

County of Orange-CSUF A/P Project: Sixth Six-Months Report (Feb. 25, 2002 -- Aug. 24, 2002)

Introduction

March 6, 1999, the OC Board of Supervisors (BOS) awarded California State University, Fullerton (CSUF) a 3-year contract to develop and to begin implementing a model curation program for the archaeological and paleontological collections under the stewardship of the County. Final contract approval and signing by the BOS took place August 24, 1999, commencing the official starting date for the project. Considerable preliminary work by the project Principal Investigators (PIs), Drs. Phyllisa Eisentraut (CSUF Anthropology) and John Cooper (CSUF Geology), began well in advance of the contract approval. In accordance with the County RFP, the proposal submitted by CSUF spoke to short- (first year), intermediate- (second year), and long- (third year) term goals. The CSUF goals¹ for the first year were: goal #1: assessment of existing facility; goal #2: procedure/database development; goal #3: fee schedule evaluation; and goal #4: volunteer participation. Goals for year two were the continuation, expansion, and refinement of goals 1—4 and initiation of goal #5, the development of some exhibits. Goals for year 3 are the continuation, expansion and refinement of goals 1 through 5 and initiation of goal 6, additional funding and marketing. We have made significant advancements on these five six fronts and in compliance with the contract, which calls for a progress report every six months (first, second, third, fourth, and fifth six-months reports included for continuity), we submit the following:

Goal 1: Assessment of Existing Facility

First six months:

The present facility at Chestnut in Santa Ana, abandoned by the dissolved Natural History Foundation of Orange County (NHFOC) after their bankruptcy in the early 1990s, houses collections acquired mostly pre-1993. It has long been recognized that this facility is warehouse and not up to state or federal standards for curation facilities. Nonetheless, the County has done its best to maintain this building and it can be used to simply **store** large volumes of material. In terms of future growth, however, the facility is greatly undersized with respect to needed capacity and storage. Presently, although not quite at full capacity, available storage space is extremely limited. An abundance of large, unprocessed plaster casts occupy much open space and empty shelves are limited. This situation, which the County inherited from the NHFOC despite their longstanding dedicated efforts, has contributed to the program's inability to receive additional collections for the past 8 years.

A future facility to meet state and federal curation guidelines should have filtered lighting, well-insulated and -sealing windows and doors, bathroom facilities, temperature and

¹ The CSUF goals are presented slightly differently than those identified by the County in the Request for Proposals.

humidity control, adequate work space, safety and security systems, especially fire suppression and intrusion detection. Unfortunately, these features are lacking at Chestnut; they were not viewed as necessary requirements of curation facilities at the time the NHFOC undertook the stewardship of the collections more than twenty years ago. Furthermore, at this point in time, these features would be difficult, if not impossible, to install. It was decided that these capital improvements to this facility would be money ill spent, and any capital improvement money would be better expended on improvements to a more workable facility than this one. Sadly, the condition of Chestnut warehouse adversely impacts the level of volunteer effort and the day-to-day working conditions of trying to manage the collections. **Alternative/additional space** options have been and continue to be investigated by the County. For several years, the solution seemed imminent, centering around three buildings on the Tustin MCAS property that the approved base closure plan has designated/dedicated to this A/P project. It is hoped that once an interim lease agreement between the City of Tustin and the Navy occurs and the sublease with the County is in place, these buildings can be used to house most of the collections presently stored at Chestnut, and, more importantly, will provide space to accommodate the great volumes of material/collections presently stored by a number of developers and Archaeo/Paleo firms who have been safe-guarding materials collected since 1992. Getting **all** these collections organized under "one roof" is a **high priority**; not only will it facilitate inventorying, cataloging, research and future display, it will allow the County to maintain their collections at a facility capable of meeting state and federal curation guidelines. The new facility also will relieve a huge burden for the firms, many of whom are dedicated to preserving Orange County's natural and cultural patrimony but are now stressed to the limit in holding these collections. Ultimately, the new facility will ensure that Orange County's natural and cultural patrimony is not lost. If a new facility at Tustin is not available soon, alternative sites with similar capabilities must be sought.

The Tustin facility, visited by the PIs several times over the course of the first six months, has much promise as a curation facility, with nearly twice the storage capacity of Chestnut as well as office, library, and lab space, and restroom facilities. Patricia Shoemaker, facility planner CSUF, has visited the Tustin facility, and, based on her observations together with our projected needs, has developed a schematic and list of recommendations for this facility to meet health and safety standards (a copy of this material was submitted to the County under separate cover for internal review).

Second Six Months:

During the second six-month period, the storage capacity of the Chestnut Avenue warehouse (main metal building + yellow wooden building) was increased by ~3,000 square feet. This was accomplished by the County's procuring additional storage shelving units and the relocation of pallets with plaster-jacketed large vertebrate fossils from the floor of the yellow building to cleared open-floor space + additional racks and shelves beneath the lean-to structure along the north side of the records building. Several jackets on pallets were arranged for greater ease in future specimen preparation work. Additional space in the Archaeology section of the main building was created through more efficient space utilization and moving boxes to upper shelves. Once this new space was freed up, a letter was prepared and distributed (with a second follow-up reminder) to all certified archaeologists and paleontologists as well as members of the

building industry, inviting them to submit a short proposal that provides names and numbers of projects, square footage of shelf space, dimensions of jackets, extent of project documentation (final reports, field maps, photos, copies of field notes, etc.), and scientific significance of the collections if they were interested in moving some of the collections that they have been accumulating since 1992. The deadline for response was August 15, 2000. Responses were received from six major firms. Movement of collections into the warehouse is scheduled to begin September 2000.

Also, the curation capabilities of the facility were upgraded significantly through the purchase of curation equipment, including: lap top computers for Eisentraut and Cooper to facilitate onsite cataloging; additional tools for cleaning and preparing fossils; wagons for moving chairs, buckets, tools to preparation site; a hydraulic table lift to hoist small to medium plaster jackets (<1000#); a new hand truck for moving heavy boxes; and a reciprocating saw for cutting plaster jackets.

News on the eventual (?) move to the Tustin facility is encouraging, and efforts have been made to “gear up” for this move, which, when accomplished, will represent a quantum leap forward in the success of this project. An Engineering firm is assessing the three buildings (#20A, #90, #533) that have been designated for this A/P project. We completed a questionnaire asking for information regarding use, special needs, etc., and also supplied them with the detailed floor plans/usage plans that were drawn up by CSUF facility planning during the first six-month period.

Third Six months:

The third six-month period provided a good test for how effective the present Chestnut warehouse complex is as a **curation** facility. Much of the additional space that was created during the second six-month period was filled with the accessioning of several large archaeological and paleontological collections from CRM firms. The accessioning of these collections was approved after the August 15 deadline (extended to September 1, 2000) for submitting short proposals in response to our invitation letter (see second six-month report above). The largest paleontological collection, from RMW Paleo Associates, included 206 standard-size specimen boxes and 69 plaster jackets, representing 28 different projects, spanning the late 1980s to late 1990s. This large collection was submitted in excellent condition and accompanied by thorough documentation, and represents a move toward the kinds of quality and consistency we are attempting to make standard policy. However, ample storage space to accommodate this collection was not complemented by curation space. This large collection placed a strain on the curation/accessioning capabilities, severely hampered by lack of adequate work and document filing space. Yet another large collection was submitted by JMA and included well-prepared and curated specimens, with accompanying documentation (reports and specimen catalogs) from the San Joaquin Hills and Foothill Transportation Corridors, as well as several other major projects. Again, we had adequate shelving for these collections, but poor lighting and insufficient workspace to examine these materials. Included in these collections are a number of delicate vertebrate specimens that require temperature and humidity control conditions, also severely lacking in the present situation. Other, more modest-size collections

were submitted by ARMC and MBAS, and accompanied by full documentation. All of these newly accessioned paleontological collections are presently being housed in a highly organized manner in the yellow building at Chestnut. The collections and their management here are exemplary of our working model curation plan development.

RMW Paleo Associates and ARMC also submitted large archaeological collections. As with their paleo collections, RMW archaeological material spanned a ten-year period and included over 100 standard size storage boxes. Each box was labeled to site, but additional information – project name, catalog numbers and contents enclosed – varied from box to box. Additionally, many artifacts were packaged loose in their boxes that over the long term is not archivally proper. Overall, however, the RMW Paleo collection is in better shape than many of the collections presently housed at the warehouse; the boxes are labeled, in general are not overly packed (excessively heavy), and each collection includes a final report. ARMC’s archaeological material also included over 100 boxes of material, although these are the smaller, hinged half-sized boxes. Each box was identified by site and content. Attempt had been made to note the number of boxes present per collections (i.e., 1 of 20, 2 of 20, etc.), but many boxes included redundant numbers or no number at all. Additionally, many of the ARMC boxes were heavier than archivally stable. Reports were submitted for the collections but for some of the reports it was unclear which report went with which collection. To correctly assess the ARMC collections, they will need to be brought to CSUF where adequate space exists to review all of the materials. There simply is not enough workspace at the warehouse to accomplish this task. As both the ARMC and RMW collections are in relatively better shape than other archaeological collections in the warehouse this task is low on our present list of priorities. Other archaeological collections in critical need of attention are presently being transported to CSUF for improvement.

All of the above-discussed recent paleontological and archaeological collections were accessioned without any fees because none of the collections had fee clauses in the original conditions of approval language for the development projects. Moreover, a “grandfather” posture was determined to be the only equitable way to accept these collections that had been safeguarded, at their expense, in good faith by the CRM firms.

In addition, since the last six-month report, little or no progress has been made on the County’s designated property at Tustin MCAS, and more specifically the three buildings that have been designated by the County for the A/P project. Negotiations for lease agreements have stalled, with little encouragement for significant progress in the short term. Without this, or some comparable alternative space option, this project, and the very positive progress made thus far, will be severely hampered. **We therefore make the following recommendations:**

RECOMMENDATION 1: As we attempt to implement the evolving model curation program, it is becoming ever more painfully obvious that an upgraded facility with controlled humidity and temperature, clean, dust-controlled office space (especially for computers, copy machine), clean and dirty lab space, and curated specimen space, in addition to bulk storage space, and staffed with scientific personnel is a must. We have reached a critical crossroads—while on the one-hand we will have developed a viable model curation program, we have also brought Orange County archaeology/paleontology to the point where a perpetual system must be developed. Otherwise the momentum will be stalled at a critical time. Therefore, looking ahead to a point beyond the termination of the present contract, we strongly recommend forward-thinking

planning for a fully functional facility (including staff), which at a minimum would include, assuming a modest **core** facility of ~**40,000 sq. feet**:

1. Exhibit/display area (25%)	10,000 sq. ft.	
a. Permanent	7,000	
b. Temporary (3-4 special exhibits/year)	3,000	
2. Collections/storage/prep (~52%)	20,000	
a. Gross storage (ready for prepping)	13,000	
b. Resource preparation (state-of-the art Prep labs)	2,000	
c. Prepared collections (could utilize Collapsible units, e.g. SDMNH))	5,500	
3. Administration/research (~10%)	4,000	
a. Administrative/cultural offices	2,000	
b. Research library	850	
c. Custodial maintenance/security	750	
d. Employee area (copy facilities; supplies)	200	
e. Visiting scientists work area		200
4. Public programming (~8%)	3,500	
a. Auditorium	1,700	
b. Classrooms/workshops	1,800	
5. Lobby, restrooms, stairs, elevators, ramps, etc. (~5%)	<u>2,000</u>	
	total: 40,000 sq. ft.	

