

Society for California Archaeology

NEWSLETTER



Volume 31, Number 3

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Results of 1996 Data Recovery Excavations at Prehistoric Sites along the Tuscarora Gas Pipeline

Far Western Anthropological Research Group

Introduction

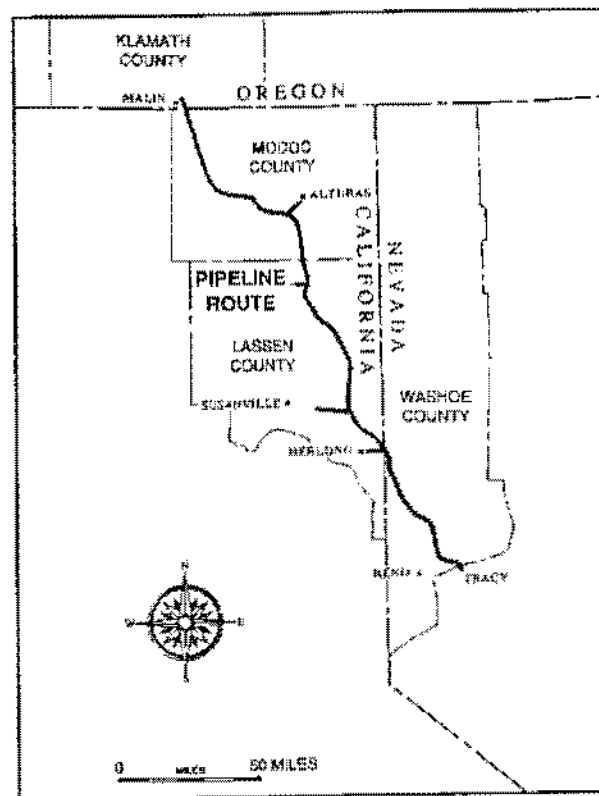
This article summarizes the final results of archaeological data recovery excavations by Far Western at 32 prehistoric sites for the Tuscarora Gas Transmission Company's 229-mile pipeline from Malin, Oregon to Tracy, Nevada (eight historic-era sites were evaluated by Archaeological Research Services and JRP Historical Consulting Services; these are not discussed here). The route includes portions of the Modoc Plateau and the western Great Basin in northeastern California and western Nevada (Map 1).

The initial archaeological survey of the project route was carried out by Infotec Research, Inc. in 1993 (Price et al. 1994); they recorded 15 archaeological sites. In addition to the survey, a three-part Native American Studies report was prepared by Woods Cultural Research, Inc. Five tribal groups inhabited various parts of the study area at the time of European contact: the Modoc, the Astariwawi, Kosalektawi, and Hammawi bands of the Pit River; the Wadatkuht and Tasiget Tuviwarai bands of the Northern Paiute; the Maidu; and the Washoe.

In 1994, Tuscarora retained Far Western to prepare a Research Design and perform evaluation/data recovery at sites likely to be affected by project construction, and to conduct ancillary surveys of alternative pipeline routes, staging areas, and new facilities, as required. Formal evaluation of 150 sites along the pipeline corridor began in July of 1994 and continued until late October; results of these efforts and work at numerous historic-era properties are presented in Delacorte et al. 1995. The evaluation program identified 32 National Register-eligible prehistoric sites that would receive data recovery. These final excavations began in June, 1995 and continued almost non-stop until July 31. More than 240 m³ of deposit were excavated during this final phase of the project, resulting in the recovery of over 7,600 artifacts, 130,000 pieces of flaked stone debitage, and 45,000 pieces of faunal bone. The following sections outline the results of these studies, by geographic subregion.

Modoc Uplands - Vol. II (by Patricia Mikkelsen)

Of 77 sites identified on the Modoc Uplands project segment, six went to formal data recovery, and another 16 test sites contributed data applicable to the research issues. Dating at all sites was based on obsidian hydration analysis, with support from diagnostic projectile points; the sites yielded little material suitable for radiocarbon dating and few other chronological markers. Faunal remains were scarce because of poor



preservation, and sample flotation analysis recovered few seed remains. Overall, assemblages from temporal components are characterized by varying numbers of projectile points, bifaces, and flake tools (general utility implements), with only four tools (all drills) indicative of maintenance and manufacturing gear. Ground stone was identified at six sites, and the only domestic facilities were a Late Archaic hearth and a house floor associated with the Terminal Prehistoric Period, both found at a single site in Blacks Canyon.

The 30 chronologically discrete components identified in the Modoc
(Continued on page 3)

President's Message (Continued from page 2)

and making changes, some quite profound. The Board thought that it would be a good idea to remind our members that we have such a code, and to encourage feedback on it. In the upcoming Board meetings we plan to discuss the Code of Ethics and determine if we need to make any changes. Finally, I encourage you to respond to our questionnaire so that we may better serve our membership.

The SCA sponsored a symposium late last spring with the Coachella Valley Archaeological Society (CVAS) in the City of La Quinta. The event included an impressive array of experts in the field of anthropology and archaeology in the region who shared information with each other and with the public. There was great publicity on the event in the local newspapers, and the attendance was excellent, as (I heard) was the symposium. The SCA wants to thank Leslie Mouriquand, the CVAS, and the City of La Quinta for implementing such an excellent and professional program. There is already talk of a second symposium next year, and of publishing the presentations from this year.

Well, I could go on and on, but I will keep you in suspense until the next *Newsletter*. There are a number of other issues that the SCA is in the middle of, but in three months, probably a lot will have developed.

See you at the Data Sharing Meetings!

Tuscarora Pipeline (Continued from page 1)

Uplands cluster primarily within the Middle and Late Archaic, between 500 and 1000 B.P., with limited evidence of occupation at either end of this range (i.e., the Early Archaic and Terminal Prehistoric). Three major research issues were addressed using data obtained from these components: chronology, changes in land-use patterns, and obsidian acquisition and distribution.

