or more between clusters of larger ones. A small (3 x 10 mm.) fragment of a mammal bone cut at both ends, possibly a bead, was also removed from the red clay. (Fig. 3m)

The abundance of shell artifacts indicates extensive trade, either directly or through intermediary tribes, with the coastal peoples. The recent Sierra Miwok made journeys to the shores of Monterey Bay to procure shells which were carried home to be made into beads and pendants and it is possible that similar trading expeditions were carried on in prehistoric times as well.¹¹

Artifacts of several types were found in the gravel:

1. Triangular obsidian point; 30 mm. long; 20 mm. wide, stemmed and barbed; serrated edge; 1 specimen (Fig. 3p).
2. Smooth, river cobble pestles; 15 cm. long, 7 cm. wide; 2 specimens.
3. Chipped quartz fragment, possibly a crude scraper; 30 mm. long; 1 specimen.
4. Cup-shaped pipe bowl or pipe inset of polished white stone; 33 mm. long, 25 mm. diameter; 1 specimen (Fig. 3n).
5. Ornament (?) of ground stalagmite; 50 mm. diameter; 1 specimen (Fig. 3 o).
6. Crude, "half" shell Olivella bead; 17 mm.; 1 large (punched?) central perforation; 1 specimen (Fig. 3q).
7. Small, round, slightly cupped Olivella disk beads; 4 mm. diameter; 1 central perforation; 97 specimens (Fig. 3r).

No abalone ornaments were found in the gravel formation.

Charcoal and Faunal Remains

Carbonized vegetal material was observed in both strata. Isolated fragments and thin bands resembling burnt sticks were contained in the red clay. These may represent the residue of torches carried by corpse bearers to light their way in the upper passage which, when charred or extinguished, were thrown into the cave. It is also possible that fires were lighted on the ledge and the embers pushed off into the darkness of the cave below. Charred fragments of wood occurred scatteringly in the gravel. No extensive charcoal or ash lenses or blackened stones such as would indicate the presence of a campfire or hearth were located.

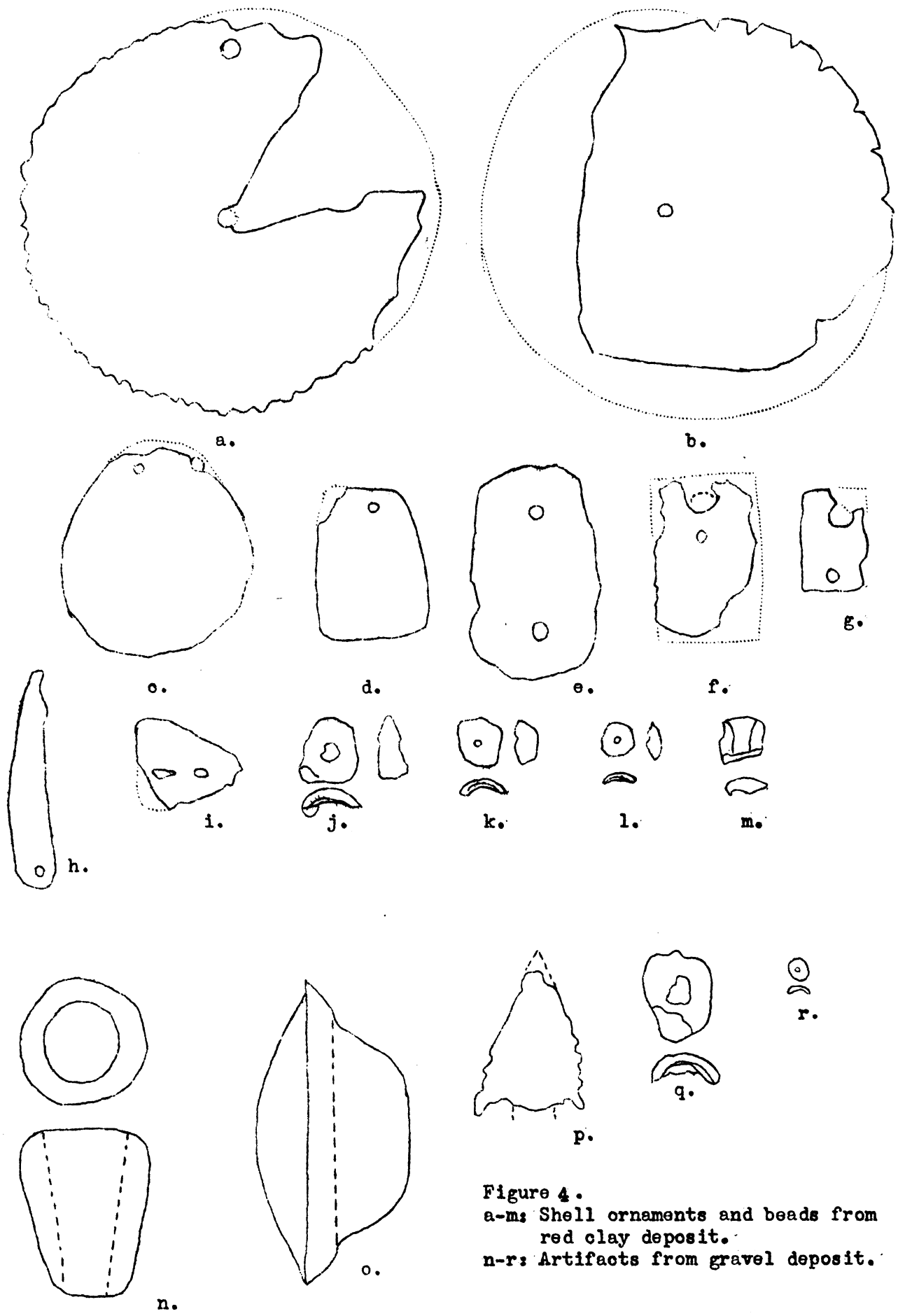


Figure 4.
 a-m: Shell ornaments and beads from red clay deposit.
 n-r: Artifacts from gravel deposit.