The Collections/storage/prep areas should include a high-security storage area for sensitive specimens (exceptional paleontological specimens/human remains/burial related items), two separate laboratory spaces - one for prep work that may be dirty and one for cataloging, repackaging, etc activities that are generally a lot cleaner and so shouldn't be conducted in the same space with the dirtier prep work. Particulate pollution needs to be kept to a minimum. The facility also needs two different rooms to study collections - one

for specimens/artifacts and one for records. Again we need to think about minimizing particulate pollution, a requirement of state/federally approved curation facilities. The Army Corps of Engineers in their review of similar floor plans also suggests a separate room for conservation so that chemicals contamination can be confined to one place within the facility.

6. Staff requirements: “bare bones”

a. Full-time curator, paleontology (a vertebrate specialist); b. full-time curator, archaeology; c. Half-time collections manager/registrar, paleontology and archaeology (some of this could be done on a web-based system); d. full-time specimen preparator, paleontology. Total number of recommended staff is 4. Hopefully, Curator positions could involve some CSUF faculty (new positions?; split-duty assignments? salary matches between CSUF and County?)

Interim upgrades at the present Chestnut curation facility should include: a new “lean-to” (carport-type) structure on the north side of the yellow building; erection of new heavy duty racks and shelving along the northeast wall of the main records building; electrical upgrade in the main warehouse building, and an office/clean lab trailer.

Fourth Six Months:

During this period we continued to test and evaluate the Chestnut facility in terms of meeting the needs/basic requirements of a curation facility. While various improvements were made to enhance the curation (vs. bulk storage) component of the project, the facility still suffers greatly from lack of climate (temperature and humidity), dust, and pest control, as well as security. Lack of climate control is especially critical because of the deterioration of delicate vertebrate fossils once they have been removed from their confining plaster jackets. Lack of dust control and crowded conditions make this facility unattractive, both for project personnel and for volunteers, and difficult to work in. Spiders are a significant problem in the archaeology portion of the main warehouse and a small mammal or rodent has already damaged newly prepared archaeology collections in the yellow building. Conditions at the warehouse continue to make it easier to work on archaeology collections back at CSUF.

Improvements that were made by the County during this period include:

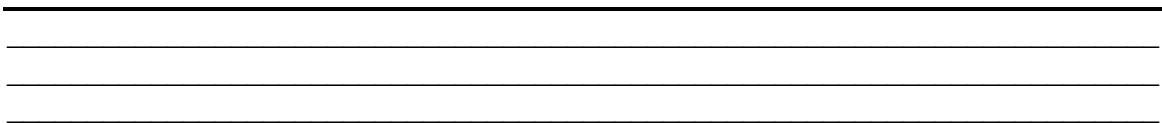
1. Installing two new electrical circuits and breakers, which solves the problem of tripping single circuit breaker due to power overload (especially in the winter when it is necessary to use electrical floor heaters in addition to the normal demand for electric lamps to ensure well lit areas for delicate lab work, as well as laptop computer data entry);
2. Repairing and making operational one of the two ceiling heaters, which will help circulate warm air during the cold winter mornings;
3. Weed and pest abatement;

4. Obtaining permission from County surplus to store office furniture and supplies in their building between the east records building and the yellow wood A/P storage building #2 (This move freed up some additional work and specimen storage space.);
5. Construction of new “carport” (lean-to) structure on north side of yellow wooden building for more outdoor jacket storage and preparation space.

Our conclusions underscore the recommendations for an adequate curation facility proposed in the third six-months report (see previous section).

Yet another test for how the warehouse functions as a curation facility concerns our ability to serve the paleontological and archaeological community. In this regard, it stands up to the test far better than does the physical plant. Because of the improved organization, record keeping, and cataloging, we have been able to provide critical information for several searches by CRM firms, CALTRANS, independent researchers, and the Natural History Museum of Los Angeles County (LACMNH). This information has been used for initial paleontological surveys, graduate student research (in archaeology), and general resource management, as well as for the loan of specimens for research and display (see later discussion under OTHER ACCOMPLISHMENTS).

Finally, Selway has spoken to Bob Hamilton, County of Orange, about the possible interim use of two of the buildings at Tustin MCAS for storage and curation, but no word has been forthcoming.



Fifth Six Months:

Our recommendations remain the same as previously: improvements in working conditions are needed for a facility more conducive to onsite volunteer activities, work space, and controlled temperature and humidity housing of prepared paleontological specimens as well as some archaeological materials. In this regard we put forth a recommendation for a limited use at Tustin MCAS:

From: Phyllisa Eisentraut and John Cooper, Co-PIs,
CSUF—OC Archaeo/Paleo (A/P) curation contract

Subject: Proposed use of Tustin MCAS buildings 90 and 533

- Personnel:**
- (1). 2-3 supervisory staff in Bldg 533 (armory), 2-3 days per week;
 - (2). 4-6 volunteer staff in Bldg. 533, 2-3 days per routine work week;
 - (3). Up to 15 persons involved in vertebrate fossil jacket preparation (prep) **program** – includes 2-3 prep supervisors and 10 to 12 volunteers; mostly during weekends and summer months; also up to 5 or 6 people involved in

screen-washing for archeological materials on “once-in-a while basis;

(4). 2-3 people in Bldg. 90 (warehouse) 2-4 hours/week

Initially, the move from Chestnut and the set-up/arrangement of the two buildings would require more hours and temporary staffing (maintenance and inmate crews) over a several week period.

Facility use: Attached are floor plans for the two buildings, with annotations describing intended use and distribution of personnel. Daily use would be confined to Bldg 533 (armory), but limited access and activity would be required from time to time in Bldg. 90 for retrieval and accessioning of materials

Needs: (1). racks and shelving for Bldg. 90; use of ramps/loading docks

(2). periodic use of fork lift in Bldg. 90; use of roll-up doors

(3). good interior lighting and temperature/humidity control in Bldg. 533;

(4). fully functioning restrooms in Bldg. 533;

(5). use of water source and drain in Bldg 533 courtyard

We hope this plan meets with all levels of approval and that this limited use of Tustin MCAS will be forthcoming in the near future. This use of TMCAS would represent a major improvement in the County’s A/P program allowing for future access, curation, and preservation of important archaeological and paleontological collections.

Although the Chestnut facility is less than ideal, we have continued to serve the archaeo/paleo community by accommodating a number of requests for collection information and paleontologic locality and faunal information from CRM firms, environmental firms, the U. S. Geological Survey, and the Natural History Museum of Los Angeles County.

Sixth Six Months (Feb. 25 – Aug. 24, 2002):

Adjustments and improvements to the facility have continued to upgrade the curation capabilities. Addition of some new table-work space in the paleontological section was created with the preparation and bone

salvage of a large jacketed fossil whale specimen and the removal and disposal of the empty jacket. The archaeological portion of the warehouse was cleared of miscellaneous office materials donated to the program and a small table with a computer was hooked up to facilitate a more box specific inventory of the archaeological collection. Archaeological materials and documentation were also reorganized in order to better access the newly curated collections.

It is important to note, however, that the facility remains substandard for curation owing to lack of dust abatement, temperature and humidity control for specimens and documents as well as personnel, and storage capabilities. Despite these drawbacks, the collections have been sufficiently organized, inventoried, and matched with documentation to serve the scientific community for inquiries about information on paleontologic localities and specimens and archaeological collections and documentation.

During the sixth six-month period paleontologic services such as locality and specimen information, as well as loans, were provided for several CRM firms, the Natural History Museum of Los Angeles County, the US Geological Survey, and the San Diego Natural History Museum (SDNHM). Regarding the SDNHM, Dr. Tom Démeré is conducting funded research on Miocene otariids (sea lions and seals) and is keenly interested the otariids in the warehouse collection. We are presently inventorying these particular specimens for Dr. Démeré.

Archaeological services for this same period were provided to the Department of the Navy – Southwest Division Naval Facilities Engineering Command through the San Diego Archaeological Center, CALTRANS, Orange County Harbors, Beaches and Parks (OCHBP), and the local Native Americans. The San Diego inquiry resulted in the deaccessioning of a small collection from ORA-22. Research into the collection indicated that it was collected from badly disturbed deposits situated on Camp Pendleton/CALTRANS land and as such was actually property of the federal government. CALTRANS continued to investigate their need to upgrade information and curation on collections stored at the warehouse. CALTRANS collections are subject to federal law, which requires them to periodically review the state of their collections housed at curation facilities around the state. Unlike other depositors, CALTRANS collections remain the property of the federal government and cannot be gifted. Eisentraut is working out a MOU with CALTRANS to bring their collections up to current curation standards - basically applying the curation policies established by the Orange County model curation program to their materials

stored at the warehouse. The work on the collections will be conducted by CSU Fullerton, but the MOU will be administered through CSU Sacramento as they have been retained by CALTRANS to administer all of their curation related work throughout the state.

OCHBP assistance involved the transfer of an archaeological collection housed at the Old County Courthouse to the warehouse. Conversations with Joyce Perry concerned local Native American access to a collection from the Newport Back Bay.

Also during this period Mooney & Associates finally delivered their archaeological collection for Talega-related construction. Carol Serr, the Money & Associates Archaeological Laboratory Director, reported the existence of the collection as part of the June 2000 inquiry of outstanding Orange County collections. It was agreed in September 2000 that the warehouse would accept the collection as part of the “grandfathering” in of material safeguarded by local archaeos and paleos. It has taken the company close to two years to compile supporting paperwork and documentation for the collection, and to schedule a delivery date to the warehouse. Serr and Eisentraut finalized a delivery date in early July, and Ted Cooley delivered the collection and assisted in its organization at the warehouse on July 23.

Activities such as those described above continue to give the Orange County curation facility scientific credibility and provide the scientific community with an important service.

Goal 2: Procedures & Policies/ Inventory/ Database

Development

First Six Months:

A major undertaking during this first six-month period involved the research, consultation, and writing of a draft policy and procedural manual for Archaeology and Paleontology. The Project PIs availed themselves of previous County guidelines and the

Natural History Association guidelines, and had consultations with Museums in the region and numerous individual scientists to put together a document that recommends policies for how Orange County collections are to be managed far into the future – from acquiring materials to curation and cataloging. This document (submitted to the County under separate cover for internal review) is structured as follows: Part I, aimed primarily at the interested public and County-wide personnel, presents background information on Orange County Archaeology and Paleontology to facilitate understanding and appreciation of the sensitivity and importance of these nonrenewable resources (justification for Part III); Part II discusses various kinds of impacts to these resources, both positive and negative; Part III, aimed primarily at the A/P community, discusses mitigation of adverse impact, from pre-construction mitigation, to construction mitigation, and detailed procedures/guidelines for pre-accession preparation of collections to the point of curation, report preparation, procedures for accessioning and deaccessioning of collections in/out of the facility, and a loan policy. Part III attempts to standardize all aspects of collection development and management, including use of archival containers, paper, and tags, locality and specimen numbering systems, and development of a state-of-the-art museum-type database and cataloging system. The main purpose here, of course, is proper and consistent handling of the collections through all phases, pointing toward future accreditation as a museum facility, and putting ourselves in more favorable position to be considered for future curation grants.