An hydration rate for obsidian found in the Uplands (East Medicine Lake [EML] and Grasshopper Flat [GF]), based on data from radiocarbon/hydration pairings and hydration-age pairings for Modoc projectile points (Hildebrandt and Mikkelsen 1995), allowed the development of a chronological sequence for the region, with estimated dates, associated point types, and hydration means. Over 200 temporally diagnostic points were recovered from Uplands sites, with EML hydration data used to verify the point sequence. The Northern Side-notched point is associated with the Early Archaic, with a hydration mean of 4.5 μ (sd 1.4). The Siskiyou Side-notched (hydration mean of 4.0 μ ; sd 1.1) and Elko Corner-notched (hydration mean of 3.9 μ ; sd 1.3) are associated primarily with the Middle Archaic but show variable hydration ranges across a long temporal span. The arrow-sized Rose Spring Corner-notched point is associated with the Late Archaic, with an hydration mean of 2.9 μ (sd 0.7). Small-stemmed points (Gunter) cross-cut the Late Archaic/Terminal Prehistoric, with an hydration mean of 2.1 μ (sd 0.6). Finally, Desert Side-notched points (DSN) are clearly Terminal Prehistoric markers (hydration mean of 1.5 μ ; sd 0.5). Small-stemmed and DSN points show differential distributions in the Uplands.

Diachronic trends over the five temporal periods identified within the Uplands are reflected in assemblage content and diversity. The three Early Archaic assemblages contained fragmentary bifaces and associated debitage, representing well-curated toolkits of local obsidian. Notching flakes were clearly associated with this early component, representing

final tool production. Other toolstone material was rare, as were associated diagnostic points. The many Middle Archaic sites were dominated by bifaces (primarily early-stage), with associated flake tools and points. The single Middle Archaic feature, a cluster of biface reduction debris, typifies the focus of this period — biface blank preparation from cortical flakes of local obsidian. Points and bifaces dominate Middle Archaic tool assemblages, with a very high ratio of debitage to tools. Components representing the Middle/Late Archaic Transition show the first predominance of late-stage bifaces and debitage; the first significant presence of flake tools, ground stone, cores, and core tools; and the first significant use of Buck Mountain obsidian and basalt. These artifacts are usually found in association with Late Period components, occurring mostly in the southern half of the Uplands. Late components provide the first evidence of prolonged habitation, indicated by associated drills, a fire hearth, ground stone, and ochre. Flake tools and late-stage bifaces dominate the late assemblages, with associated points lacking. This same tool assemblage is found in Terminal Prehistoric components, along with at least one housefloor and the first significant sample of ground stone, mostly stationary millstones and unshaped handstones for processing seeds and ochre. Buck Mountain obsidian continues to dominate these late sites. The only other Upland habitation sites are found along the shores of Tule Lake.

Obsidian is the principal element of Modoc Upland sites; source identification indicates a dominance of local EML obsidian in northern sites through all temporal periods, and Buck Mountain only in southern sites, and only during the Late Period. Projectile points show the greatest material variability and are the primary tools made from non-local materials. The third major local source, Blue Mountain, occurs primarily in northern sites after the Middle Archaic. Analysis of this obsidian source shows that it hydrates at a slower rate than EML obsidian, and this must be taken into account when making age determinations. Two Highlands source groups (EML and GF) distinguishable by their different zirconium values, show different distribution patterns: EML dominates in the Uplands, while GF is dominant to the south, in the Siskiyou/Pit River region.

South Fork Valley/Madeline Plains - Vol. III (by Michael Delacorte)

Five prehistoric sites were excavated along this segment of the project route, with another 60 receiving more attenuated test evaluations. Although sites were distributed fairly evenly, all but one of the data recovery properties lie on or near the Madeline Plains. Many factors might account for this clustered distribution, but perhaps the most significant is the location of the pipeline corridor adjacent to the Pit River as it passes through South Fork Valley. These stream-side areas flooded seasonally in aboriginal times, and would have afforded little access to environments and resources other than the river. Major settlements probably were located at higher elevations on the valley flanks, and thus the sample of sites is by no means representative of the region.

Excavation revealed a long and dynamic history of human occupation in the region. Early Holocene use of the area is represented by Great Basin Stemmed series projectile points and suggestively large obsidian hydration readings. Cultural remains recovered in association with Stemmed points suggest that early foragers made use of the Plains primarily as a seasonal hunting ground, with assemblages dominated by points, bifaces, and fewer flake tools. Milling equipment is limited (and of questionable association) at all of the early sites, suggesting that few if any local plants were exploited during this interval. As in other parts of the Great Basin, obsidian source analysis indicates that Early Holocene populations were extremely mobile and wide-ranging, with groups on the Madeline Plains traveling north to the Oregon border and south for an unknown distance into the Lahontan Basin.

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Tuscarora Pipeline (Continued from page 4)

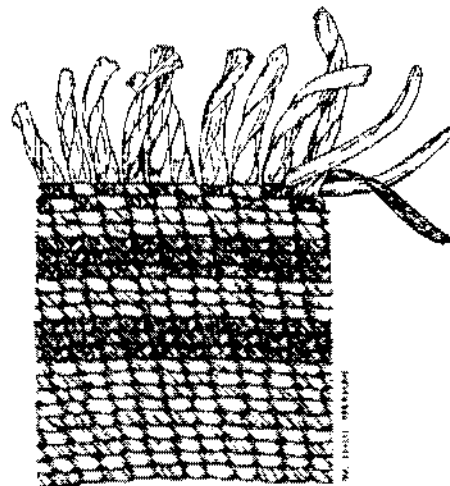
Early Holocene use of the three primary toolstone classes — obsidian, basalt, and CCS — seems to have emphasized biface reduction for the manufacture of hunting implements. This lack of material selectivity and reliance on biface reduction are consistent with previous models of Early Holocene lifeways, where toolstone procurement is seen as embedded within a highly mobile, territorially expansive foraging pattern (see Basgall 1988; Delacorte and McGuire 1993; Kelly 1988; Willig and Aikens 1988). By the Early Archaic, however, flaked stone reduction trajectories begin to change: obsidian and CCS continue to be used for bifaces, but basalt is used primarily for core/flake reduction. This shift occurs in tandem with an increase through time in the frequency of large basalt cores and core tools. The use of basalt thus begins a transition away from bifacial hunting implements and toward the production of large, percussion-flaked processing tools. The Early Archaic, then, may signal a wider subsistence shift toward the specialized processing of tubers, stalks, and other fibrous vegetal matter typically associated with core tools.