A few mammal bones, all of extant or recently present species, were recovered. The animals represented were:¹²

In red clay stratum: Coyote (*Canis latrans*): incisor tooth, 1; humerus fragments, 2; skull, 1 (removed from cave some years ago and described as being coated with stalagmite); unidentified, 3 (perhaps coyote).

In gravel stratum: Elk (*Cervus* sp.), all specimens of immature, possibly the same individual; mandible, right, 1; metapodial, 1; scapula, 1. Rabbit (*Sylvilagus* sp.): femur, fragments, 2; humerus, fragment, 1; ulna, fragment 1. Gopher (*Thomomys* sp.): humerus, fragments, 2. Unidentified - 3 (probably small rodent).

Antiquity of the Deposit

The determination of the more or less precise age of a prehistoric cultural deposit usually offers considerable difficulty and the one in Moaning Cave is no exception. The red clay stratum with its unbroken sheet of stalagmite covering and the vast quantity of human bones contained in it, gives an initial impression of appreciable antiquity. The cultural material, when fitted into the known framework of Californian archaeology, does not, however, indicate any great age. The ornament and bead types are predominantly those of the Middle Horizon of the Sacramento Valley, a cultural period estimated as beginning about 1500 B.C. and terminating about 500 A.D.¹³ The exclusive use of green-backed abalone shell, the circular and serrated ornament type with two perforations, one central and one edge, and the "saddle" olivella beads, are all Middle period forms. The small round *Olivella* cupped disk bead is most characteristic of Middle Horizon sites, but also occurs in the Late culture period. The "half" shell olive bead is either Middle or Late in time. The cultural inventory thus strongly indicates contemporaneity with the Valley Middle Horizon. In view of well-established trade routes and relations, there is no reason to suspect cultural lag of these types in the Sierra foothills. No depth differences in artifacts were noted.

The gravel stratum is presumably of more recent origin than the red clay. Its unconsolidated condition and its stratigraphic position overlying part of the red clay indicates that it was deposited later. The artifacts are too few in number and not sufficiently distinctive to permit anything more than a guess as to their cultural affiliation. It is difficult to see how these cultural remains became incorporated in the gravel, unless trash from a village site above the cave was washed in by a flood or by placer mining.

Summary and Conclusions

The excavation was not extensive enough to reconstruct the entire history of human utilization of Moaning Cave. Only a few general conclusions can be made: (a) there are two distinct archaeological strata which differ in age; (b) the cave was not a human residence but was used solely for burial purposes. A more exhaustive investigation, not only of Moaning Cave but of nearby caves and surface sites is needed before any definitive conclusions can be drawn. The archaeology of the Sierra foothills is unknown, making it impossible to fit the Moaning Cave material into any local cultural sequence. The temporal position of the archaeological deposit is uncertain. It seems to be entirely prehistoric,

though of no great antiquity. The cultural evidence suggests that the cave was extensively used in Middle Horizon times, but not during the immediate proto-historic or historic period.

A geological study of the cavern and particularly of the stalagmite layers in the floor may give some clue as to the exact age of the red clay layer. Certain favorably situated, slow-growing stalagmites record major seasonal climatic fluctuations occurring during their lifetime.¹⁴ The rate of dripstone growth or the development of annual growth rings which can be correlated with tree rings perhaps can be utilized to age the deposit. Dating by radioactive carbon (C-14) may be possible and samples of charcoal were collected for this purpose.

W. J. Wallace
University of California
Archaeological Survey

NOTES

1. The cave received its present name from the low moaning sound it formerly emitted. This was caused either by slight changes in temperature or by wind blowing into the cave mouth. Since the construction of a steel staircase in 1922, the cave has ceased to "moan."
2. The Sacramento Times article could not be located. The plate referred to was not reproduced in The Daily Alta California.
3. A general descriptive article of the cave and the details of the construction of the passageway and staircase appeared on page 4 of the special Mother Lode Highway Edition of the Calaveras Prospect published on November 24, 1923.
4. The cavern was visited and its archaeological possibilities estimated in June, 1950 by R. F. Heizer, Director of the University of California Archaeological Survey and A. E. Treganza of San Francisco State College. At Heizer's suggestion, William J. Wallace, Archaeologist, University of California Archaeological Survey, and Donald W. Lathrap, Assistant Archaeologist, worked in the cave September 17-23, 1950.
5. Merriam, J. C., 1906, 1907.
6. Whitney, 1867. See also Speleological Society Report cited in note 8.
7. Cliff, 1929.
8. Human remains have also been found in limestone caverns in other parts of California. Hawver Cave, near Cool in El Dorado County yielded human bones and those of extinct animals. In Stone Man Cave, near Baird in Shasta county, was found a portion of a human skeleton embedded in stalagmite. References to these finds are listed in Heizer, 1948, pp. 10-12. Additional published information on Sierran limestone caves of this region is cited in the Monthly Report of the Stanford Grotto, National Speleological Society, Vol. 1, Nos. 5, 7, 1951.
9. Merriam, 1909, pp. 805-806.
10. Artifacts from the excavation and those in the collection of Addison Carley, owner of the Cave, are included in the description.
11. Barrett and Gifford, 1933, pp. 251-256.
12. The animal bones were identified by J. Arthur Freed.
13. Heizer, 1949, p. 39.
14. This method of dating by stalagmite growth is described in detail in Allison, 1926.

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