One of the main tasks/accomplishments during the first 6-month period has been a time- and labor-intensive inventorying of the collections at Chestnut. For paleontology, this has involved updating and preparing new inventory cards for containers and general contents for each shelf on each rack (310 shelves on 62 racks in the main building; 65 shelves on 13 racks in the yellow building), as well as 15 gray metal cases and 16 wooden cabinets containing mainly previously cataloged specimens and mapped location of plaster jackets presently outdoors under protective roofing. During this important familiarization with the collections, much re-boxing of contents of fatigued boxes and reorganization for more efficient utilization of space and bringing collections from specific projects together has resulted. Additionally, to a large extent, rocks and minerals, out-of-County fossils, and specimens that have been previously used for teaching and displays have been separated out from the main body of the paleontological collections. A by-product of this first-round inventorying and organization has been a neater, cleaner, less intimidating warehouse.

For archaeology, this phase involved inventorying and reorganizing the contents for each shelf on each rack (240 shelves on 40 racks) in the archaeology section of the main warehouse, relocating material from the paleontology section of the warehouse and from the yellow building, and generating an Excel spreadsheet of the 250+ sites with collections at Chestnut. Overall, over 2700 boxes of material and 200+ pieces of ground stone were cataloged to general provenience. Several boxes were relabeled, as provenience information was no longer visible or re-boxed, as previous packing had resulted in cardboard collapse. Additionally, notes were taken as to the condition of several collections, prioritizing future work efforts. For example, one more recent submission relocated from the yellow building was plagued by mold and will need to be cleaned and re-boxed/relabeled in order to salvage tags and provenience information. Several other boxes, records from several collections were infested with silverfish and need to be placed in a cleaner and less humid environment. As with paleontology, but to a far lesser degree

because the collections were much better organized to begin with, first-round inventorying and organization has resulted in a neater, less disorganized warehouse.

We have contracted with RMW Paleo Associates (a Disadvantaged Business Enterprise [DBE]) to hire one of their employees, Kim Scott, to set up a comprehensive database and cataloging system in Microsoft Access. Kim is very well qualified to do this work because she has had considerable experience working with museum collections and databases, she is a first-rate paleontologist and specimen preparator, she has a working knowledge of archaeology, and she has had extensive experience with the Microsoft Access software. Additionally, Kim's brother, Rick Cooper, is an experienced programming consultant, and he is writing the actual program for the database. Kim has consulted regional museum personnel about database formats and fields and has presently installed all the fields for paleontology, while Dr. Eisentraut has done the same for archaeology. Kim has compiled a list (>3000) of fossil taxa known to occur in Orange County. Dr. Eisentraut has similar list of hierarchical artifact classes for archaeology, approximately 3000 prehistoric and historic entries. Rick is working on the links between and among fields so that the program will be extremely versatile as well as user-friendly. For example, specimens and artifacts can be linked with geographic location, project, stratigraphic formation, geologic/cultural age, reports, photographs, other provenience documentation, and scientific status. The program can be used to track loans and conservation treatments as well. The database will also be able to incorporate information from two previous NHA and OC locality and specimen databases done on Q and A and d-Base 4, the largely non-cataloged part of the existing collection, and the site database from the regional archaeological/historical information center at UCLA. Additionally, condensed versions of the database format can be put on a CD-Rom and sent to contract firms who plan to donate collections to the curation facility. Hence they will submit a catalog on Microsoft Access as part of the prerequisites for getting their materials accessioned into the curation facility. Kim and Rick will prepare a user manual and we will plan to have some database user workshops.

Second Six Months:

After receiving important feedback from the County and selected consultants, the Policy and Procedural Manual entered its second draft phase, with fine-tuning of critical points and the restructuring and reformatting of various parts to make it more readable and to highlight critical sections. The second draft will be sent out for another round of reviews in September, with hopes of submittal to Board of Supervisors for Approval in December.

A major task for the second six month period in Paleontology involved completing the initial paleontological inventory on index cards and transferring this information + NHF (=NHA) locality catalog information onto computer excel spreadsheet for inventory catalog. The computer spreadsheet catalog has led to further examination of boxes for provenience information and other documentation, providing continuing familiarization with the enormous collection. As of August 24, the general contents of 37 racks and 216 shelves, including more than 2000 boxes and flats and more than 50 plaster jackets are now on the computer (out of more than 75 racks, 525 shelves, and 4000 boxes and flats, and 125 plaster jackets). Attendant with this computerization

has been an extensive search for records and the filing of records and reports. Individual items/boxes/jackets have been color-coded on the spreadsheet to indicate suitability for research, education, or display, as determined by nature of project or method of donation, scientific significance, quality of material, and amount of supporting documentation

For Archaeology during this same second six-month period work has progressed on several fronts. In addition to assisting with the creation of the archaeological portion of the curation database (discussed below), documentation on the County archaeo collections (provided to Eisentraut by the Pacific Coast Archaeological Society) was inventoried, organized, and used to direct work on updating (repackaging, reorganizing, and checking artifact inventories) several of the warehouse collections. Considerable space has been saved during this process as updated collections have been condensed into fewer, but better organized boxes. The inventory of the archaeological portion of the warehouse is in the process of being updated to reflect these changes. Also, PCAS continues to conduct ongoing preparation work at the Orange County Courthouse on collections from the warehouse.

The comprehensive specimen/artifact/locality database on Microsoft Access programmed and formatted by Kim Scott of RMW Paleo Associates and private Consultant Rick Cooper was finally completed in early July 2000. During the last 6 weeks of the second six-month period this database has been tested using specimens collected and prepared by Paleoenvironmental Associates from the eastern Transportation Corridor.

The "Doing Curation" exhibit, although not yet installed in the Anthropology Teaching Museum, was further elaborated and planned. Dr. Marjorie Kelly's Museum Science class spent the Spring 2000 semester working on floor plans, label and other design elements. A binder of their work is on file with Eisentraut. Additional time organizing content and presentation was conducted during the summer. A time line/changing landscape mural was designed and submitted to Discovery Works for possible fabrication.

Third Six Months:

The second, greatly improved draft of the comprehensive Policy and Procedural manual, complete with Appendices A to Z, has been submitted for County review. Once we have feedback from the County, we will send it out to designated CRM firms, the NHA, and SCAS for review and feedback. Our aim is to submit it for Board of Supervisor approval by June 1, 2001. We are also working on an in-house manual that establishes guidelines, procedures, and policy (including safety issues) for day-to day functioning of the clearinghouse.

The **paleontology** inventory catalog has been completed and thoroughly edited and includes all collections presently housed in both buildings, as well as numerous jackets under the two lean-to structures. Also a major effort has been expended to locate

and organize documentation (such as reports, field notes, maps, photographs) for many of the individual collections, especially those resulting from grading projects. These have been recorded on the inventory catalog. A major effort during Spring 2001 will be to rebox all remaining fatigued boxes and continue search for documents that may be within boxes.

The original **archaeology** inventory catalog is in the process of being upgraded to include, where available, project names, catalog numbers, and gross contents by box. This upgrade is driven by the collections received during the third six-month period by RMW Paleo Associates and ARMC. As these CRM firms are responsible for providing many of the collections in the warehouse and when they submitted the recent collections they provided more complete information, it is now possible to go back and interpret some of the information listed on the older collections. Additionally, significant progress has been made in reorganizing collections (to allow for a great amount of useable space) and in archiving older, poorly organized/labeled collections. There has been a significant decrease in the number of boxes needed to house the collections. Lastly, several fatigued boxes have been replaced, a task that will continue during Spring 2001.

The Microsoft ACCESS database has been completed and is presently being tested to catalog paleontological specimens from the Eastern Transportation Corridor (scheduled for accessioning into the clearinghouse Spring 2001)– an important implementation strategy at this stage of the program. Kim Scott, the data base developer is also working on a training manual, which along with several planned workshops, will train and familiarize members of the A/P community with its use. Information on the archaeological database was shared with Marshall Duell, County archivist, in order to determine whether or not the County could use the A/P database as a model for cataloging all of their historical collections.

Fourth Six months:

The second draft of the Policy and Procedural Manual has been reviewed by County staff and Stuart Ross, as well as by Dr. Keith Dixon of the Historical Commission, and is now ready for another round of revisions. While the County was reviewing the document, we also made further improvements in the Mitigation section and highlighted those recommendations that will require Board of Supervisors approval. At Stuart Ross' recommendation a separate, stand-alone document detailing the scientific protocols for paleontology was created. Additionally, we will make a separate list of these issues to present to the BOS, including rationale for relaxing BOS resolution 87-516 for scientifically significant specimens, particularly holotypes, in accordance with proper scientific protocol. Once we have made the revisions, we will put the document on the **project web site** for more widespread archaeo/paleo community scrutiny and comment. We hope to have this important document ready to present for final approval by the end of the year.

During the fourth six-month period, ongoing efforts to refine the paleontological and archaeological inventory catalogs continued with marked success. For both

archaeology and paleontology, this included gathering of more detailed information on some collections, and for paleontology, developing separate construction project and non-fossil materials inventory catalogs. The pulling together of documents related to specific project collections remains a time-consuming ongoing process. Several archaeological collections were found to lack any kind of documentation. Records on file with the County and the South Central Coastal Information Center were searched. A final report and catalog were found for ORA-173, but the search is on-going for ORA-853. Additionally, some volume reduction was accomplished by more efficient utilization of shelf space, reboxing, consolidation, and tighter organization of individual project collections. Several severely damaged archaeological collections were reboxed in an effort to ensure that materials were not lost. The new packaging increases collection size to a small degree as the previous, damaged boxes were overpacked, contributing to the boxes' original failure. Paleontology boxes previously stored on pallets in the main building have been shelved, with concomitant updating of the inventory catalog. We are also working on a separate in-house procedural manual that relates to activities at the curation facility, geared mainly to the training of volunteers.

The paleontological database has been completed and used thus far for the cataloging of Eastern Transportation Corridor (ETC) specimens and localities. We are hopeful that this collection will eventually be accessioned into the curation facility. The paleontological database training manual, written by Kim Scott, has been edited and revised and is presently going through another edit. The archaeological database is undergoing substantial revisions. Additionally fields were added under all categories. Substantial information was added for classes of archaeological remains, both archaeological/ethnographic and historical. These changes have been addressed by Kim and are presently under review.