By almost any measure, the Middle Archaic and Middle/Late Archaic Transition witnessed a rise and general elaboration in cultural complexity, as evinced by the house structures, midden deposits, hearths, ovens, burials, and the richest collections of artifacts and subsistence remains along the entire project corridor. The most representative sites of this cultural florescence (CA-LAS-1705/H and CA-LAS-206/215) share strong affiliations with the Karlo Site, which may be somewhat older (3250-2250 B.P.), but is also characterized by impressive burial lots, midden deposits, and elaborate assemblages. There is also a marked increase during this time in resource intensifications, reflected in the changing profile of prey taxa in faunal assemblages. Birds, rabbits, and other small mammals increase demonstrably in relation to artiodactyls in Middle and Late Archaic components.

A longstanding research theme in the Secret Valley region has been the degree to which earlier populations (those pre-dating the Terminal Prehistoric arrival of desert-oriented Numic groups) exhibit affinities that are more typically "Californian" than "Great Basin." Certain artifacts, features, and traits documented during the project (cairn/pit burials, certain marine shell beads and specialized bone tools, bowl and hepper mortars and pestles, red ochre staining on milling equipment) generally support the notion of a California affiliation during the Middle-Middle/Late Archaic Transition. But probably the most incontrovertible evidence for this is a small piece of plain twined basketry, with "Z"-twist warp and down-to-the-right weft, and two-face decorative overlay, recovered from a CA-LAS-206/215 burial. The fragment shares greatest affinity to baskets made by ethnographic Pit River, Klamath, Modoc, and Maidu peoples. Fragments of similar flexible-warped twined basketry have been found at Kramer Cave near Winnemucca Lake dating from 3900-3600 B.P., and at Lovelock Cave, where they are placed at around 2900-2450 B.P. (Hattori 1982:91-94). These data point to a pre-Numic population in Secret Valley that may have counted within its territory much of northeastern California, the western Great Basin, and perhaps an even wider area.

Following the Middle and Middle/Late Archaic transition are major changes in land use. House structures, middens, and elaborate artifact assemblages disappear by about 1000 B.P., with a decline in the intensity of obsidian reduction and a shift to a core/flake technology. Between about 1000 and 500 B.P. is also a break in the otherwise continuous radiocarbon sequence for the valley, implying a significant change of some kind. From a settlement perspective, the number of Late Prehistoric components actually increases somewhat, but they are comprised of more ephemeral ground stone/rock concentrations and hearths accompanied by

only limited debris scatters and/or midden pockets. These changes may reflect the interplay of decreased resource productivity wrought by sustained drought (i.e., the "Medieval Climatic Anomaly") and changes in land use associated with the late prehistoric arrival of Numic-speaking groups.



Close Plain (Single Warp) Twining on Cordage Warp with Down-to-the-right (Z-twist) Flat of Weft Turns Decorated by Means of Double Face Overlay

Schematic Representation of Basketry found at CA-LAS-206/215, Locus A.

Honey Lake Basin - Vol. V (by Randall Milliken and William Hildebrandt)

The Honey Lake segment of the pipeline passes northwest to southeast through treeless sagebrush and greasewood brushlands of the Honey Lake Basin. The route passes along the east side of Honey Lake and out across a low saddle that separates it from the now dry lake bed of the eastern Honey Lake basin. Prehistoric sites, including surface flake stone scatters and complex flaked and ground stone scatters with some depth, are densely distributed on the northeastern side of the lake but decline dramatically as one proceeds south out into the lacustrine sediments of the basin floor.

The three prehistoric sites given full data recovery in the Honey Lake project segment include CA-LAS-1756/H, a 160 x 420-meter Middle/Late Archaic site with buried midden pockets; CA-LAS-1699, a surface flaked stone scatter occupied primarily during the Early Holocene; and 26WA5578, a sparse but extensive surface flaked stone scatter also dating to the Early Holocene and extending for 2.2 kilometers out onto the dry eastern basin lake bed playa from benches at the foot of the Fort Sage Mountains.

Findings from the three data recovery sites were augmented with information from 19 test-phase and probe sites located in the northeast basin. Two of them, in particular, are singled out here as very important sites for future research: Early Holocene lake-shore site CA-LAS-1758, and multi-component marsh/pond-edge site CA-LAS-1760 (both sites were avoided during project construction). The Honey Lake volume (V) also integrates information from Francis Riddell's excavations at Tommy Tucker Cave (CA-LAS-1) and Amedee Cave (CA-LAS-90), sites overlooking the pipeline on the east side of Honey Lake.

Site components were dated using obsidian hydration studies; only one group of features (at CA-LAS-1756/H) furnished radiocarbon dates. There was no lack of obsidian: 70% of the estimated five million pieces
(Continued on page 6)

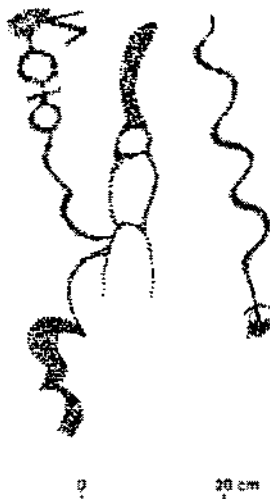
Tuscarora Pipeline (Continued from page 6)

With one noteworthy exception, the prehistoric sites in the southern portion of this project segment are unremarkable; most are small, temporally-mixed surface manifestations with limited tool assemblages. An exception is 26Wa5604, a small but ancient site containing the project's only "fluted" projectile point, four Great Basin Stemmed points, and several biface and point fragments. The points and the hydration data suggest two discrete Early Holocene occupations at 26Wa5604, an early "Clovis" manifestation, and a later component represented by the Stemmed points.

The intensive Early/Middle Archaic use of CCS documented at the Fort Sage Pit Quarry and in assemblages elsewhere along the eastern Sierran Front contrasts sharply with basalt-dominated "Martis" components and quarries found in the Sierra Nevada uplands. From this it is inferred that populations who inhabited the Eastern Front and desert areas to the east were not routinely exploiting Sierran basalt sources during this interval. A variety of data, including an on-going program of XRF basalt sourcing suggest instead that Sierran basalt was transported west into the foothills and Central Valley of California (see for example Bloomer et al. 1997). On the basis of toolstone distribution and other data, two distinct Early/Middle Archaic settlement systems are identified, one oriented along the major drainages flowing west of the Sierran Crest to the Central Valley, and the other directed to movements along the well-watered valleys fronting the eastern Sierran scarp from north to south.

Pah Rah Uplands - Vol. VII (by Michael Delacorte)

Four sites were investigated as part of the data recovery program in the Dry Lakes Basin of the Pah Rah Uplands. Data from these and other investigations in the area provide the basis for an understanding of the area's unique prehistory. The Dry Lakes Basin has long been known for its thousands of petroglyphs, dozens of rock ring house features, and countless millstones, though there has never been a comprehensive report prepared on the area. Whether the many complex sites reflect a single pattern or multiple land-use patterns was a critical research question from the outset, particularly since the antiquity and function of Great Basin rock art has long been debated. Other issues of special interest are the types of activities and subsistence resources that attracted so much aboriginal attention to the area, and the link between upland and lowland environments within prehistoric adaptive systems.



Rock art panel from CA-LAS-1653.

Of the four data recovery sites, three were large rock ring, petroglyph, and debris scatters; the last was an immense collection of ground stone milling equipment next to one of the playas which give the Dry Lakes Basin its name. Work at the four sites involved the controlled surface collection of 7,600 m² and excavation of over 26 m³ of deposit, including all or part of eight rock ring house features. As anticipated, most of the cultural deposits proved to be quite shallow, with a maximum depth of ~50 cm. Even so, more than 500 flaked and 250 ground stone tools, 28,000 pieces of flaked stone debitage, and 3,000 fragments of animal bone were recovered, providing an abundance of information on the aboriginal use of the highlands.

Although traces of occupation dating back to the early Holocene can be identified in Pah Rah Uplands obsidian hydration samples, extensive use of the highlands appears to have begun in the Middle Archaic (ca. 3500-1300 B.P.) or slightly earlier. Components attributable to this period were identified at three of the sites, where they occurred in association with rock art, but never with house remains. Obsidian and other raw materials exploited by the early inhabitants, and the composition of the artifact assemblages, suggest that Middle Archaic foragers were extremely mobile and wide-ranging, making use of the Basin primarily as a seasonal hunting area. Groups appear to have traveled north-south along the Sierran Front between a series of lowland base camps, from which resources were exploited by task-specific groups. Bifaces and other easily transported tools were resupplied at major obsidian and other toolstone quarries along the way, and less portable but still highly efficient gear was cached for future use.

A somewhat different pattern characterizes the Late Archaic (ca. 1350-600 B.P.) use of the uplands. Raw materials associated with these deposits suggest that populations traveled over smaller areas, from perhaps the Mono Basin to the Truckee Meadows, with seasonal encampments located near especially attractive lowland resources (e.g., fish). From these residential settlements with well-built structures and storage facilities, forays also were made to more distant locations to procure food, including large game and waterwort (*Elatine* sp.) seeds in the Dry Lakes Basin.

Still more intensive use of the uplands occurred during the Terminal Prehistoric interval (post-600 B.P.). Lowland fishing and semi-permanent villages were abandoned in favor of smaller household settlements, with seasonal movements even further restricted. Coinciding with these changes is evidence that entire household groups resided in the Dry Lakes Basin for extended periods during the spring and summer, as indicated by the numerous rock ring house features dating to this interval. Antelope and other large vertebrates, and waterwort seeds, continued to be important upland staples, along with small mammals, and some piñon and fish imported from the lowlands.

In sum, from the Pah Rah Uplands indicates a number of sweeping changes in land use, including significant reductions in the areas exploited by aboriginal foragers, and resource intensification, at roughly 1350 and 600 B.P. This can be seen in the changing use of toolstone raw materials, including a Late Archaic reliance on Suro Springs obsidian, which can be used to date sites of this age. Obsidian hydration and other data also provide evidence that most Great Basin petroglyphs are of Middle/Late Archaic age, and certainly younger than the rock ring house features which occur at the same sites. Explanations for these and other changes in the Uplands archaeological record are difficult to identify, although there is intriguing evidence to suggest that they may be associated with the arrival of Washoe and later Numic people at roughly 1350 and 600 B.P., respectively.

[Editor's note: The eight-volume Tuscarora final report is currently under agency review and should be available later this fall.]

(Continued on page 8)

Tuscarora Pipeline (Continued from page 8)

Price, B. A., N. D. Sharp, T. W. Canaday, L. A. Ross, C. K. Roper, K. T. Katsura, L. J. Sekora, and F. A. Riddell

1994 *Cultural Resources Assessment Report Tuscarora Pipeline Project. Phase 1: Survey, Inventory, and Preliminary Assessment of Cultural Resources.* Report submitted to the Tuscarora Gas Transmission Co., Reno.

Willig, J. A., and C. M. Aikens

1988 The Clovis-Archaic Interface in Far Western North America. In *Early Human Occupation in Western North America: The Clovis-Archaic Interface*, edited by J. A. Willig, C. M. Aikens, and J. Fagan, pp. 1-40. Nevada State Museum Anthropological Papers, No. 21.

Society Business & Activities

Update on 1998 Annual Meeting by Michael Sampson, Arrangements Chair

The 1998 SCA Annual Meeting will take place on April 8-11 at the Hyatt Islandia Hotel in San Diego. The hotel is very well situated on Mission Bay and close to many local attractions and restaurants. Reservations for the Hyatt Islandia Hotel can be made by calling 1-800-233-1234 or 619-224-1234 (not 244-1234, as previously published). The conference rate is \$76; suites at the hotel are also being discounted for SCA members. Conference rates are applicable for four days before and four days after the annual meeting. I encourage members to make their reservations early.

A reception on the historic ship S.S. Berkeley, moored on San Diego Bay, is scheduled for Wednesday night (April 8); this is the night before sessions begin. The usual Thursday night reception and silent auction will take place at the San Diego Museum of Natural History, which has a terrific exhibit planned for that time. We can arrange to entertain children at the Museum during the reception (an evening with Ms. Frizzle) if enough parents request it. The Friday night Awards Dinner features a great meal, presentations, a keynote speaker, and dancing to a rock-a-billy/blues band. Tours to local historic sites and museums are scheduled for Saturday afternoon.