Fifth Six Months:

Work continued on the fine-tuning of the archaeology and paleontology inventory catalogs, collection organization, including some reboxing and reshelving, and locating, coordinating, and filing of individual collection documentation. New collections brought back to CSUF for processing in the archaeology lab were found to lack documentation (as occurred during the previous six month period) and records on file with the South Central Coastal Information Center and in the CSUF archaeology lab were searched. Some helpful material was located for ORA-22 and ORA-287. Additionally, Ivan Strudwick of LSA provided a report for ORA-287 and CSUF graduate student Tracy Evans compiled a site history of all work at this same site. Additionally the paleontological database continued to be improved with testing on the ETC collection at the PEA, Inc. lab. Likewise, another level of editing and improvements on the database

user manual was accomplished. The Policy and Procedural Manual was finalized and placed on the project website for public viewing and comment in preparation for submission to the OCBOS for approval. A flyer announcing the availability of the manual was delayed by the preparations for the “Doing Curation” exhibit installed in the Anthropology Teaching Museum. However, members of the archaeo/paleo community have been made aware of the manual’s availability and a few comments regarding the document have been sent via the web-based comment page associated with the project website.

Sixth Six Months (Feb. 25 – Aug. 24):

Refinements continued to be made to the archaeological & paleontological Policy and Procedural Manual. Having made the manual available on the project website provided for some valuable feedback, but the large size of the pdf file caused some problems in accessing the file and downloading. Currently, the document is being subdivided into smaller segments (sub-files) for easier access and for soliciting improvements both for the manual itself and for the presentation of the manual electronically. Refinements also continued for the archaeological and paleontological database systems and inventory catalogs. Paleontological and archaeological collection and supporting document organization continued to improve with the acquisition of additional reports, including field notes, maps, and reports. Paleontological materials were obtained specifically for the Mission Viejo area. Archaeological documentation on file at the South Central Coastal Information Center and the CSUF Archaeological Laboratory continued to be valuable sources of collection information. Reboxing and examination of selected paleontological and archaeology collections continued as well.

Goal 3: Fee Schedule

First Six Months:

Inasmuch as the collection of fees to help offset curation and operational costs is customary at most curation facilities, we have developed a preliminary fee structure for: accessioning and storage of artifacts/specimens (with justification for fee amount); paleontological records search; onsite artifact/specimen examination; and artifact/specimen loans. A fee schedule/structure is an important element of any curation procedural/policy manual; the collection of fees is the primary way in which curation facilities support their endeavors and maintain collections in perpetuity. The Fee Schedule developed by CSUF is a recommendation. It is recognized that prior to the implementation of any fees for the curation of Orange County collections review and approval by various entities, including the BOS, will be necessary. The County may choose to fund the curation of archaeo/paleo collections with moneys from the County Building and Safety Fund, per previous policy recommendations.

Second Six Months:

Discussions about fees and fee structure were held at a number of the monthly meetings and recommendations will be made in the second draft of the P & P document.

Third Six Months:

A system for generating fees to offset curation costs (e.g. accessioning collections, prepping specimens, database management) is needed as the project takes on more curatorial responsibilities (even though we do not have an adequate facility). There exists in the County financial structure a fund known as the **Building and Safety Fund**. Years ago a portion of this accumulating money was earmarked for scientific cultural curation, but no mechanism has been emplaced to tap into this fund. We therefore recommend the following:

RECOMMENDATION 1: A system needs to be emplaced to provide dollars from the B&S fund for curation **projects** on a proposal by proposal basis. One major need for curation funds involves the present paleontological collection, much of which has lain largely unexamined since it was first stored. It will take years, if not decades, to curate (including prepping, taxonomic identifications, and cataloging) the present collection (and the length of time will be related to the degree to which an upgraded and staffed facility becomes a reality—see recommendation 1).

In addition, it is standard procedure for curation facilities to charge fees for the accessioning of collections. In the case of development projects, such fees should be borne by the developer, and

CRM firms should make allowances for these fees, once instituted, by structuring them into their budgets for the particular project.

RECOMMENDATION 2: There will be a **one-time fee** per project charged by the curation facility for permanent curation of materials. This fee will be used to compensate the facility for storage space, cabinets and/or shelves, access to aisle space, a retrievable catalog system, additional preparation and organization, filing, and labor involved in the above. The **minimum fee** for materials and records **that meet clearinghouse guidelines** is **SUGGESTED** to be **\$250.00/cubic foot** for well-prepared materials and **\$300.00+/cubic foot** for unidentified or unsorted bulk samples. Actual charges will be on a sliding scale, with the assessed amount commensurate with the degree of pre-transfer preparation the donor has completed. The better and more complete the preparation, the smaller the accession fee (**minimum of \$250.00/cu. Ft.**).

Yet another function of a curatorial facility is to provide access, both onsite and offsite, to qualified representatives of scientific firms and institutions for the purpose of examining nonproprietary paleontological and archaeological information such as specimens and artifacts, locality information, reports, faunal lists, etc. for legitimate research or environmental mitigation purposes.

RECOMMENDATION 3: The following proposed information access fee structure is consistent with charges levied by other curatorial facilities/museums:

Locality search fee:

In addition to the one-time only fee (minimum of \$250.00 sq. ft.) for accessioning new materials into the curation facility, there will also be fees for procuring information about archaeological and paleontological artifacts and specimens, paleontological localities, and gaining access for scientific work on artifacts and specimens. The clearinghouse will maintain a file of locality maps, reports, and eventually a catalog of localities and specimens and artifact. Requests for access to paleontological locality information should be sent directly to the clearinghouse and should contain a minimum level of information: firm name and address; firm project name and/number; Township, Range, and Sections to be searched; a photocopy of the study area on 7.5-minute USGS quadrangle map(s); level of search needed (see structure below). This fee schedule for a locality search is structured as follows (including turnaround time):

<u>Basic locality search (20 working days):</u>	\$110.00/hr offsite
	\$ 80.00/hr onsite

Client receives a cover letter, 8.5" X 11" copies of clearinghouse maps showing the search area and known localities, and locality sheets listing basic information about the localities in the study area. The locality sheets list formation, age, and basic material recovered from the site (e.g. cetacea and plants)

<u>Detailed Locality Search (25 working days):</u>	\$130.00/hr offsite
	\$100.00/hr onsite

Client receives all the material from a basic locality search but also a detailed listing of the materials collected from the sites located during the search. Most of these material listings will be taken from the archaeological or paleontological reports that located the sites, and will be subject to the limitations of those reports. A basic search can be upgraded to a Detailed Locality Search at any time prior to our sending out the results of the search. The fee to upgrade is \$20.00/hr.

Both the Basic Locality Searches and the Detailed Locality Searches can be expedited. A Rush Order will be delivered within one week of receiving the request and will be billed at twice the regular rate. A Super Rush Order will be delivered by email or fax within 24 hours and will be billed at three times the regular rate.

<u>Rush Order (5 working days)</u>	Basic Locality Search	\$220.00/hr
	Detailed Locality Search	\$240.00/hr
<u>Super Rush Order (24 hours)</u>	Basic Locality Search	\$330.00/hr
	Detailed Locality Search	\$350.00/hr

Large jobs (totaling more than 1,000 acres or more than three miles in the longest direction) will be charged the regular hourly rate, but may take longer to complete. **All requests will be completed on a first come, first served basis unless expedited.**

Onsite access to materials in the collections will be permitted to persons having an approved (by the curation facility) research proposal or have been contracted to conduct archaeological or paleontological compliance work (County of orange certified archaeologists and paleontologists). Visits to examine materials will be by pre-arranged scheduling only.

Loan fee:

Catalogued artifacts/specimens can be loaned to institutions (not individuals) for purposes of display, education, and research for periods of up to **one-year**, with opportunity to renew upon approval of renewal proposal. Standardized loan form must be completed prior to receiving material. Loan fees will be assessed for mailing/shipping and clearinghouse preparation time.

Fourth Six Months:

A letter was written to Tom Mathews, Director of Planning with the County, inquiring about the Building and Safety Fund and its possible use for A/P Curation. We are still awaiting a response. The fee structure for accessioning and information/specimen

retrieval, described above in the Third Six Months Report, will be presented to the Board of Supervisors for Approval.

Fifth Six Months:

There was a continuation of efforts to investigate the Building and Safety Fund as a source of curation fees. Negotiations also continued with the TCA to accession the ETC collection and agree to an accompanying fee structure. Looking ahead to the final phases of the present project, the following plan was put into an amendment to the existing contract. The grant project for developing a curation program is near the end of the proposed three-year timeline. An additional \$58,000 was transferred from a construction phase that was funded but is no longer proposed to the curation program. This amount has been earmarked for exhibits. At the end of the three-year contract, CSUF, the contractor, will have grant funds remaining that could be used to effect a smooth transition from their lead to the County's continued role as managers of the collection with an extension of one-year for to continue the existing scope-of-work, even though the terms of the original agreement will have been met at the end of the three years (August 24, 2002). These goals and deliverables include: the organization and preparation of the existing warehouse collection of fossils and artifacts; development of a draft policy and procedures guidelines for professionals in the field to standardize methods in data collection, reporting and identification of finds; development of a database system for future cataloging of materials. The status of the project is routinely summarized in six-month reports to Harbors, Beaches and Parks, Cultural and Historical Programs section. Once the grant funding is ended, the County will need to find means of continued support for the long-term maintenance and curation of its collection. Options that have been discussed include but are not limited to the following:

- Establish an interest-bearing account for curation fees that could be required of project proponents. Management Services has advised us on the process for earmarking donations from developers for funding curation. The interest from the curation fees would help fund future curation-related activities.
- In-lieu of new fees, access Building and Safety Funds collected for past development projects involving the cultural resource mitigations that led to the recovery of the artifacts and fossils currently warehoused in our collection.
- Seek further grant opportunities. CSUF has prepared a list of potential sources of grant funding.
- Seek private donations to support the County's significant collection.

- Affiliate with another institution, such as Los Angeles County Natural History Museum, that can serve as an umbrella organization, providing scientific resources and staff, as well as satellite exhibitions.

The contractors, CSUF, will prepare a final package that includes their professional advice on what is required to maintain the archaeological and paleontological resources that are in the County’s care with the intent to make these fossils and artifacts available for public viewing and scientific study.

Sixth Six Months (Feb. 25 – Aug. 24, 2002):

The amendment to the curation program agreement was approved by the Board of Supervisors June 4, 2002. This included a one-year extension of the curation project and the addition of \$58K, a fund dedicated for exhibits by a CalTrans grant. This \$58K will be used during the one-year extension of the project for several new exhibits and to partially replace other monies used for the “Doing Curation” exhibit. (see section i. Under Other Accomplishments)

Goal 4: Volunteer Participation

First Six Months:

For Paleontology, volunteer participation thus far has involved the following individuals: Camilla Wallis, long-time NHA volunteer, has worked extensively with Cooper on the paleontological collection inventory and is presently working on completion of the d-base 4 specimen catalog (which eventually will be incorporated into the new system).