After attending the meetings or to entertain family members, endless possibilities for fun excursions and good dining exist near the hotel. Nearby local attractions include, Sea World, Old Town, Balboa Park, the San Diego Zoo, beaches, sport fishing and dive boat operations, and others. Please contact me to inquire about child care during the conference. Note, also, that both the San Diego Museum of Man and the Museum of Natural History have offered to provide daily or week-long classes for children of meeting attendees. Any inquiries can be directed to me at (619) 220-5323.

SCA 1998 Program Begins to Take Shape by Ron May

By the last day of the 1997 Annual Meeting at Rohnert Park, 19 symposia and three workshops were lined up for the 1998 meeting in San Diego. Counting the full-day symposia, panels and workshops, we have

filled 22 of 30 half-day time slots. Folks wishing to organize additional symposia or workshops have until **October 15, 1997** to submit titles and 100-word abstracts. If we have more than 30 sessions, Mike Sampson has assured me that additional rooms can be found at a nearby convention center. The deadline for all symposia papers or volunteer papers is **December 31, 1997**. Please send the titles and abstracts by eMail to SCA1998@aol.com or mail a hard copy and a disk (PC format) to Ron May, Fort Guajarras Museum Foundation, P.O. Box 23130, San Diego, CA 92193.

Just prior to the Rohnert Park meeting, Mike Sampson organized a SCA 1998 planning meeting at the State Parks office in Mission Valley, San Diego. A large group of agency, academic, and consulting archaeologists attended to share concepts for the next San Diego meeting. I carried a list of symposia ideas at Rohnert Park and buttnholed folks who might be willing to organize symposia. By the last day, archaeologists had volunteered for a wide range of symposia and volunteer papers.

The honors go to Marty Rosen as the first to mail a symposium abstract and title. Rosen proposed "San Dieguito-La Jolla: Chronology and Controversy, Ten Years Later." This fascinating topic continues to explore the evolution of thought on evidence for Paleo-Indian occupation of Southern California. The topic has been pursued in several local gatherings in San Diego this past year. Susan Hector and Anna Noah swiftly followed with an abstract for "Public Outreach, Community Participation, and Archaeology." The field of public programs in archaeological research and field research has expanded greatly in recent years, and Hector and Noah will showcase examples for consideration in other communities.

The largest symposium thus far is proposed by Jon M. Erlandson and Terry L. Jones, who continue their saga of "Cultural Complexity on the California Coast: Late Holocene." This full-day session falls on the heels of a well-attended symposium on the Early Holocene at the 1997 meetings. The session for San Diego is packed with 18 speakers on such diverse topics as "Islands in Crisis: Late Holocene Intensification and Environmental Stress on San Clemente and Santa Catalina Islands" by L. Mark Raab, Judith Percassi, Katherine Bradford, and Andrew Yatsko, and "The Evolution of the Barbareno Chumash" by Jon M. Erlandson.

Don Laylander (Caltrans - Bishop) has organized a panel discussion on Prehistoric Landscapes of the Inyo-Mono Region. Daniel F. McCarthy and Mike McIntyre (U.S. Forest Service) have proposed a symposium entitled "National Forest Lands of Southern California," and Russ Kaldenberg has offered a joint Bureau of Land Management and U.S. Forest Service symposium that will fill a full day on "Twenty-five Years of Federal Archaeology." Faith Louise Duncan has planned a full day Saturday Educator's Workshop entitled "The Magic of the Past, Present, and Future." Duncan will be advertising the workshop through various school districts in San Diego. There will be a size limit of 30 participants, and we wish her the best. Mary Gordon and Anne Stoll have volunteered an Education symposium that will have a full title by December 31, 1997.

Other symposia topics are proposed, but have not yet taken shape; these include Rock Art, Camp Pendleton, Curation, Western Mohave, The Celtic Influence, Site Formation and Bioturbation, Overseas Chinese, and Lithics. Kerstine Johnson has offered to organize either a panel or workshop on Public Relations.

So, mark your calendar for the SCA 1998 Annual Meeting to be held April 8 through 11, 1998, at the Islandia Hotel. Remember to reserve your room early and submit your 100-word abstracts and titles for symposia/workshop/panel by October 15, 1997. Once again, the deadline for all paper abstracts and titles will be December 31, 1997. I can be reached at the Fort Guajarras Museum Foundation, P.O. Box 23130, San Diego, CA 92193; eMail: SCA1998@aol.com

Society Business & Activities

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UNESCO Sponsors Global Village Project

by E. Breck Parkman

In a letter dated June 20, UNESCO Director-General Federico Mayor announced the United Nations Educational, Scientific and Cultural Organization's sponsorship of the Fort Ross - Global Village project ("Global Village"). Global Village is a multi-year Internet education project being conducted by the SCA in co-operation with U.C. Berkeley, California State Parks, and other organizations. The project is focused on the archaeology and history of Fort Ross, and involves school kids in California, Alaska, and Russia, the three areas from which the original settlers came to Ross. By linking the children together in their studies, the project strives to recreate the same sense of community and co-operation that marked the original 1812-1841 settlement. Global Village stresses communication across boundaries, be they cultural, political, or generational.

Here is how Director-General Mayor explained his reason for granting sponsorship to the project: "This project, which offers schoolchildren an opportunity to play an active part in a real archaeological investigation guided by professionals and teachers and whose results will be disseminated through the Internet, seems to me a very worthwhile initiative and one that is fully in line with UNESCO's aims. In particular, I am pleased to note that it combines the preservation of historic heritage with the use of modern technology in order to develop greater awareness of cultural diversity while promoting peace and encouraging communication and co-operation across boundaries."

It is likely that the UNESCO sponsorship will result in a heightened awareness of the project, and will help lend it credibility on the international stage. Further information is available on the project web site at: <http://www.mcn.org/od/ross/gv.htm>.

Committee Reports

1997 California Mission Studies Meeting

by Rebecca Allen

In celebration of the 300th anniversary of the founding of the first Spanish Mission in the Californias, the California Mission Studies Association (CMSA) held their 14th annual conference in Loreto, Baja California, where Misión Nuestra Señora de Loreto Conchó was founded in 1767. The establishment of this Jesuit mission initiated colonization that the Franciscans continued with a chain of missions into Alta California. CMSA invited scholars from Alta California, Baja California, Guadalajara, Mexico City, Arizona, New Mexico, and Texas to address conference attendees. Dr. Miguel León-Portilla of the Universidad Nacional Autónoma de México, gave a keynote address entitled "Loreto's Key Role in the Early History of the Californias - 1697-1773," which CMSA plans to publish as a keepsake volume for its members. Dr. León-Portilla noted the historic events and trends that led to the Mission Period in the Californias, and helped establish the later missions in Alta California. Dr. Harry Crosby spoke on "The People of Baja California: The Californias," and the persistence of Native American culture in Baja California. Dr.