Patty Hatfield and Carla Sawyer are also long-time volunteers with the NHA who previously worked at the warehouse under the direction of Lisa Babilonia, County Paleontologist

– Clark Park, and have continued to work with Cooper on various tasks, especially the prepping of several vertebrate specimens in plaster jackets. Cam, Patty, Carla, and Lisa have provided a smooth transition for this project’s work at the Chestnut facility. Their long experience and expertise have been greatly beneficial for accomplishments made thus far.

For archaeology, volunteer and student participation has thus far involved several CSUF students (Sandra Kennedy, Kenneth Payne, Mariam Dahdul, Caroline Braker, Adrian Lopez, Susan Underbrink, Jill Cooley, Liz D’Arcy), the archaeology PI’s mother (Kristi Slowter), and an interested member of the public (Sharon Reck).

Student involvement has centered on the inventory and organization of the warehouse material. Sandra Kennedy, who conducted an internship on archaeological curation at CSUF, is also a member of the Pacific Coast Archaeological Society and was instrumental in getting a preliminary inventory of the archaeological collections from that organization. She had worked with the collections before, helping to repackage materials badly damaged by the leaking roof. She worked closely with the other volunteers and has developed a short volunteer “How to” sheet for tips on what to do when dealing with an inadequately curated collection.

Second Six Months:

In addition to Camilla Wallis, Patty Hatfield, and Carla Sawyer, volunteers for **paleontology** included: Kristy Harbour (inventory), Jill Cooley (computer inventory), Leah Hahn (specimen prep) and Paul Alms (specimen prep), all from CSUF, and Lisa Babilonia (Clark Regional Park) assisted with report and loan form copying. Camilla Wallis continued to do important work on locating and filing reports and other collection documentation. Carla and Patty worked mainly on jacket salvage and preparation of vertebrate fossils. More than 1100 volunteer hours for the first year (96 days, 213 visits, 1183 hours; 589 volunteer hours for second six-month period) were logged, representing a significant contribution to this project.

For archaeology during the second six-month period, volunteer participation has involved several CSUF students mentioned during the first six-months: Sandra Kennedy (computer research, real-estate cost analysis, volunteer manual creation), Kristy Harbour (report inventory), Adrian Lopez (report inventory at Old County Courthouse), Susan Underbrink (repackaging collections and report inventory at Old County Courthouse, Jill Cooley (repackaging collections), Liz D’Arcy (repackaging collections). Additional volunteers include Ester Won (repackaging collections), Megan Galway (exhibit design), and Jodi Dalton (exhibit design). More than 1100 volunteer hours were logged for the first year, primarily during the second six-month period.

Third Six Months

Paleontology sustained a modest, but consistent and productive volunteer program. The main volunteer activities involved specimen preparation. The most time- and labor-intensive project involved the removal of a partial sea-lion skeleton from a large plaster jacket. This included delicate removal of matrix, photographing and

mapping the specimen in the jacket, removal of the skeleton bone by bone, and subsequent cleaning of the individual bones. This specimen will be reassembled and studied by CSUF student and volunteer, Leah Hahn, for her senior thesis project in Geology. Volunteer personnel included Jillian Cooley (CSUF, data input); Leah Hahn (CSUF, specimen prep); Paul Alms (CSUF, specimen prep); Patty Hatfield (NHA, specimen prep); Carla Sawyer (NHA, specimen prep); Camilla Wallis (NHA, report organization and filing, NHA computer specimen catalog); Melissa Smith (Community, specimen prep), and Barbara Nielson (Community, specimen prep). Volunteer efforts totaled 818 hours during 47 days. Although not a volunteer, Lisa Babilonia (Clark Regional Park Ranger) assisted with report and loan form copying.

Archaeology also sustained a modest volunteer program during the third six months. The primary volunteer activity was the upgrading of older collections from the warehouse. Collections were relocated to laboratory space at CSUF and several archaeology students, including Jillian Cooley, Caroline Braker, Susan Underbrink, Chris Dalu, Janice Lee and Karen Sylvester, were involved with repackaging and upgrading collections. Susan Underbrink and Janice Lee are proposing to use materials from the warehouse for their M.A. projects: Susan is interested in the geographic distribution of cogstones while Janice is investigating collections with underutilized faunal collections. Chris Dalu and Mary Kearney also reviewed the archaeological portion of the ACCESS catalog program and have offered suggestions for its improvement. Jennifer Zelinski conducted an independent study project; researching education outreach programs for archaeological and paleontological collections and has amassed an impressive array of documentation. She will be incorporating this information into a M.A. project. PCAS also continued to work on collections at the Orange County Courthouse.

Fourth Six Months:

During the Fourth Six-month period, total volunteer hours for paleontology dropped a bit due to a smaller number of volunteers and summer vacations. However, a solid nucleus of three faithful volunteers, including Patty Hatfield and Carla Sawyer (NHA), and Leah Hahn (CSUF-Geology) continued their efforts on vertebrate specimen preparation. All of the bones collected from the jacket prepped during the previous year were painstakingly cleaned and repaired as needed and coated with hardener. Leah Hahn has begun a project of reassembling the bones into a reconstruction of the animal. Another jacket, DNS-193 – from the Monterey Formation in Laguna Niguel, was opened and work is in progress on preparation. Camilla Wallis (NHA, with long-time association with these collections) also volunteered some time assisting with report filing and consultation, and she continues working at her home on cataloging paleontologic specimens in the gray cases. Paleontology recorded a total of 669 volunteer hours during 47 volunteer days. The present curation facility is not well-suited for a large number of volunteers for paleontology activities owing to limited work space, dusty conditions, and location.

Archaeology continued a modest volunteer program during the fourth six months with the upgrading of older collections from the warehouse the primary activity. Jillian Cooley, a volunteer from previous periods, was hired to work with the collections and during the summer to oversee and train new volunteers (of which there will be many during the Fall 2001 semester). Susan Underbrink, Chris Dalu, Elias Kary, and Luis Ramirez were involved with repackaging and upgrading collections. Susan Underbrink, John Elford, Nick Franco, Hector Hernandez (Geology) and Greg Frasier (Geology) assisted with exhibit preparation, moving vitrines (display cases) and positioning walls. Alana Jolley and Sharon Kovach assisted with exhibit design and construction. Susan Underbrink and Jillian Cooley completed web projects. A total of 523.5 hours was recorded.

Fifth six months:

During the fifth Six-month period, a solid nucleus of three faithful paleontological volunteers, including Patty Hatfield and Carla Sawyer (NHA), and Leah Hahn (CSUF-Geology) continued their efforts on vertebrate specimen preparation. Two students, Stephanie Corral and Steve Hatosy, from Dr. Dennis Kelley's marine mammalogy internship program at Orange Coast College, also worked as volunteers. As part of her senior thesis project at CSUF, Leah Hahn reassembled the bones from the MAR-12595-1 jacket into a partial reconstruction of the animal. This reconstruction followed visits to the OCNHM in Aliso Woods Park, the Buena Vista Museum in Bakersfield, and the Los Angeles County Museum of Natural History to compare the subject material with pinniped skeletal material on display and in the research collections at those museums. Simultaneously, Jacket DNS-193 was fully prepared and skeletal elements in four parts of the jacket proved to be better articulated than in MAR-12595-1. This necessitated the strategy of jacketing and removal of these concentrations from the main jacket. Two of these sub-jackets are excellent assemblies of front and hind limbs of a pinniped, and are being displayed as part of the "Doing Curation" exhibit in the Anthropology Teaching Museum at CSUF. Comparison of this material with MAR-12595-1, showed that the bones belong to *Imagotria*, an extinct genus of primitive walrus. Camilla Wallis (NHA, with long-time association with these collections) also volunteered some time assisting with report filing and consultation, and she continues working at her home on cataloging paleontological specimens in the gray cases at the warehouse. In December 2001, she provided files of her cataloging to date and these were converted to Microsoft Excel. Paleontology recorded a total of 727 volunteer hours during 46 volunteer days for this period.

Volunteer participation for archaeology during the fifth six-month period was extensive. Numerous students were brought into the project as interns or independent study lab technicians. Most weeks saw volunteers working Monday through Friday at the CSUF archaeology lab or in the Anthropology Teaching Museum under the

supervision of Dr. Eisentraut or Chris Dalu (Dalu was hired by CSUF to replace Jillian Cooley who graduated in June 2001). Volunteers participated in a variety of tasks during this six-month period. Unlike previous periods where work focused on upgrading the curation of archaeological collections, volunteers spent a significant amount of time attempting to reduce the bulk of unsorted shell midden associated with a collection from ORA-287. The ORA-287 collection had been removed from the warehouse in August with the assumption that artifacts would be reboxed and reinventoried. Upon closer inspection, however, it was determined that the collection consisted of unsorted shell midden; no cataloged artifacts could actually be found for the collection (indeed, cataloged artifacts from this site appear to be missing from the warehouse). Believing it was beneficial to reduce the bulk of the collection, a midden sorting policy was emplaced and volunteers learned the fundamentals of shell midden sorting. Shell midden sorting continued until mid-November when preparations for the Doing Curation exhibit took precedence. From mid-November on volunteer efforts were directed toward the installation of the Doing Curation exhibit. Archaeology recorded over 1000 hours for the fifth six-month period.

Sixth Six months (Feb. 25 – Aug. 24, 2002):

Volunteerism in paleontology increased significantly during the sixth six-month period, both in number of volunteers and volunteer hours. As previously, the nucleus of the volunteer corps included Patty Hatfield and Carla Sawyer, NHA, and Leah Hahn, CSUF student. Other volunteers included Muffi Mendelson, Brian Kussman, Jackie Hanson, Debbie and Jennifer Marsing, Jeanette Mann, Sarah Hatfield, Camilla Wallis, and Steve Hatosy. Volunteer work involved 889 hours over 42 days, and was devoted primarily to vertebrate jacket preparation and fossil bone cleaning, repairing, and boxing.

During the sixth six months volunteer participation in archaeology focused on the Doing Curation exhibit in the Anthropology Teaching Museum. Two graduate assistants supported by the Anthropology Department (Natalie Lawson and John McDermott) with the assistance of Christopher Dalu supervised several CSUF students (Gini Austerman, Veronica Lujan, Mary Jo Tarrant, Pattie Tuck) and one high school student (Grecia Salgado) in their efforts to curate a collection from ORA-858, 859, 692. During the summer, archaeological volunteerism was greatly reduced in

order to facilitate completion of other project deliverables. John McDermott continued to operate the exhibit and Gini Austerman and Susan Underbrink assisted with collection organization. Andrea Murray who has extensive experience with curation and educational outreach was hired to take over for Chris Dalu who has been overseeing volunteers and will be leaving the project in September 2002. In total more than 750 hours were contributed to the project in relation to archaeology.