Crosby emphasized that there are still peoples in remote areas of Baja California who can provide insight on native inhabitants at the time of Spanish contact.

Conference attendees were also treated to excursions to nearby sites, including Mission San Javier and Mission Santa Rosalía de Muiegé. *The Lost Treasures of Baja California* (Black Forest Press, 1996), by Padre James Donald Francez, has excellent black-and-white photographs of these two mission churches and others, nearly forgotten and less recognized, that still remain as cultural treasures of Baja.

Next year's conference will be held in February 1998, at San Juan Capistrano. For information on becoming a CMSA member, please contact the California Mission Studies Association, P.O. Box 3152, Mission San Jose, San Jose, California 94539. Or visit their web site at <http://www.jrac.com/cmsa>.

Call for Nominations

The SCA has formed a Nominations Committee for the 1997-1998 term. Members are Vicki Beard, David Earle, Tom Layton, and Mike Moratto (chair). The Committee is now soliciting names of potential candidates for election to the following offices:

- President (President-Elect 1998-1999; President 1999-2000; Past President 2000-2001)
- Northern Vice President (1998-1999)
- Southern Vice President (1998-1999)
- Secretary (1998-1999)

Please submit names of qualified potential candidates, not later than **October 1, 1997**, to:

SCA Nominations Committee
Attn.: Dr. Michael J. Moratto, Committee Chair
c/o Department of Anthropology, California State University-Fresno
5245 North Backer Avenue
Fresno, California 93740-0016

Regional Grey Literature Review

Eastern Sierra Nevada

by Don Laylander

Inyo and Mono Counties have been the subject of scores of archaeological surveys and resource management documents, several CRM and field school excavations, and a fair number of conference papers and publications during the last three years. Several of the more substantial contributions are noted here.

Burton, Jeffery F.

1996 *Three Farewells to Manzanar: The Archeology of Manzanar National Historic Site, California*. National Park Service Western Archeological and Conservation Center Publications in Anthropology 67. Tucson, 3 vols., 1,046 pp.

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Regional Grey Literature Review (Continued from page 12)

Eastern Sierra Nevada (Cont.)

milling assemblages are interpreted as indicators of black oak processing, in line with McCarthy's western Sierra studies ("their abundant presence here, some 55 miles from the nearest significant black oak stands...is staggering" [p.66]); (3) readers may be interested in pondering both the practical advantages and the management and interpretive consequences of Gilreath's criteria for distinguishing between sites, isolates, and archaeological background noise in this obsidian-rich region.

Milliken, Randall, Amy Gilreath, and Michael Delacorte
1995 *Photographic Evidence of Ethnographic Owens Valley Paiute Shelters*. Report prepared by Far Western Anthropological Research Group, Davis, for Caltrans District 9, Bishop. 114 pp.

The authors have assembled and discussed 34 early twentieth-century photographs of aboriginal houses and other structures in the Inyo-Mono region. Most of the photographs are the work of pioneer Bishop photographer Andrew A. Forbes; others are from Edward S. Curtis, Burton S. Frasher, Harold W. Mendenhall, and unidentified photographers. Despite the report's title, some of the photographs pertain to areas outside of Owens Valley, notably Bodie, and some of the locations are not known.

Types of structures shown in the photographs include hemispheric and conical willow-pole framed houses, covered and roofless enclosures, wind-breaks, dance ground fences, ramadas, and an earth-covered assembly house. Besides provenience information on the photographs and their subjects, the authors evaluate the structures' construction characteristics, associated site contexts, and environmental settings.

Presented together with the photographs are discussions of the ethnographic literature pertaining to these structures and a brief consideration of relevant archaeological findings and the implications of the photographs for archaeological investigations.

Reno, Ronald L., and Christine Savage Palmer
1996 *An Archaeological Survey Report and Historic Study Report for the Highway 395, Manzanar 4-Lane Project, Inyo County, California*. Report prepared by Archaeological Research Services, Virginia City, for Caltrans District 9, Bishop. 131 pp. plus 4 appendices.

This more limited study provides a supplement to Burton's Manzanar report, noted above. An archaeological survey for a highway project adjacent to the National Historic Site identified 15 prehistoric and historic sites, and the historic sites were evaluated through surface observations and background research. Of particular interest may be Reno and Savage's background discussion for Burton's "second farewell," the early twentieth-century settlements forming the community of Manzanar.

Reynolds, Linda Anne
1996 *In the Dwelling Place of a Great Spirit: The Prehistory of the Piñon-Juniper Woodland of the Inyo-White Range, Eastern California*. Ph.D. dissertation, University of Nevada, Reno. 222 pp.

Reynolds' dissertation addresses the effects of climatic change on prehistoric site location patterns, particularly in the Papoose Flat area south-

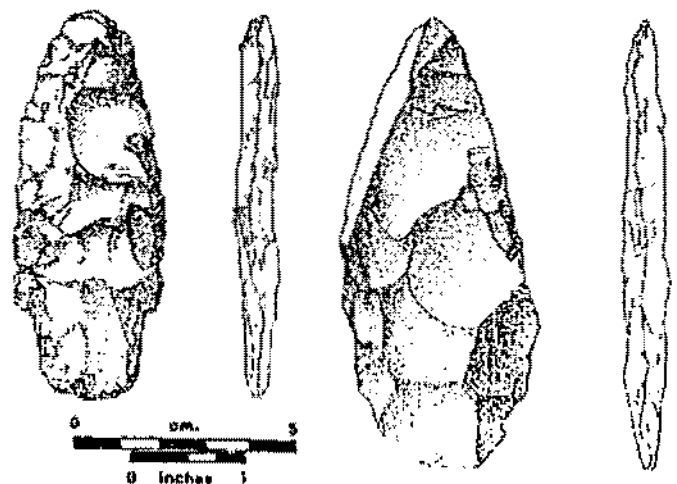
east of Big Pine. Cultural chronology is indexed by the familiar sequence of typeable projectile points. Changes in the natural environment — specifically, vertical shifts in the treeline of the piñon-juniper woodland — are traced through radiocarbon dating of plant macrofossils from packrat middens.

The study concludes that (1) piñon was present in the region at least by the middle Holocene (as indicated by a 7880 B.P. radiocarbon date); (2) middle Holocene temperatures were 5° to 7° C warmer than at present; (3) shifts in site locations through time reflected corresponding shifts in the locations of resource zones (notably piñon), rather than cultural shifts in the resources being targeted; and (4) intensive piñon exploitation developed over a long period, rather than arising rapidly late in prehistory, as suggested by Robert L. Bettinger and others.

Reynolds, Linda A.
1997 *Heritage Resources Program Overview, Inyo National Forest, California and Nevada*. Inyo National Forest, Bishop. 105 pp. plus 10 appendices.

This resource management volume brings together discussions of a diverse assortment of topics. Brief new overviews of archaeology, ethnography, and history are offered, as well as a review of information on paleoenvironments by Wallace B. Woolfenden.

The overview's discussions build upon Bettinger's well-known synthesis, "Archaeology East of the Range of Light," and on Robert J. Jackson et al.'s FARM ("Framework for Archaeological Research and Management") guidelines for the northern Sierra Nevada forests, both of which are included as appendices. Other appendices address such varied subjects as research strategies for obsidian quarries, rock art, and piñon-juniper woodlands; the management of an historic railroad logging district; and feminist perspectives on Great Basin prehistory.



Artifacts from Littlejohn's Creek Site. Illustration by Dennis Leinfelder.

Due to an eMail glitch, this illustration in the March issue was distorted. Here is the corrected drawing. — Editor

Clement Woodward Meighan (Continued from page 14)

uilding into a clubhouse/laboratory with tables, benches, chemistry apparatus, etc. Under Clem's leadership, they recruited about 20 local kids and gave lectures in their makeshift laboratory on various scientific subjects. Clem developed tests and examinations for the League members, with certificates of advancement (or badges) cut from tin cans and decorated by brother Don, who would later become a professional artist and scientific illustrator. The Meighan boys' specialty was entomology. In short order, Clem became the youngest full member of the California Academy of Sciences.

Clem was drafted and saw combat in the Pacific Theater in World War I. In 1943, at age 18, he began training as an army tank crewman in Hawaii, where he explored as much of the islands as he could on weekend passes. Clem found the islands fascinating and couldn't understand why many of his fellow GI's stayed in their barracks or hit the Honolulu fleshpots, when they could be out swimming, chasing tropical bugs, or trying to speak pigeon with the locals. Meighan was assigned to a detachment of US Army Shermans supporting Marine amphibious operations in the Marianas campaign. Three weeks into the fighting on Saipan, Clem's tank was hit and disabled, and he was hit twice by machine-gun fire while bailing out of his burning tank. Rescued under fire, he was evacuated to Eniwetok, where triage doctors concluded he would not survive and so was not worth operating on. Clem was covered with his poncho and placed among the dead and dying. But it rained that night, reviving him, and in the morning when an orderly came to the field hospital with the news that there was space for one more casualty on the evacuation plane to Hawaii, Clem threw off his poncho, rose from the dead, and was put on the plane. He celebrated his 20th birthday in the hospital. He would spend more than three years in and out of military hospitals, and was finally discharged in 1947.

Meanwhile, Clem was getting his education onto a new and promising track. He became a UC Berkeley student while still convalescing and did much of his undergraduate work while confined to a hospital bed. By 1947, Clem's earlier interest in insects had been replaced by a new love, archaeology. He never lost his interest in the natural sciences, however, and remained throughout his long career the most humanistic of scientific archaeologists, and the most scientific humanist as well. Clem threw himself into his new discipline with the determination characteristic of his childhood and teenage years, and his rise was meteoric. He went through the Berkeley undergraduate program in record time, obtaining his Bachelor's degree in 1949. In graduate school, he worked on various contract jobs through the University of California Archaeological Survey, while pursuing his higher degree. In 1951 he became the top-ranked student research archaeologist of the Survey, and the same year he became a lecturer in anthropology and archaeology at Berkeley. In 1952 he was hired as an instructor in anthropology at UCLA, and the following year he was awarded his doctorate from Berkeley. In short order Clem rose through the ranks to full professor, became head of his department, and went on to conquer many other academic realms. He retired at UCLA in 1991 after 39 amazingly productive years.

Clem Meighan was an archaeologist's archaeologist, a leader of his chosen field in every way. He did every kind of archaeology there was, and when he ran out of "old" kinds, he invented new ones. Clem also did research in almost every place archaeology was to be found — in snowy mountains, tropical rain forests, and just about every major desert on the face of the earth. He had an enviable record of field projects carried through to writeup and publication, in North, Central, and South America, in the

Pacific, and in various parts of the Old World. He was instrumental in finding new avenues of research and became one of the founding fathers of modern archaeology as it is practiced today. Adapting new technologies or methods to archaeology was child's play for the man who, after all, could read at age three and had built a boat from scratch at eight.

Over a half-century of involvement in archaeology, Clem Meighan had an unbelievable ability to find important sites, to put things down on paper, and to get publications out in record time. Clem's credo was that if a site was worth digging, or an area worth exploring, it was also worth writing up; and, if something was worth writing up, then the eventual report should be of publishable quality. Clem had only one operating speed: ahead full. He kept going no matter how large or daunting the obstacles that confronted him. He always had an alternate plan, and was able to change research focus, switch sites, or even change countries in which he was working at short notice without any lessening of velocity. Those who ever made the mistake of trying to challenge his lead were left bobbing in his wake.

Clem had limitless reserves of intellect, energy, and drive. No reversal ever seemed to phase him, nor to diminish his amazing optimism. He never let setbacks derail his drive towards his goals. Unlike the jaded attitude of some of his peers with only a fraction of his experience, Meighan, even after leading his field for more than 50 years, still found archaeology and archaeological discovery exciting. He had a keen interest in the ways and means of archaeology, not just as a route to some nebulous future result; to Clem, any new way to get more archaeology done was a positive advance and a real contribution. He was one of the staunchest defenders of the archaeological art, and fought bravely against those who would weaken it through appeasement. Clem was committed to archaeology not only as a career, but as a way of life. He left the discipline much better, much broader, and with greater depth, than he had found it half a century before.