Goal 5: Exhibits

First Six Months:

Dr. Eisentraut has received state funding through an intramural mini-grant to develop an exhibit on the curation process. The exhibit, to consist of five task-related interactive areas, is scheduled to open this summer at the CSUF Anthropology Teaching Museum. Dr. Eisentraut is also collaborating with the CSUF Anthropology museum studies program coordinator, Dr. Marjorie Kelly, to develop exhibits and videos on the Orange County A/P project. Dr. Kelly's students who take a two-semester series on museology will be focusing their attentions on materials from the Orange County collections. Lastly, funding to conceptualize and develop exhibits has been requested from CALTRANS. Originally, the A/P grant included \$50,000 for improvements to the Chestnut warehouse. With the completion of Goal # 1 (assessment of the facility), it was determined that these funds would better serve the project some other way. A change-order was submitted to CALTRANS in January to reallocate the money to exhibit development. We are awaiting notification from CALTRANS of their concurrence with the proposed reallocation. A decision is expected March 29, 2000.

Second Six Months:

As noted earlier, a focus of the archaeology portion of the project during the second six-month period was the “Doing Curation” exhibit. Eisentraut began by making a presentation on the curation project and the exhibit proposal to the museology class at the beginning of the Spring 2000 semester. She followed this up with a field trip to the Santa Ana warehouse to investigate exhibition possibilities. Dr. Kelly then focused each museology student’s attention on some aspect of the “Doing Curation” exhibit design proposed by Eisentraut. The result of the semester-long class is a binder of materials (floor plans, timelines, label, cleaning directions, etc.) to facilitate installation of the exhibit. A paleontological timeline submitted by graduate student Clint Logan was the basis of the mural submitted to Discovery Works (discussed above). Discovery Works’ proposal to create this mural and the web/computer related materials to accompany it is expected to begin construction in October 2000. Funding for the mural will be provided through funds obtained from CALTRANS. As noted in the first six-month report, a proposal to re-deploy infrastructure monies from the original grant was submitted to CALTRANS in January. Approximately \$50,000 was transferred from construction funds originally awarded from ISTE A in February 2000 to conceptualize and develop exhibits.

Third Six Months:

The “Doing Curation” exhibit is moving along slowly. Accommodations to store several large platforms presently occupying the Anthropology Department’s teaching museum have just been made. Removal of these platforms will allow us to begin installing the completed portions of the exhibit. The “Changing Landscape” mural being produced by Discovery Works is expected to be completed May 1, 2001. Jill Cooley and Susan Underbrink searched through numerous county collections looking for artifacts for Discovery Works to include in the web portion of the mural. A video by recent Anthropology M.A. Sharon Kovach on the collection of archaeological and paleontological remains in Orange County is almost complete and ready for review. A television/VCR unit showing the video, and explaining how the collections came into being, will be an integral component of the exhibit. A draft script for the video was submitted the end of February; the video itself is expected mid-March. Graduate students Marie Marley and Denise Bergin have been working on labeling issues for various portions of the displays. Denise Is also working with Eisentraut to develop an exhibit guide and verbiage for the exhibit.

Fourth Six Months:

The “Doing Curation” exhibit is continuing to develop. All platforms, vitrines and walls have been relocated and positioned within the museum. Stationary as well as mobile walls have been patched and those in need repainted. Shelving for the finished “curated” collections has been constructed. The “Changing Landscape” mural being produced by Discovery Works was completed and delivered. Three typos were observed, one on the first panel and two on the second panel. Discovery Works has reprinted these two panels and will be replacing the incorrect panels in the next few weeks. The web portion of the mural is still under construction. Chris Padon informed us that inconsistencies with the program Discovery Works is using and the artifact graphics are causing a delay. Discovery Works completed and installed the web portion of the exhibit design. The video by recent Anthropology M.A. Sharon Kovach on the collection of archaeological and paleontological remains in Orange County is complete and two continuous copies have been created. A television/VCR unit to show the video was purchased in August. Graduate student Denise Bergin continued to work on labeling and design issues for various portions of the displays. New volunteer Alana Jolley, past Director of Museum Programs at Mission San Juan Capistrano, visited the exhibit and is presently helping with design issues and ways to advertise the exhibit. We are presently investigating a California history workshop for k-12 teachers that would link to the exhibit to the workshop curriculum and would promote archaeological and paleontological teaching resources available at the warehouse. It is believed that a virtual tour of the exhibit as well as an actual tour during the workshop could aid teachers in bringing Orange County prehistory to life.

Fifth Six Months:

The “Doing Curation” exhibit was installed and a preliminary opening was held December 14. To complete the exhibit, all efforts from mid-November onward, including those of the archaeology volunteers, were directed toward the installation. Chris Dalu oversaw the design of the vitrines, and with Dr. Eisentraut, Susan Underbrink, and Lara Haddad elaborated the concepts associated with “Tools of the Trade,” “What’s for Dinner?,” “The Pursuit of Happiness,” “What is it?,” and “Show Me the Money” themes. Andrea Murray, Christine Hacking, and Rubio Gonzales worked on signage, graphics, and the exhibit brochure. Kelly Donovan completed final graphic designs and oversaw printing. John McDermott supervised all hanging activities and was the “official” mannequin mechanic, positioning both Indiana Jones and Laura Croft. Pattie Tuck, Mary Jo Tarrant, and Susan Underbrink cleaned vitrines and floors. The exhibit previewed December 14 during the Anthropology Department holiday party. By all accounts the exhibit was well-received.

Ensuing weeks were spent scheduling the “official” museum opening. Dr. Susan Parman coordinated the invitation of President Milton A. Gordon, VP of Academic Affairs Ephraim Smith, and Deans Kolf Jayawara and Tom Klammer. Karon Kaelin coordinated invitation of off-campus guests. Dr. Eisentraut and Andrea Murray designed an exhibit invitation, distributed to the above people as well as to Marlene Brajdic at the County for wider distribution. She

distributed them to more than 300 invitees from the County, A/P Certification lists, and the Orange County Historical Commission. Hor d'ourves were ordered for 100 people. The opening is scheduled for March 4, 2002 from 6-8pm.

Sixth six months (Feb. 25 – Aug. 24, 2002):

The Doing Curation exhibit opened the evening of March 4, 2002. Over 100 members of the community, including CSUF President Dr. Milton A. Gordon and Supervisor Cynthia Coad, were in attendance. Dr. Gordon gave the opening address, praising the project efforts and the partnership formed between the County and the university. Other speakers included Rob Selway, Drs. Susan Parman (Chair, Anthropology), Kolf Jayawara (Dean, College of Natural Science and Mathematics), and Tom Klammer (Dean, Humanities and Social Science).

Leah Hahn's senior thesis project, the *Imagotaria* sp. specimen from MAR 1-, was the subject for a display at the Orange County Fair in July. This display, arranged by volunteer Hatfield and paleo supervisor Cooper, received a blue ribbon/first place award in the gem, mineral, and fossil division. This specimen also will be on exhibit at Clark Regional Park once their renovations are competed Fall 2002. Another display on Santa Ana Mountains Cretaceous invertebrate fossils from the warehouse contributed additionally to the water resources theme of the Fair, with creatures from the sea.

Other Accomplishments

In addition to advancing on the four first-year (short-term) goals, one second-year goal, and additional one third-year goal outlined in the proposal and contract, we also have made accomplishments in the following areas:

a. Equipment

First Six Months:

Various pieces of office furniture and miscellaneous supplies, donated by Silverado Construction Company, and lab tables, a specimen prep table, and a washing bin/sink, donated by CSUF, have been obtained and will be invaluable for office, library, and lab furnishings.

Second Six Months:

Properties Division, CSUF, donated several 10' -long lab tables and the County donated some decommissioned drafting tables.

Third Six Months:

Opportunity to get donation of some old specimen cabinets was passed on because of lack of storage space. Donated office furniture received during first six months is presently non-functional and takes up important space in both warehouse buildings.

Fourth Six Months:

We received permission from County Surplus Division to use some of their space at the records complex to store the furnishings, exhibit cases, and supplies. This freed up considerable space in both our warehouse buildings, which resulted in part in our being able to accommodate six research specimen cabinets donated by the Natural History Museum of San Diego.

Fifth Six months:

We received another large storage cabinet as a donation from the Natural History Museum of San Diego as well as two Lane Specimen Cases from the biology Department at CSUF.

Sixth Six Months (Aug. 25, 2001 – Feb. 24, 2002):

We received several sturdy tables from Orange County surplus for paleontological curation, one additional file cabinet from Cal-State University, Fullerton, for record storage, and two custom hand-crafted display cases from a private donor for future displays.

b. Web page

First Six Months:

Work is progressing on assembling a web page that will be served from the CSUF campus and will provide an outreach to the community for project description, progress, and updates.

Second Six Months:

The web page has been set up and can be accessed at <http://anthro.fullerton.edu/orangecocuration.html>. A web version of the time scale/changing landscape mural designed for the “Doing Curation” exhibit is proposed and has been submitted to Discovery Works for fabrication. An anticipated completion date is December 2000.

Third Six months:

As the Discovery Works project was not completed in December 2000 nothing new has been added to the web site. Two Anthropology students, Susan Underbrink and Jillian Cooley will be working on the web page during Spring 2001 as part of an independent study project. The web site also will be used to host the P/P document and to announce the curation facility open house planned for Fall 2001.

Fourth Six Months:

Two student projects, from Susan Underbrink and Jillian Cooley, have been linked to the web page. The first 15 pages of the P/P document were scanned and converted to a .pdf file for incorporation into the website. However, additional edits received from Keith Dixon, will need to be addressed and the revised document re-scanned and converted. This will be accomplished when all of the edits have been addressed.

Fifth Six Months:

The remaining 100+ pages of the P/P document were scanned and converted to a .pdf file. The complete document has been added to the website and is available for review. A web-based “comments” page is also available so that comments about the manual can be sent over the internet.

Sixth Six Months (Feb. 25 – Aug. 24, 2002):

Extensive changes and additions were made to the project web page during the sixth six-month period. Several people commented that the P/P document was difficult to download due to its size (over 100 pages in length). The document was removed and is in the process of being packaged into smaller-sized documents. The first three sections of the P/P are presently available and the remaining section and appendices will be posted shortly. Chris Dalu has added extensively to the Doing Curation Exhibit portion of the site, creating a virtual tour of materials on display at the Anthropology Teaching Museum and linking the page to photos of the Exhibit opening presented on the Anthropology Departments web. Chris also added the PowerPoint

presentation Eisentraut and Cooper delivered to the Orange County Historical Commission in July.

c. Meetings

First Six Months:

We have had several meetings with NHA and Discovery Works to discuss ways these organizations can be involved in the project. Our work with NHA will involve use of previously written guidelines and databases, as well as consulting on volunteer coordination, scientific expertise, and tracking down paperwork and other documents associated with collections.

We have also had monthly meetings with Rob Selway and Debbie Cavers, OC office of Historic Programs, to discuss various issues related to the project. Minutes for these meetings are on file at CSUF. We have also had one meeting with the on-campus, CSUF advisory committee to discuss the project.

Second Six Months:

Regular monthly meetings with Robert Selway and staff, HBP/Historical and Cultural Programs continued during this period. Minutes for these meetings are on data file at CSUF.

Third six Months:

Regular monthly meetings with Robert Selway and staff, HBP/Historical and Cultural Programs continued during this period. Minutes for these meetings are on data file at CSUF. Eisentraut attended a nationally organized curation conference in Austin, Texas during November 2000. Anthropology graduate student Susan Underbrink also attended, volunteering her time to attend sessions of interest to the County curation project. Numerous useful contacts were made, and many report and curation standards/guidelines obtained.

Fourth Six months:

Regular monthly meetings with Robert Selway and Marlene Brajdic, HBP/Historical and Cultural Programs continued during this period. Minutes for these meetings are on file at CSUF. In March 2001, a meeting at the Paleo Environmental Associates (PEA) lab in Tustin, including Cooper, Mark Roeder and Bruce Lander, principal (PEA), Rob Selway and Dan Thomas, County of Orange, and Valerie McFall, Transportation Corridor Authority (TCA), was held to view and discuss the disposition of the outstanding, well-prepared fossil collection from the ETC. An invitation was extended to TCA personnel to visit the A/P curation facility to determine if they deem it worthy to house this collection. In April, Cooper met with Jacques Graber, California Integrated Waste Management Board, who is seeking to develop standardized policies and procedures for how paleontological resources recovered from landfill projects will be

managed. He is very interested in the A/P project and our Policy and Procedural manual, as well as data base system. In May 2001, Eisentraut met with archaeological representative from CALTRANS concerning CALTRANS collections housed at the warehouse. Three of their four collections were identified. They are presently considering upgrading the curation of these collections and their review for compliance with NAGPRA (Native American Graves Protection and Repatriation Act). In July, 2001, Cooper hosted a meeting at the A/P Curation Facility that included personnel from RMW Paleo Associates, Talega Land Association, and Rob Selway and Marlene Brajdic, HBP/Historical and Cultural Programs to discuss the issue of the 48 plaster jackets containing vertebrate specimens from a late Eocene bone bed salvaged from the Talega Champion Hills project during February 2001. This meeting was in response to the letter Cooper sent to Talega in May asking them to consider providing moneys for the preparation of these jackets, inasmuch as no provisions regarding fees for preparation were stipulated in the conditions of approval for the project. The discussion was fruitful and the Talega representative encouraged us to submit a more detailed proposal with budget breakdown. In August, Cooper hosted at the A/P Curation Facility a delegation from CALTRANS, with attendees representing all CALTRANS districts. CALTRANS is working on developing state-wide policies and procedures for managing paleontology resources recovered from throughout the state of California. They have begun to develop paleontological sensitivity maps to add as a GIS layer on base maps with CALTRANS mile markers. They expressed great interest in our project, and particularly our Policy and Procedural Manual, database system, and the suitability of the A/P Curation Facility as a local repository for items collected and properly provenienced from Cal-Trans projects in Orange County. These visits have all brought another level of visibility to and appreciation for our A/P project.

Fifth Six Months:

Regular monthly meetings with Rob Selway and Marlene Brajdic, Office of Historical and Cultural Programs, continued during this period. Minutes for these meetings are on file at CSUF. In December, the cities of Fullerton and Placentia, the Fullerton Business community, and the University met at CSUF to discuss the possibility and feasibility of a building a natural history museum as part of a museum complex near the Fullerton train station. An architectural firm has been contracted to conduct a feasibility study and artist renderings of the proposed museum complex were shown. A short white paper was prepared articulating the University's position, and stating that such future discussions and planning should involve the County, who owns the collections at the warehouse, and the Natural History Association, who has been working steadfastly over the years to make a County natural history museum a reality.

Sixth six Months (Feb. 25 – Aug. 24, 2002):

Regular monthly meetings with Rob Selway and Marlene Brajdic, Office of Historical and Cultural Programs, continued during this period. Minutes for these

meetings are on file at CSUF. In April 2002, Cooper met with Carlos Bustamente of the OC CEO's office, who is a member of the City of Santa Ana redevelopment committee, interested in the possibility of a natural history museum in a future museum complex on Main Street in Santa Ana. Cooper also met with David DeLeon, Recreation Manager City of La Habra, to begin negotiations for donation to the warehouse of a collection of archaeological and paleontological remains, recovered by SWCA-RMW in the early 1990s, and subsequently stored by the City in one of their recreation buildings. Eisentraut and Cooper also met with the Orange County Historical Commission, delivering a PowerPoint presentation detailing the projects accomplishments over the past three years.

d. Paleontological specimen preparation

First Six Months:

One of these paleontology specimens, identified onsite by vertebrate paleontologist Dr. Larry Barnes, LACM, is a possible new species of the sirenian genus *Dusisiren* sp. NHA volunteers Patty Hatfield and Carla Sawyer meticulously exposed the bones in the jacket, while Lisa Babilonia carefully mapped the bones in place, photographed them, and removed them for transport to Clark Park for continued lab preparation.

Second Six Months:

During this period, three plaster jackets were prepped and two badly deteriorated ones were salvaged. Prep work produced a whale lower jaw and two outstanding sea lion skeletons.

Third six Months:

Final preparation and bone removal of a significant and possibly taxonomically unique walrus or sea-lion (Imagotarian?) semi complete, but disarticulated skeleton was accomplished. Major bone cleaning and treatment procedures continue.

Fourth Six Months:

Cleaning of bones from the jacket prepared during the previous year continued and was completed in June. Leah Hahn, senior geology major at CSUF, is conducting her senior thesis on the reconstruction and taxonomic identification of this Miocene marine mammal. Work is well underway on the preparation of another jacket containing a Miocene sea-lion. There is no skull,

and little vertebral column material, but leg and foot bones are well preserved and reasonably well articulated.

Fifth Six Months:

Dave Alexander, PEA, Inc. and Brian Kussman were contracted as sub-consultants to assist with the jacketing and mapping, respectively, of the four subjackets from DNS-193. With completion of preparation of the two imagoarian specimens (MAR-12595-1 and DNS-193 – see discussion under goal 4: volunteer coordination), the volunteers embarked on prepping a large whale skull from the Topanga Formation (DLG 87). Dave Alexander of PEA, Inc. assisted in removal of the top of this large jacket to expose the matrix and some bones, November 27, 2001. At this writing, this jacket has been prepared nearly to the point of photography and mapping of the exposed bone assembly.

Sixth Six Months (Feb. 25 – Aug. 24, 2002):

During the first half of 2002, volunteers worked on preparing the Topanga Formation whale specimen (DLG 87) and hardening and repairing, as needed, and eventually removing the bones one by one. Prior to removal, this exposed jacket was thoroughly photographed, and the bone assembly drawn/mapped by Brian Kussman. In July, the warehouse accessioned a semi-complete fossil whale specimen (DAA 041702-1) recovered in two jackets (by REA, Inc) from the Prima Deschecca Landfill extension and donated by the Orange County Waste Management facility. Volunteers began work on preparing one of the jackets the week after delivery (see photo cover for this report).

e. Archaeological collections

First Six Months:

Besides inventorying collections and repackaging badly damaged and deteriorated boxes, no effort was made to begin updating archaeological materials as the computer database was not yet completed.

Second Six Months:

During this period, it was decided that we would begin updating collections even though the database was not yet complete. Collections from CA-ORA-433, -568, -946, and -1079 were processed. Extensive time was spent interpreting field notes and the varying cataloging systems used by past repositories. Significant amounts of time could have been saved during this process had standards for collection preparation been implemented and followed at the time these collections were prepared.

Third Six months:

Several additional collections were removed to CSUF for processing. As noted in the second six-month report, extensive time was spent interpreting field notes and the varying catalog systems processed by past repositories. However, additional curation techniques were applied to the collections (better improving future access) based on information collected during the curation conference Eisentraut attended in Austin, Texas during November 2000. These improvements are being applied to the collections finished during the second six-month period.

Fourth Six months:

Rehabilitation of archaeological collections continued throughout the fourth six-month period. Three loci from ORA-414 were processed, bringing the total number of properly archived archaeological collections to over 60 boxes and many hundreds of thousands of artifacts. Materials from ORA-1006, -174, and -853 were also prepared and are awaiting completion. ORA-287 was relocated from the warehouse to CSUF and will be the subject of work for the next semester or two. It is an extremely large collection with a great deal of unsorted shell midden. A sorting strategy has been devised to expedite sorting and conform to sampling strategies outlined in the P/P document. This strategy should greatly reduce the bulk of the collection and yet maintain the collections future research potential. Susan Underbrink, graduate anthropology student at CSUF, is continuing her graduate thesis project on cogstones, their distribution and stylistic attributes. Debbie McLean, another CSUF graduate student, completed her M.A. after researching the occurrence of ceramics in Orange County collections.

Fifth Six months:

Rehabilitation of archaeological collections, as well as shell midden sorting and exhibit installation occurred throughout the fifth six-month period (see descriptions under earlier sections of this report). Susan Underbrink continued to search the collection for cogstones, and CSUF graduate students Janice Lee and Ron McLean expressed interest in utilizing materials from the warehouse for MA projects.

Sixth Six Months (Feb. 25 – Aug. 24, 2002):

The sixth six-month period was a time of much activity in terms of archaeology. The warehouse was reinventoried and a box-by-box list by shelf was created. Additionally, several collections that had been removed to CSUF for curation were fully curated and finding aids created. These collections included CA-ORA-287, -414, -421, -431, -692, -858, -859, -867, -1006, and -1079-H. Several other collections were upgraded but not fully curated. In general, these collections from ORA-853, -867, -869, -871, and -874 could not be fully curated because documentation, most often in the form of a collection catalog, was missing. "Treatment and Status of Collection" documents were created for each of these collections so that future researcher could track changes to the collections. Other collections (from CA-ORA-385, -426, -433, -460, -854, and -956) were researched so that they could be easily curated during the one-

year project extension. Other activities included floating soil samples from CA-ORA-174 (to reduce the size of the collection) and creation of a finding aid for the site. A finding aid was also created for CA-ORA-176 and -1100. One collection from CA-ORA-22 was inventoried and deaccessioned (see Goal 1 sixth six-months). Amendments to the finding aids for CA-ORA-414A and CA-ORA-859 were written after additional artifacts, presumed missing from the collections, were recovered during the reinventory process. A collection from CA-ORA-568 was reboxed due to its badly deteriorated state. two student MA projects and the small archaeology exhibit installed in the west exterior window of the Doing Curation exhibit.

Lastly, access was finally gained to the exterior storage bins. Inquiries had been made earlier regarding the bins, but no one seemed sure of who had the lock code. It was assumed that the bins contained unsorted shell midden that due to poor storage was likely unprovenanced. Finally in early August, the combination code to the bins was discovered. The bins were found to contain several thousand boxes of badly damage collections. It is unclear when the boxes were packed into the bins. Some material appears to be the result of Natural History Foundation activities dating back 10+ years. Dan Thomas, however, recounts that some material may be as recent as three years old. If this latter is the case, CSUF was not aware of materials being moved into the bins during their stewardship of the Chestnut facility.