Clem was also a talented and inspirational teacher. He could lecture on almost any archaeological subject at the drop of a hat and get your interest. To students, Clem Meighan inspired a sense of awe of nearly Old Testament proportions. They would follow him anywhere and do anything he asked, because they always knew that not only would they learn something, but that Clem invariably had their own best interests in mind. He was always most generous with his time. Regardless of whether it meant driving for an entire day to see a student excavation, or limping up a mountainside in pain from his old war wounds to see a student's rock art site, or setting aside his own writing to edit a student's first paper for publication, he would do it with good grace and genuine enthusiasm.

Like many of us, Clem tended to place most students (and people in general, for that matter) into two basic categories: producers and consumers. If he thought you were a producer, no matter what you were working on, you had his support and could count on his help and advice. Consumers were politely tolerated but basically ignored, provided that they didn't get in the way and gum up the works. Clem also tried to show his students that there were two kinds of archaeologists: those who only talked about archaeology, and those who did it. As always, Clem taught by example, for while others might "design" archaeological research, Clem Meighan actually *did* archaeological research.

Clem's antennae were fine-tuned to detect hypocrisy, falsehood, or duplicity, and he tried his hardest to teach naive or unwary students how to keep themselves from being gulled. Inertia was another demon to be overcome; Clem said that on the surface, there always seemed to be more excuses not to begin a given research project, not to dig a particular site, or not to begin writing some report than reasons to actually do it, but, that if one good reason could be found to do archaeology, that outweighed all the objections. (Continued on page 16)

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November 8, 1997. SCA Northern California Data Sharing Meetings at Yosemite National Park Visitor's Center, East Auditorium, 9:00 am - 3:00 pm (party to follow). Make submittals to Jane Caputo at (707) 464-6101 X 5411 or by FAX (707) 822-8904, Redwood National Park, Arcata Office, 1125 16th St., Arcata, CA 95521. Provide name, affiliation, paper title, brief abstract, and audio-visual needs no later than **September 15th**.

November 17-20, 1997. Fire in California Ecosystems: Integrating Ecology, Prevention and Management. Bahia Hotel, San Diego, CA. Papers on Pre-historic and Historic Fire Occurrence/Use are requested. Contact Dr. Neil G. Sugihara at (916) 364-2854 or Sandra Cooper, University Extension, UC, Davis at (916) 757-8948 or FAX (916) 757-8634.

January 7-11, 1998. 31st annual meeting, Society for Historical Archaeology, Crown Plaza Ravenna Hotel in Atlanta, Georgia. For information: Garrow & Associates at phone 770-270-1192, fax 770-270-1392, e-Mail garrow@mindspring.com. Web site: <http://www.sha.org>

February 1998. California Mission Studies Association 15th annual meeting, San Juan Capistrano February 13-15, 1998. For information: David & ChaCha Belardes at 714-493-4933 or fax Mission San Juan Capistrano at 714-240-8091. Web site: <http://www.jruc.com/cmsa>

February 27-March 1, 1998. The 1997 California Indian Conference has been rescheduled from its usual October date to late February 1998. It will be held at Seven Hills Guest Center, San Francisco State University, Friday Feb. 27 to Sunday March 1, and will be jointly sponsored by SPSU

(California Studies Program, American Indian studies, Anthropology Dept.) and the California Indian Museum. 150 word abstracts should be submitted by January 15, 1998 to: Lee Davis, Anthropology Dept., San Francisco State Univ., San Francisco, CA 94132.

April 8-11, 1998. SCA Annual Meeting at the Hyatt Islandia Hotel, San Diego. Room reservations can be made at 1-800-233-1234. For more information contact Michael Sampson, Local Arrangements Chair, or Ron May, Program Chair, at <http://www.scanet.org>. Proposals for symposia, workshops, poster presentations or volunteered papers should be submitted to Ron May at 6044 Estelle St. San Diego, CA 92115.

March 25-29, 1998: 63rd Annual Meeting, Society for American Archaeology, Seattle. For information: (202) 789-8200 or meetings@saa.org

Visit the new American Institute for Conservation of Historic and Artistic Works (AIC) web site at <http://palimpsest.stanford.edu/aic/> on the Internet. The site is linked to other related organizations such as the National Institute for the Conservation of Cultural Property (NIC), the American Association of Museums (AAM), and the National Endowment for the Humanities (NEH). AICCOMM@aol.com

An on-line organization dedicated to protecting cultural sites through letter and eMail writing campaigns, called P.A.S.T. (Protecting Archaeological Sites Today), can be found at: <<http://home.uleth.ca/geo/jasweb/jasweb.htm>>

Calendar listings include notices for meetings, lectures, museum openings, educational opportunities, etc. All submissions are welcome. For frequent updates and more background information visit the SCA web site (<http://www.scanet.org>). Please send calendar listings to Donna Day, Tahoe National Forest, P.O. Box 6003, Nevada City, CA 95959-6003 or eMail day@jps.net

Society For California Archaeology



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The Society for California Archaeology is a nonprofit scientific and educational organization dedicated to research, understanding, and conservation of archaeological resources. Membership is open to everyone with an interest in California archaeology.

SCA promotes cooperation among archaeologists in California by: 1) conducting symposia and meetings to share information on new discoveries and techniques; 2) publishing an annual *Proceedings* on archaeological research in California; 3) publishing a *Newsletter* on current topics of concern, with news and commentaries; and 4) promoting standards and ethical guidelines for the practice of archaeology.

The Society seeks to increase public appreciation and support for archaeology in California by: 1) helping planners, landowners and developers un-

derstand their obligations and opportunities to manage archaeological sites; 2) representing the concerns of California archaeologists before government commissions and agencies, and on legislation; 3) encouraging the conservation of archaeological resources for future research and public interpretation; 4) discouraging vandalism and exploitation of archaeological resources; 5) recognizing the significance that many sites possess for ethnic and local communities; and 6) encouraging respect, appreciation, and a better understanding of California's diverse cultural heritage.

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