The material in the bins is an assortment of collections, paperwork and display material. The bottommost materials are badly water damaged, leading to mold and box collapse. No shelving is present in any of the containers. Instead, plywood was laid every two rows of boxes in an attempt to distribute box weight more evenly. Unfortunately, the weight of upper levels was excessive, causing the lower levels to cave inward and blocking access into the bins. Cockroaches and mice feces are present throughout the collections and the bins smell badly of decay. Although a cursory inspection of contents was made, the County decided that further work should stop until a hygienist could be retained to test for possible health hazards. In the meantime, Dr. Roger Mason has been contacted. It is believed that he submitted one of the larger collections in the bins. As this material is primarily unsorted shell midden it is hoped that if the material must be discarded due to contamination at least some idea of its contents will be retained.

f. Curation Proposals

Fourth Six Months:

In July, 2001, Cooper wrote (co-authored with Rodney Raschke, RMW) and submitted a proposal to Talega Land Association for funds (\$105,000.00; \$150,000 with exhibits component) to operate a five-year comprehensive curation program on the Talega “bone bed” (“Rhino quarry”). Most of the budget calls for salaries to hire expert preparators to train and supervise volunteers in the preparation of the jackets. This has the potential for evolving into a summer education program for Orange County high-school and community college students, as well as ensuring the safety and proper curation of one of the richest and scientifically most significant fossil discoveries in the history of the County.

Fifth Six Months:

No action was taken by the Talega Land Association on the proposal submitted to them (other than to submit it internally to their financial board for review). In the meantime, Cooper prepared a personal position statement on the collection and its recommended disposition and distributed it to concerned parties. The County received a letter from the City of San Clemente expressing why they cannot accept such a collection, and the desire to donate the collection to the County. However, they did not officially offer the collection to the County because they have not claimed responsibility for the collection. Likewise, there has been no formal letter from the Talega Land Association to offer/donate the collection to the County.

Sixth Six Months (Feb. 25 – Aug. 24, 2002):

In July 2002, the Talega Land Association submitted a letter to the Office of Cultural and Historical Preservation, stating their intentions regarding disposal of the ~43 (from the original 48 – 4 previously loaned to Santa Barbara Museum for supervised summer 2002 fossil prep program; one retained by RMW/SWCA to prep at their facility) vertebrate fossil jackets from the Eocene bone from the Talega property in San Diego. Their proposal offers to pay for all transportation costs to the warehouse and \$50K in curation/prep fees (to be paid in two installments; one at time of collection delivery and the second June 30, 2003). This is a major breakthrough in negotiations that had been ongoing for nearly a year. At this writing, OC PFRD management has accepted this proposal in principle and has instructed the Office of Cultural and Historical Programs to draft an agreement statement. Also in July the County of Orange and the Transportation Corridor Agency (TCA) reached general agreement on the transfer of the Eastern Transportation Corridor (ETC) paleontology and archaeology collections to the warehouse. In August, the TCA submitted a letter and MOAs for curation and exhibits. At this writing these agreements are under review. The paleontology part of this collection is truly outstanding, and would represent the best single collection in the warehouse. TCA has offered \$119K in curation fees, \$45K of which is earmarked for the development of a mobile exhibit. While in an unprepared state, the Talega fossils collections has great potential for being the centerpiece of a more extensive volunteer program and potentially the subject of a funded educational program. The ETC fossil collection has been carefully prepared to meet the standards of the policy and procedural manual produced for this A/P project and the items have been cataloged into the project's data base system.

g. Specimen Loans

First Six Months:

During the first six-month period we were not organized to the point where paleontological specimens could be loaned to scientists/institutions on a consistent basis.

Second Six Months:

During the second six-month period the paleontological collections were organized to the point where specimen loans could be made on a more consistent basis. For example, a goodly number of invertebrate and vertebrate fossils specimens were loaned to Carol J. Stadum, consulting Paleontologist, for use in exhibits in the new Laguna Hills Fossil Park. Completed loan forms with individual items are on file at the curation facility. The loans represent a significant contribution that the curation facility is making to community exhibits and putting the collection to good use.

Third Six Months:

Several additional specimen loans as well as loan returns were executed for Carol J. Stadum in connection with her development of the paleontology component of Laguna Hills Fossil Park, which had its official opening November 19, 2000. A jacket with whale jaw from the AFCOM project (late 1970s; locality NHF-22) was prepped by volunteers under Stadum's supervision at the Fossil Park. The salvage produced several fish specimens but the whale jaw turned out to be very poorly preserved and not worth saving.

Unprovenanced archaeological materials were loaned to Ernie Siedel of the County for exhibits presently under construction at the Newport Backbay Interpretive Center.

Fourth Six Months:

More loans and some loan returns to/from Carol J. Stadum, for the Laguna Hills Fossil Park, were executed during this period. Also, a loan of box #18 from RMW's Olinda Landfill project (95-1032) containing delicate late Miocene Argonaut Cephalopod egg case fossils was made to Stadum, who, in collaboration with Lou Ella Saul at the Los Angeles County Museum of Natural History (LACMNH), is conducting publishable research on these unique fossils. Most of the specimens were returned to the A/P facility in April, but several are being retained on extended loan basis at LACMNH for continued research. In May 2001, a major loan agreement was consummated by Rob Selway, HBP/Office of Historical and Cultural Programs, and Dr. John Harris, head Curator of fossil vertebrates at the LACMNH, for a long term, renewable loan to LACMNH of the scientifically, highly significant AMH Golf collection from Aliso Viejo. This collection, donated by the Aliso Viejo Golf Club, and salvaged by RMW Paleo Associates, was accessioned into the A/P Curation facility during September 2000. The collection consists of 14 boxes and 22 jackets of a well-preserved and diverse marine vertebrate fauna from the Monterey Formation. The centerpiece of the collection is a near-complete (and perhaps the most complete on record) specimen of a *Paleoparadoxia*, a member of the extinct marine mammal order Desmostylia. Dr. Larry Barnes of LACMNH has written a proposal to NSF for funds to curate this exceptional collection. This loan represents an important breakthrough for the County of Orange's scientific resource management program by establishing partnership relations with LACMNH. Orange County has collections of scientifically important marine vertebrate fossils; LACMNH has the expertise and interest in conducting research, publishing, and exhibiting some of these fossils. This loan is a prime example of the scientific importance of the fossils being matched by the level of scientific expertise.

Fifth Six months:

During Fall 2001, a loan of vertebrate, invertebrate, and plant fossils from localities in the Anaheim Hills was made to the Anaheim Museum for a display in their Anaheim Room on geology and paleontology of the Anaheim area. Cooper met with their display designer several times to conceptualize and help implement this exhibit. This represents an example of a community service provided by the warehouse. In addition, in early February 2002, Charles Powell, paleontologist with the U. S. Geological Survey in Menlo Park, borrowed 10 boxes of invertebrate specimens from the RMW-96-1074 collection (Chevron—West Coyote Hills) for research he is conducting on Pleistocene invertebrate faunas from the Coyote Hills area in north Orange County. He also accessioned into the Chestnut facility collections, a Pleistocene collection from the Upper Newport Bay area, consisting of six boxes of specimens that were the subject of a manuscript for scientific publication and originally collected by LSA, Inc. Cooper supplied Powell with a block of OCIP locality numbers for this publication. Powell is keenly interested in the warehouse facility's Pleistocene invertebrate collections and hopes to involve them in several publications over the next few years. This association underscores how we are able to work with the paleontological community and provide them with critical information in the form of collections and supporting reports and other documentation. Cooper also worked with Sherri Gust of Cogstone Resources to arrange an eventual loan of 6 jackets containing Pleistocene vertebrate fossils from the RMW-95-1075 East Coyote Hills Unocal Collection project. These jackets will be prepared at the Raymond Alf Museum in Claremont and researched by Gust for an eventual publication.

Sixth Six Months (Feb. 25 – Aug. 24, 2002):

In April six jackets, containing Pleistocene vertebrate fossils from RMW 95-1075 (the East Coyote Hills), were loaned to Sherri Gust of Cogstone Resources for the purpose of doing research on the Pleistocene fauna. These jackets were sent initially to the Raymond Alf Museum of Life at the Webb School in Claremont for supervised preparation by science students at the Webb School. This outstanding museum has arguably the best scholastic fossil prep program in the state of California. Also in April, a number of fossil whale fragments and sediment matrix were loaned to the Upper Newport Bay Interpretive Center for use in an interactive “fossil dig” display.

h. Marketing

Fourth Six Months:

In June 2001, Cooper prepared a press release about the loan of the AMH Golf collection to LACMNH, which resulted in an Orange County Register article, several short articles in local city newspapers, an interview with Cooper on the Program “Real Orange” on KOCE TV in August, and an article in the Office of Public Affairs Newsletter at CSUF.

Fifth Six months:

Cooper and Eisentraut worked with Janna Anderson, a free-lance writer whom CSUF contracted to write an article on the university-county archaeo/paleo contract for a university publication. The warehouse facility also was the subject of a January article in the Los Angeles Times that focused on rock art recovered from Irvine Ranch property. The article focused on the uniqueness of rock art in Orange County, but also touched on what happens to archaeological remains once they are excavated. Several photos of materials from the warehouse were included with the article.

Sixth Six Months (Feb. 25 – Aug. 24, 2002):

In April a photography crew from CSUF spent a day at the warehouse photographing paleontological and archaeological specimens and personnel for an article on the project to be published in Titan Magazine. This same crew also spent several hours in the Doing Curation exhibit at CSUF photographing the exhibit and student volunteers. Also in April, Cooper appeared on the Program *Real Orange*, produced by KOCE TV, where he displayed several specimens of warehouse fossils and spoke about the project. In May Leah Hahn's CSUF senior thesis on Imagotaria (MAR 12591-1) was published in DIMENSIONS, the journal for undergraduate research in the College of Natural Science and Mathematics, CSUF. In July, a reporter and photographer from the Orange County Register interviewed and photographed Eisentraut for an article on local cultural resource management. In early August, Dylan Wright, a photojournalist from Orange County Public Relations, took photos of the Prima Deschecca whale specimen and volunteers (see cover photo this report) for a County Waste Management Newsletter.

It should be noted that items **f.** and **h.** above are aspects of third-year goals (goals 7 and 8) for the project.

i. Completion/extension of project

Sixth Six Months (Feb. 25 – Aug. 24, 2002):

As an addendum to the 58K amendment, the OCBOS on June 4 approved the recommendation to extend the project one additional year to August 24, 2003. This additional year will provide for the project a transition period to:

1. establish new stewardship of the facility;
2. develop exhibits;
3. expend the 58K and money left over in the grant;
4. provide an opportunity to pursue new avenues for potential funding;
5. continue to implement the model curation program developed during the original three years of the project;
6. assist in moving the collections to a new facility if new space becomes available;
7. and basically continue the momentum generated during the first three years.

All deliverables and tasks contracted for the original agreement will be completed and presented in the final report during the Fall 2002.

Respectfully submitted,

Phyllisa Eisentraut, PI for Archaeology

John Cooper, PI for Paleontology

September 12, 2002